

The Impact Of Wage Increases On The Purchasing Power Of Employees In Public Administration In Algeria

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Abstract:

Wages are vital to individuals' well-being and economic stability. This study investigates the effect of wage increases on the purchasing power of employees in administrative public institutions, with a focus on evaluating the wage system. A field study was conducted at Dar Taquafa "Kateb Yacine" in Sidi Bel Abbes, using a questionnaire distributed to 61 employees. An analysis was performed using SPSS (version 26). The findings reveal that the current wage system is inadequate in meeting employees' basic needs. Moreover, wage increases and income tax reductions have had a limited impact on enhancing employees' purchasing power due to inflation and high living costs.

Keywords: wage increase; wage system; purchasing power; public sector; income tax

JEL Classification Codes: C12; E62; J30.

1. INTRODUCTION:

The position of wages is crucial and can be used to attract researchers' attention and incorporate their concepts, leading to many developments becoming a human rights issue and a standard of welfare and social justice for countries. Therefore, it is the focus of all social sectors, and the public authorities play a crucial role in its identification and protection.

Wages, a key concern for political authorities, are determined based on the standard of living, which is influenced by the cost of essential items. These items, including food, shelter, clothing, transportation, education, and health, have continuously increased, impacting real wages and leading to a decline in purchasing power.

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The President of the Republic has committed to increasing wages and has proposed measures to enhance purchasing power. These measures include reducing fiscal pressure on wages and salaries, adjusting the salary evidence network for employees, providing consumers with direct access to essential commodities, enacting laws to protect consumers from illegal trade practices, and developing a project to determine profit margins for essential commodities.

Therefore, considering the importance of the topic, the study is based on a field study that is focused on examining the evaluation of wages and purchasing power of public sector employees, as well as the significance and sensitivity of wages to employees of administrative institutions, Dar Al Taquafa Katib Yassin in Sidi Belabbas. Our study aims to answer the question:

What is the impact of wage increases on the purchasing power of employees in public institutions?

However, to answer this question, I set two hypotheses as follows:

- There is high satisfaction with the current wage system on the part of employees of administrative institutions.
- There is a relationship between wage increases and the purchasing power of employees.

To achieve the aim of this study, which is to evaluate the wage system in the public sector and examine the impact of wage increases on the purchasing power of employees in public administration in Algeria, the study will begin with a literature review, followed by the theoretical framework, and then identify the data and methodology used. Subsequently, the empirical results will be discussed, and the study will conclude with a conclusion.

2. Literature review:

- Engin & Büşra, 2023: Their study entitled “The Loss In Purchasing Power Of Public Employees Despite Adjustment In Salaries To Inflation Rate: A Case Of Turkey” Emphasized that in settings with significant inflation rates, especially in the public

sector, semiannual wage increments fail to completely counterbalance the effects of inflation on the ability to buy goods and services. By utilising time value of money methods in engineering economics, the research illustrated that increases in inflation are inadequate to restore the ability to buy goods and services entirely and offer policy suggestions as a consequence. This study's distinct and innovative characteristics render it a valuable addition to this topic's current literature. (ENGİN, 2023)

- Mokhtari, (2024). His research entitled “The Impact Of The Increase In Nominal Wages On The Real Wages Of Public Sector Employees In Algeria During The Period 2018-2024- A Tentative Standard Model” elucidated the significance of wages and salaries and how they impact the economy. It investigated the factors that affect wages and compensation, including the dynamics of supply and demand in the labour market, education, and experience. Additionally, it analysed the salary structures of the public sector, with a particular emphasis on the utilisation of common grade scales. The investigation also evaluated the impact of nominal wage increases on real wages and the impact of wages and compensation on purchasing power and living standards. Furthermore, it assesses the repercussions of wage increases that the Algerian government has authorised per the President's directives. These measures generally encompass tax exemptions, reductions, and nominal compensation adjustments for Algerian workers, particularly emphasising public sector employees. The objective of these measures is to either preserve or enhance purchasing power. (Mokhtari, 2024)

3. Wages and Purchasing Power:

3.1. Definition of wage:

A wage is a form of compensation employees receive in exchange for their labour or services. It is typically expressed as an hourly, daily, or monthly rate and can vary based on factors such as job role, experience, and industry. Wages are often distinguished from salaries, which are usually

paid on a regular, fixed basis. (Investopedia, n.d.). The wage has two aspects: nominal and real wage

Nominal wage: Nominal wage refers to the money a worker receives in current dollars, not adjusted for inflation. It is the actual monetary payment made to employees for their labour and is often reported as an hourly, daily, or annual amount. Nominal wages do not account for changes in the purchasing power of money over time. (Mankiw, 2021, p. 112) (Mankiw, 2021).

