

## The Impact of Social Transfer Allocations on the Balance of Public Budget of Algeria During 2007 - 2023. A Quantitative Approach-ARDL Model -.

تأثير التحويلات الاجتماعية على المركز المالي للدولة في الجزائر خلال الفترة 2007 - 2023 الدراسة قياسية باستعمال نموذج ARDL.

**HADDOU Djamel<sup>1</sup>**

<sup>1</sup> Oran University 2 Mohamed Ben Ahmed, [haddou.djamal@univ-oran2.dz](mailto:haddou.djamal@univ-oran2.dz)

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### **Abstract:**

The present study aims to examine the impact of social transfer allocations on the balance of the public budget of Algeria over the period 2007-2023, using a quantitative approach by employing the Autoregressive Distributed Lag (ARDL) model.

The study found that social transfer allocations have a significant impact on the balance of the public budget of Algeria. Where in the long run, an increase in the volume of social transfers by 1% leads to a decline in the financial position of the government by 0.87%. The study also revealed that there is a statistically significant positive effect (P less than % 5) of social transfer allocations on the balance of the public budget in Algeria in the short term; this is due to the stimulation of economic activity in Algeria through increasing domestic demand and its impact on other economic variables in the short term.

**Keys words:** Algeria; Social transfers; Public budget; budget deficit;ARDL.

**JEL classification codes:** H 60 ; H 70.

### **ملخص:**

تهدف دراستنا هذه إلى دراسة أثر التحويلات الاجتماعية على المركز المالي للدولة بالجزائر خلال الفترة 2007 - 2023 معتمدين على المنهج الكمي من خلال استخدام نموذج ARDL . توصلت الدراسة إلى أن التحويلات الاجتماعية تؤثر على المركز المالي للدولة في صورة رصيد ميزانيتها العامة على المدى الطويل، حيث أن ارتفاع حجم التحويلات الاجتماعية ب 1% يؤدي إلى تراجع المركز المالي للدولة ب 0.87 % . كما كشفت الدراسة أيضا على وجود أثر موجب ذو دلالة إحصائية (5 % < P) للتحويلات الاجتماعية على رصيد الميزانية العامة في الجزائر في المدى القصير، والتي تكون نتيجة تحفيز النشاط الاقتصادي بالجزائر من خلال زيادة الطلب المحلي وما له من تأثير على المتغيرات الاقتصادية الأخرى في المدى القصير.

**الكلمات المفتاحية:** الجزائر؛ التحويلات الاجتماعية ؛ الميزانية العامة ؛ عجز الميزانية ؛ نموذج ARDL.

**تصنيف JEL:** H 60 ،. H 70.

**Corresponding author:** HADDOU Djamel, e-mail: [haddoudjamel@gmail.com](mailto:haddoudjamel@gmail.com)

## **1-Introduction**

Social support is no longer limited to developing countries only; it is now a global phenomenon, extending beyond them to capitalist countries. Many countries are keen on the policy of government support, which remains the mean through which they seek to achieve diverse social, economic and, to a greater extent, political goals through their various interventions that are closely linked to the prevailing political system and the legitimacy of their institutions.

In Algeria, the Social support policy is inextricably linked to the concept of the social state and the principle of social justice. These concepts were adopted in the post-independence era to deal with poverty and illiteracy. However, the policymakers in Algeria continue to grapple with the repercussions of imbalances in all economic and social spheres, necessitating the government to intervene to protect vulnerable groups and enhance the performance of economic activity in the country by pursuing a support policy that reflects the sovereign role of the government in achieving its economic and social objectives through its responsibility to realign the economic trajectory and improve the mechanisms for implementing its social role along with the sharp turbulence of the current economic environment, and adhere to the social contract' principles that binds it to its people.

like many developing countries, Algeria is confronted with weak social safety programs, which are largely confined to subsidies, these have become a major burden on its public finances as a consequence of the Algerian decision-makers' resort respond to various shocks across various sectors by increasing allocations for social transfers, employment, and public sector wages in order to appease the social front on one side, and achieve political gains on the other. Consequently, social transfers have become a burden that is increasingly challenging, necessitating sustainable resources to cover them.

The nature of the subsidy policy pursued by Algerian decision-makers has exacerbated its cost, which in 2016 exceeded 28% of total budget expenditures, (التقرير التقيمي السنوي لمشروع قانون المالية), (2017) constituting 10.51% of the country's GDP. this is especially challenging in light of the decline in budget revenues as a result of the fall of hydrocarbon prices on the international market since the second semester of 2014, which led to the need to review the existing policy of subsidies and social transfers, as outlined in Article 182 of the 2022 Financial Law (قانون المالية), (2021). This re-evaluation aim to shift towards targeted support measures instead of providing a comprehensive assistance, Particularly, after the significant increase in the level of social transfers coincided with the deterioration of the government's financial position, as evidenced by its public budget balance, which has been in deficit since 2009.

### **1-1-Problematic of the study**

As per above, the study investigates the impact of social transfer allocations on the balance of public budget in Algeria, therefore, the main question of this investigation is:

What is the impact of social transfer allocations on the balance of the public budget in Algeria?

### **1-2-Hypothesis of the study**

The impact of social transfer allocations on the balance of the public budget is ambiguous and multifaceted. They may have a positive effect when they lead to stimulating domestic consumption, which leads to dynamizing business sectors, thereby leading to higher corporate profits and income taxes which boost the flow of tax revenue to the government.

Social transfer allocations may also have a negative effect on the government's budget balance when they are inefficiently managed or not supported by corresponding increase in revenues, which may harm the government's financial position and exacerbate its budget deficits.

This study assumes that the social transfer allocations significantly and negatively influence the balance of the public budget of Algeria during the period of the study 2007 - 2023.

### **2-Literature and empirical review:**

Social transfers are defined as Redistributing part of national wealth through payments offered to a group of individuals or families in kind or in cash to mitigate the financial burden of risk protection.(Insee)

Social transfers are connected to the following risk categories: Poverty and social exclusion, health (full or partial reimbursement for medical expenses), old age (pensions), housing challenges, Maternity-family (child care assistance);... etc.

Many researchers have addressed the topic of social transfers and their impact on divers domains, whether social, economic or financial spheres.

In their paper entitled” The local impact of social cash transfers”, Karen Thome and her associates , explored the role of social cash transfers in stimulating economic growth, by stimulating demand which exert a positive contribution to the business environment which lead to enhance budget revenues (Thome, Taylor, Filipski, Davis, & Handa, 2016), it is evident that various social transfer programmes can effectively reduce poverty levels, but they require sustainable financing mechanisms to avoid pressure on public finance ( Barrientos & Niño-Zarazúa, 2011), which must be accompanied by an effective employment policy, in order to achieve low levels of poverty, and financial stability for vulnerable households, this approach will prevent undesirable that can accompany social transfer programmes by producing an autonomous category of individuals that is permanently relied to various government support programmes instead of becoming a contributing category in the economy. This is due to the fact that social transfers may have adverse effect on work incentives if the social transfers provide alternatives that cover the basic needs of individuals (Gentilini, 2022).

During periods of economic recessions, social transfers can function as a stabilization mean by preventing consumption levels from falling to low levels, thereby reducing economic fluctuations in various sectors.

A number of studies have concluded that the targeting of specific groups within society with social transfer programmes would increase their effectiveness(DAVIS, HANDA, HYPHER, ROSSI, WINTERS, & YABLONSKI, 2016), otherwise they would lead to increased pressure on public finance.

### **3-Methodology, data source, and the empirical model:**

#### **3-1-Methodology:**

This study investigates the impacts of the social transfer programs on the balance of the public budget of Algeria during the period 2007 - 2023. To reach that autoregressive distributed lag (ARDL) model has been employed due to the nature of the study's variables.