Real wage: Real wage represents the goods and services that can be bought with a worker's nominal wage, adjusted for inflation. It reflects the purchasing power of the nominal wage, providing a measure of how far the wages go in terms of actual consumption. Real wages are adjusted using a price index, such as the Consumer Price Index (CPI), to account for changes in the cost of living. (Mankiw, 2021, p. 114) (Mankiw, 2021).

3.2. Wage system in Algeria:

Various national regulations and collective agreements govern Algeria's wage system. Key elements include:

Minimum Wage: The Algerian government sets a minimum wage, known as the "Salaire National Minimum Garanti" (SNMG), establishing the lowest legal wage employers must pay workers. This minimum wage is periodically adjusted to reflect changes in the cost of living and economic conditions.

Wage Scales: The Algerian wage system also includes wage scales that vary by sector and job classification. These scales are often defined through collective bargaining agreements between employers and trade unions.

Public vs. Private Sector: Wage systems can differ between the public and private sectors. Government regulations often set public sector wages and may include additional benefits, while market forces and company policies typically determine private sector wages.

Labour Law: The Algerian Labor Law provides a legal framework for wage regulations, including provisions on overtime pay, minimum wage requirements, and employee benefits.

3.3. Definition of Purchasing Power:

Purchasing power refers to the amount of goods and services bought with a currency unit. It is influenced by factors such as inflation and changes in income levels. When purchasing power increases, a currency can buy more goods and services, while a decrease in purchasing power means it can buy less. (Investopedia. n.d.).

4. Data and Methodology:

The study employed the case study methodology and used the questionnaire as a primary study tool in addition to the observation in the administrative institution, Dar Thaouafa Katib Yassin in Sidi Bel Abbes. The questionnaire consists of two sections. The first one includes the respondents' personal and functional data (gender, educational level, employment status, professional experience, salary level, and family status). The second section includes two axes. The First axis evaluated the wage system at Dar Al Thaouafa Kateb Yacine - Sidi Bel Abbes. This axis includes ten questions specifically designed for this purpose. The second axis measured wage increases' impact on workers' purchasing power at Dar Al Thaouafa Kateb Yacine - Sidi Bel Abbes through 12 statements. Furthermore, the study applied a descriptive analysis using SPSS (26) software to examine the impact of wage increases on purchasing power in Algeria.

Table 1. Returned and unreturned questionnaires

Employees	Questionnaires distributed	Non-returnable questionnaires	Returned questionnaires	
			Excluded questionnaires	Valid questionnaires for analysis
76	70	6	3	61
100%	100%	8.6%	4.3%	87.1%

Source: based on the questionnaire output

After collecting the valid questionnaires 61, which represent 87.1% of the employees, the evaluation of a measurement instrument is based on two fundamental elements: validity and reliability (M .Tavakol, 2011). An instrument's validity is determined by its ability to measure what it is supposed to measure, while its reliability is determined by its ability to measure consistently ((M. Tavakol, 2008). For this purpose, the survey is tested in two stages:

4.1. Pearson correlation coefficient:

It measures the extent of internal correlation between the statements and aims to determine the extent of internal consistency between the answers regarding the statements of the questionnaire's axes.

Table 2. Results of Pearson correlation for the 1st axis

N°	Statements	correlation coefficient	p-value
01	The current wage system is fair and equitable.	0.710 **	0.000
02	The pay system recognises my contributions and efforts to the organisation.	0.520**	0.000
03	The current pay system motivates employees to perform well and achieve the organisation's goals.	0.385**	0.002
04	The pay system is flexible enough to meet my financial needs.	0.563**	0.000
05	There is justice in the distribution of wages among employees in the institution.	0.430**	0.001
06	There is an excellent opportunity for advancement through the current pay system.	0.647**	0.000
07	The rewards given in the wage system require more effort and perseverance to obtain them.	0.411**	0.001
08	The grants and allowances I receive are good	0.612**	0.000
09	My salary is commensurate with the academic degree I hold.	0.518**	0.000
10	I am satisfied with the compensation offered during the promotion.	0.882**	0.000

Source: based on the SPSS output.