#### **3.2 Data source:**

The data of our study is collected from the following sources:

1- Annual reports of Bank of Algeria(Bank of Algeria, 2023-2020-2018-2017-2014-2012-2009).

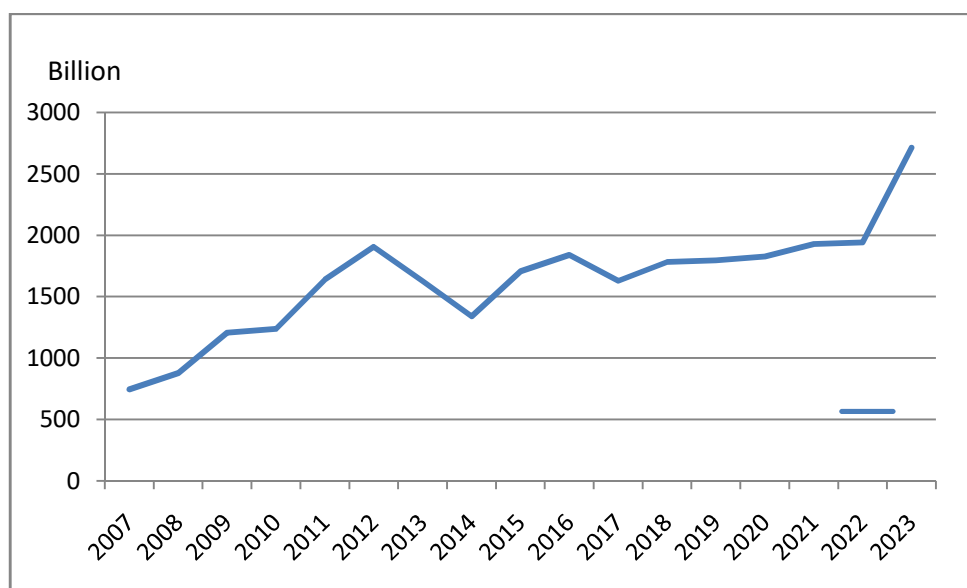
2- Annual assessment reports of the Accounting Council(National Accounting Council, 2021-2020-2019-2017-2015).

#### **3-3-The ARDL Model:**

##### **3-3-1-Descriptive analysis**

##### **3-3-1-1-The evolution of social transfers in Algeria during the period 2007 – 2023**

**Fig.01.** The evolution of social transfers in Algeria during 2007 – 2023



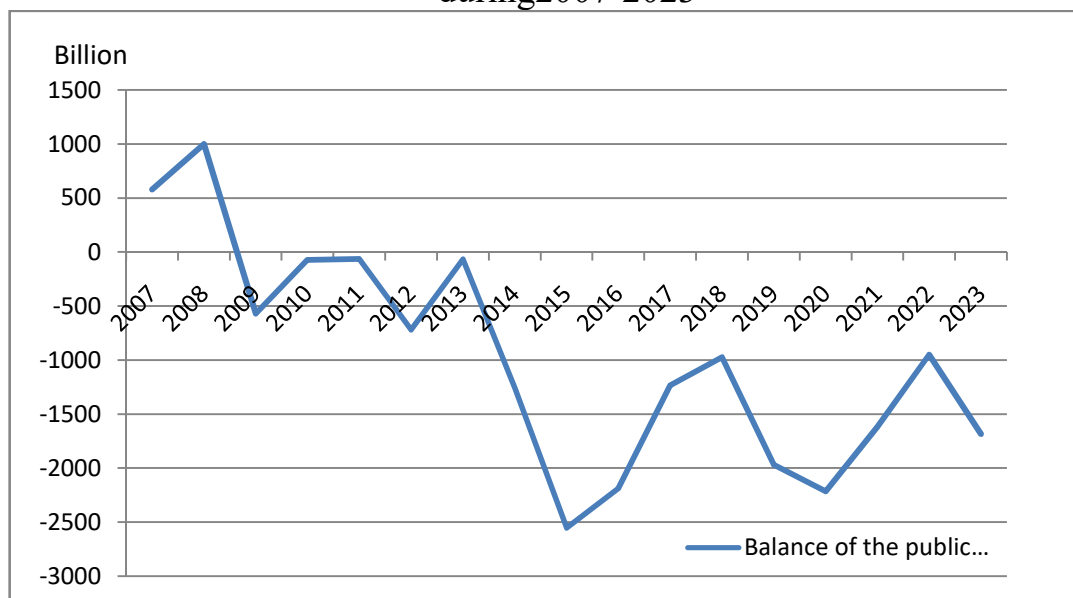
**Source :**The author from the collected data.

Social transfers, as shown in Figure 01, recorded an escalation trend, reaching 1905 billion dinars in 2012 against 746.04 billion dinars in 2007, achieving a growth rate of 155.35% over a five year period, however, social transfers saw to decline in 2013 by 14.62% to reach 1626.5 billion dinars, then 1340.5 billion dinars in 2014. this downturn is due to the pressure of declining levels of public budget revenues, to rise again during the next two years, marking a growth of 37.37% to 1841.6 billion dinars in 2016. Nevertheless, this was followed by a decline of 11.5% during the following year, reaching 1630.1 billion dinars, to display a gradual increase, reaching 2714 billion dinars in 2023, which represent a growth of 66.5% compared to 2017.

### **3-3-1-2-The evolution of Algeria's public budget balance during 2007-2023.**

The public budget balance, as it is demonstrated in figure 02, was permanently negative starting in 2009 as a consequence of the downturn of public revenues due to the shock of the global financial crisis, reaching 570.3 billion dinars after a positive budget balance registered in 2008 at 999.5 billion dinars, representing a 157.6 % decrease in the budget balance compared to 2008. The public budget deficit witnessed a decline over the following two years, reaching 63.5 billion dinars in 2011. The deficit then grew to 718.8 billion dinars in the following year, then to decline again in 2013 to 66.6 billion dinars, nevertheless, budget deficit rised again and reached its highest level of 2553.3 billion dinars as a result of the decline in hydrocarbon prices beginning in the second half of 2014, then declined, but remained at high levels, as the deficit reached 1686 billion dinars in 2023 due to a significant increase in government expenditures that came in response to pressures from the social front.

**Fig.02.** The evolution of Algeria's public budget balance during 2007-2023

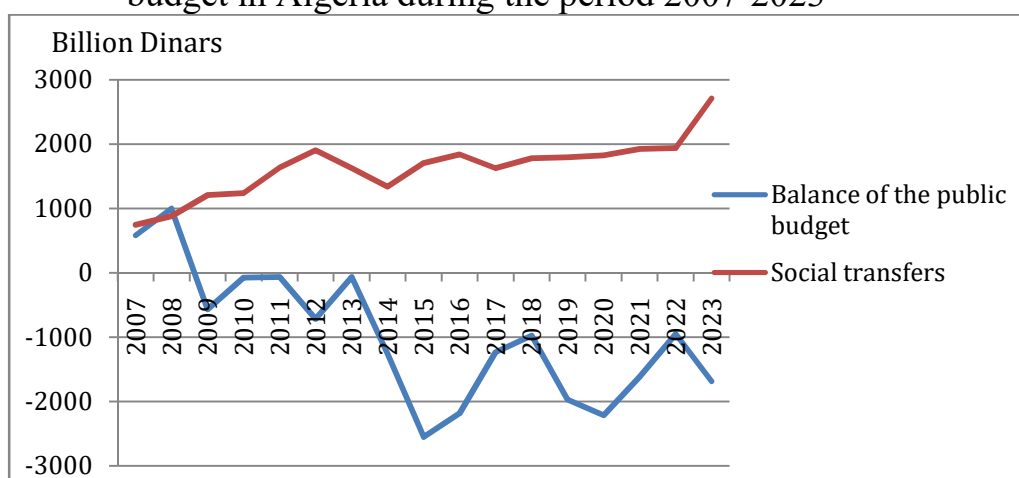


Source :The author from the collected data.