Table 3: Results of Pearson Correlation for the 2nd axis

N°	Statement	correlation coefficient	p-value
01	My ability to meet my financial needs has improved after the wage increase.	0.890**	0.000
02	The increase in wages has increased my purchasing power.	0.361**	0.004
03	I noticed increased demand for products and services after the wage increase.	0.530**	0.000
04	I was able to meet my basic needs (housing, food, electricity, transportation, etc.) better after the wage increase	0.504**	0.000

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05	I noticed an improvement in my quality of life after the wage increase (travel, entertainment, education, etc.).	0.359**	0.005
06	I noticed a change in my spending behaviour after the pay increase	0.542**	0.000
07	I was able to save more money after the pay increase	0.602**	0.000
08	Increasing wages have a positive impact on well-being	0.669**	0.000
09	I feel secure and confident about the future after the wage increase	0.622**	0.000
10	I think the pay raise was fair	0.465**	0.000
11	The salary increase had a more significant impact than the income tax cut	0.382**	0.000
12	The income tax cut was more effective than the salary increase.	0.710**	0.000

Source: based on the SPSS output

note from Table 2 and Table 3 that the correlation coefficients between each statement of both axes and the total score for all the paragraphs are positive and statistically significant at the adopted significance level of 0.05, and all probability values are less than 0.01, which indicates that the statements of the questionnaire are factual to what they were designed to measure.

4.2. Cronbach's Alpha test:

The reliability of Likert scale measurements is crucial for ensuring validity and consistency in research (Malapne et al., 2024, p93) (Ndlovu, 2024). The reliability of the internal consistency of the Likert scale statements was estimated through Cronbach's alpha analysis using SPSS Statistics.

Table 4: Reliability statics: Cronbach's Alpha

Study axes	N of Items	Cronbach's alpha reliability coefficient	interpretation
First axis	01-10	0.806	High level
Second axis	01-12	0.704	acceptable
Total reliability	/	0.844	High level

Source: based on the SPSS output

It is noted from Table 2-4 that the Cronbach's alpha coefficients for the two axes of the study reached (80.6% and 70.4%) with a high and acceptable reliability scale, respectively. The overall reliability is also high (84.4%), which indicates that this questionnaire has a high level of reliability that justifies its use for this study.

5. Results and Discussion:

5.1. Analysis of the answers of Section 1:

the graphs below show the distribution of the first section of the



questionnaire output expressed by frequency and percentage.

Source: based on the questionnaire and the SPSS output

The study of the employees of institution Kateb Yacine in Sidi Bel Abbes reveals a diverse workforce, predominantly male (62.3%) and aged between 30 to 40 years (45.9%), with a significant portion holding university degrees (44.3%). Most employees are married (68.9%) and possess substantial professional experience, with 42.6% having over ten years in their roles. Most permanent employees (67.3%) earn between 30,000 DZD and 50,000 DZD, while salary increases mostly range from

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5% to 10%. This demographic and wage distribution underscores the importance of adequate wage and incentive systems to enhance the purchasing power and motivation of a largely youthful and educated labour force.

5.2. Analysis of the answers of Section 2:

A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a statement or question followed by three or five answer statements. Respondents choose the option that best corresponds with their feelings about the statement or question (Bhandari & Nikolopoulou, 2023). The interval measurement scale of the 3-point Likert scale for the questionnaire is shown in the table below:

Table 4: the 3-point Likert scale intervals

Likert Scale	Intervale	Opinion	Significance level
1	1-1.67	Disagree	Low
2	1.68-2.34	Neutral	Medium
3	2.35-3	Agree	High

Source: Based on the SPSS output

The descriptive analysis is applied through the mean and standard deviation of the statements in both axes, and their rank according to the means are as follows:

Table 5: Descriptive analysis of the first axis statements

N °	Statements	The Mean	Standard Deviation	Rank	Scale	Sig level
01	The current wage system is fair and equitable.	1.54	0.502	07	Disagree	Low
02	The pay system recognises my contributions and efforts to the organisation.	1.77	0.783	04	Neutral	Medium
03	The current pay system motivates employees to perform well and achieve the organisation's goals.	1.38	0.662	10	Disagree	Low
04	The pay system is flexible enough to meet my financial needs.	1.82	0.742	03	Disagree	Low
05	There is justice in the distribution of wages among employees in the institution.	1.46	0.502	08	Neutral	Medium
06	There is an excellent opportunity for advancement through the current pay system.	1.39	0.665	09	Disagree	Low

07	The rewards given in the wage system require more effort and perseverance to obtain them.	1.87	0.846	02	Neutral	Medium
08	The grants and allowances I receive are good	1.92	0.918	01	Neutral	Medium
09	My salary is commensurate with the academic degree I hold.	1.74	0.772	06	Neutral	Medium
10	I am satisfied with the compensation offered during the promotion.	1.74	0.751	05	Neutral	medium