### **3-3-1-3-Comparison of the evolution of social transfers and the balance of the public budget in Algeria during the period 2007-2023**

During the study period, social transfers recorded an increasing growth since 2007 when they reached 746.04 billion dinars while the public budget recorded a surplus of 579.3 billion dinars. Social transfers continued to grow and reached 1207.8 billion dinars while the public budget recorded a deficit of 570.3 billion dinars .this was due to a decline in public revenues as a reaction to the shock of the global financial crisis during that period which led to a global economic recession that affected the global demand for oil and consequently the decline in the prices of the latter on the international markets.

**Fig.03.** the evolution of social transfers and the balance of the public budget in Algeria during the period 2007-2023



**Source :**The author from the collected data.

The budget deficit witnessed a decline in 2010 and 2011, reaching 63.5 billion dinars in 2011, despite the increasing growth in social transfer allocations, which reached 1639 billion dinars that year. That was supported by an improvement in budget revenues. However, the budget deficit jumped to 718.8 billion dinars the following year under the pressure of a significant increase in public, including social transfers, which reached 1905 billion dinars that year. In 2013, the allocations for social transfers decreased by 14.62% to 1626.5 billion dinars, accompanied by a decline in the public budget deficit, which reached 66.6 billion dinars. This latter increased significantly the following year to 1257.3 billion dinars, despite the decline in social transfers for the same year by more than 17% at 1340.6 billion dinars. The budget deficit worsened and reached its highest level during the study period in 2015 at 2553.3 billion dinars. as a result of the significant and continuous increase in the volume of public expenditures, including the allocations of social transfers, which recorded an increase of 27.46% at 1708.7 billion dinars, and 1841.6 billion dinars in the following year, which coincided with a decrease in public budget deficit by 14.3% due to the decline in the volume of total expenditures while budget revenues remained relatively stable. Public budget deficit continued to decline until 2018 reaching 974.9 billion dinars, despite social

transfers increasing by 9.4% at 1783.4 billion dinars. The allocations of social transfers exhibited an increasing growth, which coincided with the public budget registering high deficit level in 2020, reaching 2215.6 billion dinars due to the repercussions of the Corona pandemic, which witnessed a significant decline as a consequence of the diminution of economic activity in the country and even at the global level.

Nevertheless, the budget deficit recorded a decline during the subsequent two years, reaching 949.61 billion dinars in 2022, despite the continuous rise in social transfer allocations, which reached 1942 billion dinars in the same year. This was followed by a further rise in 2023, reaching its highest level during the study period at 2714 billion dinars, which was accompanied by a growth in the public budget deficit by about 77.55% at 1686 billion dinars as a result of the government's response to the demands of the social front to improve their social conditions under pressure of a decline in budget revenues that same year.