Source: based on the SPSS output

Table 6: Descriptive analysis of the second axis statements

N°	Statement	The mean	Standard deviation	The rank	scale	Sig level
01	My ability to meet my financial needs has improved after the wage increase.	1.84	0.952	04	Neutral	Medium
02	The increase in wages has increased my purchasing power.	2.00	0.876	02	Neutral	Medium
03	I noticed increased demand for products and services after the wage increase.	1.52	0.648	10	Disagree	Low
04	I was able to meet my basic needs (housing, food, electricity, transportation, etc.) better after the wage increase	0.636	1.28	11	Disagree	low
05	I noticed an improvement in my quality of life after the wage increase (travel, entertainment, education, etc.).	1.56	0.671	09	Disagree	Low
06	I noticed a change in my spending behaviour after the pay increase	1.10	0.300	12	Disagree	Low
07	I was able to save more money after the pay	1.74	0.854	07	Neutral	Medium

Source: based on the SPSS output

All answers to the statements on the second section's axes ranged in significance from low to medium, indicating that the workers of Dar Taquafa the Kateb Yassin do not agree with all of these statements.

5.3. Testing Hypotheses:

The first hypothesis states, "There is high satisfaction with the current wage system on the part of workers at the public institution Dar Al Thaquaafa Kateb Yacine in Sidi Bel Abbes." It can be formulated as follows:

- Null hypothesis H0: The public institution Dar Al Thaquaafa Kateb Yassin workers in Sidi Bel Abbes are not highly satisfied with the current wage system.
- Alternative hypothesis H1: The public institution Dar Al Thaquaafa Kateb Yacine workers in Sidi Bel Abess are highly satisfied with the current wage system.

The second hypothesis states, "There is a significant impact of increasing wages in improving the purchasing power of workers at the public institution Dar Al Thaquaafa Kateb Yacine in Sidi Bel Abbes." It can be formulated as follows:

- Null hypothesis H0: Increasing wages does not significantly improve the purchasing power of workers at the public institution Dar Al Thaquaafa Kateb Yacine in Sidi Bel Abbes.
- Alternative hypothesis H1: Increasing wages significantly improves the purchasing power of workers at the public institution Dar Al Thaquaafa Kateb Yacine in Sidi Bel Abbes.

Table 7: Hypotheses Test Results

	The mean	Standard deviation	Sig level	Decision
First hypothesis	1.64	0.509	Low	Reject
Second hypothesis	1.89	0.686	Medium	Reject

Source: based on the SPSS output

From Table 7, the mean value of the first axis reached (1.64), and the standard deviation reached (0.509), which corresponds to the level of significance "low." Accordingly, the alternative hypothesis is rejected, and the null hypothesis is accepted. The interpretation of the result indicates that the public institution Dar Al Thaqafa Kateb Yacine workers in Sidi Bel Abbes are generally dissatisfied with the current wage system. This can be attributed to factors according to the institution's workers, such as the lack of equal pay and its distribution among employees within the institution, the

current wage system's failure to motivate employees to perform well and achieve the institution's goals and its failure to recognise their efforts, and it is also not consistent with the educational qualifications of the institution's workers.

However, for the second hypothesis, the mean value of the second axis reached (1.89), and the standard deviation (0.686), which corresponds to the level of significance "medium". Hans, the alternative hypothesis is rejected, and the null hypothesis is accepted. Despite the increase in workers' wages at the public institution Kateb Yacine in Sidi Bel Abbes, the purchasing power of workers did not significantly improve. This could be due to other factors affecting purchasing power, such as inflation or the rising cost of living in recent years and increased requirements.

6. CONCLUSION:

The study showed that the current wage system at the Kateb Yacine Cultural Center in Sidi Bel Abbes is unfair, as it does not match the employees' skills, experience and competencies. Significant wage disparities exist between employees who hold the same positions, creating frustration and dissatisfaction among employees.

Most Algerian employees, especially Dar Thaquafa the Kateb Yacine in Sidi Bel Abbes, suffer from decreased purchasing power due to the high cost of living compared to wages. Furthermore, Low motivation and job satisfaction lead to poor employee performance and productivity.

Some recommendations must be applied to improve employee motivation and job satisfaction, thus improving performance and productivity and enhancing the ability to achieve goals. For example, periodic studies must be conducted to evaluate the wage system and its impact on purchasing power. Raising the value of the reference point to something higher than its current value (45 DZD) contributes to raising the salaries of all employees in the public sector. Use modern systems to evaluate employee performance and determine their rewards.

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