### **3-3-2-Pre-test statistics**

#### **3-3-2-1-unit root test :**

**Table 01.** Unit root test

| Time series                             | In Level                                                                                                                          | In 1st difference                                                                                                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Social Transfer Allocations (ST)</b> | Null Hypothesis: ST has a unit root<br>Exogenous: Constant<br>Lag Length: 0 (Automatic - based on SIC, maxlag=2)                  | Null Hypothesis: D(ST) has a unit root<br>Exogenous: Constant<br>Lag Length: 0 (Automatic - based on SIC, maxlag=2)               |
|                                         | t-Statistic                                                                                                                       | t-Statistic                                                                                                                       |
|                                         | Elliott-Rothenberg-Stock DF-GLS test statistic                                                                                    | -0.8098 Elliott-Rothenberg-Stock DF-GLS test statistic                                                                            |
|                                         | Test critical values: 1% level                                                                                                    | -2.7175 Test critical values: 1% level                                                                                            |
|                                         | 5% level                                                                                                                          | -1.9644 5% level                                                                                                                  |
|                                         | 10% level                                                                                                                         | -1.6056 10% level                                                                                                                 |
|                                         | *Mackinnon (1996)<br>Warning: Test critical values calculated for 20 observations and may not be accurate for a sample size of 16 | *Mackinnon (1996)<br>Warning: Test critical values calculated for 20 observations and may not be accurate for a sample size of 15 |
| <b>Balance of Public Budget (BP)</b>    | Null Hypothesis: BP has a unit root<br>Exogenous: Constant<br>Lag Length: 0 (Automatic - based on SIC, maxlag=3)                  | Null Hypothesis: D(BP) has a unit root<br>Exogenous: Constant<br>Lag Length: 1 (Automatic - based on SIC, maxlag=3)               |
|                                         | t-Statistic                                                                                                                       | t-Statistic                                                                                                                       |
|                                         | Elliott-Rothenberg-Stock DF-GLS test statistic                                                                                    | -1.872941 Elliott-Rothenberg-Stock DF-GLS test statistic                                                                          |
|                                         | Test critical values: 1% level                                                                                                    | -2.717511 Test critical values: 1% level                                                                                          |
|                                         | 5% level                                                                                                                          | -1.964418 5% level                                                                                                                |
|                                         | 10% level                                                                                                                         | -1.605603 10% level                                                                                                               |
|                                         | *Mackinnon (1996)<br>Warning: Test critical values calculated for 20 observations and may not be accurate for a sample size of 16 | *Mackinnon (1996)<br>Warning: Test critical values calculated for 20 observations and may not be accurate for a sample size of 14 |

**Source:** EVIEWS 12.

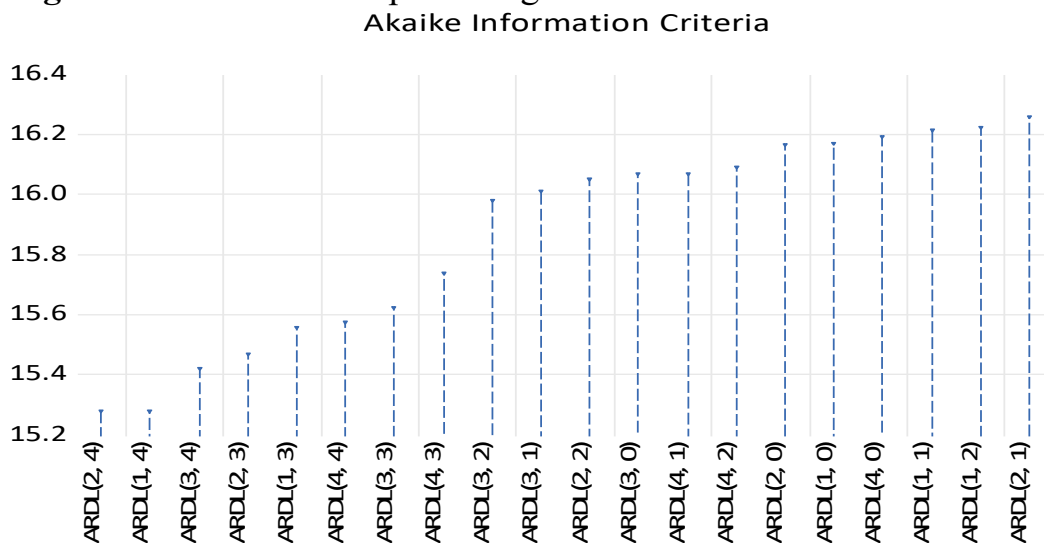
ADF GLS (ERS) unit root test is employed to check whether a time series variables are non-stationary and possesses a unit root which lead to a spurious results. The outcomes of the time series stationarity test for the study variables (social transfer allocations and public budget balance) are exhibited in Table 01.

As indicated in Table 01, the social transfer allocations variable's t-statistic is - 0.8 which is greater than all test critical values ,which means that there is likely a unit root and the series is not stationary at level , while the public budget balance variable is stationary at the 10% significance level ( t-statistic = - 1.87 less than the test critical value at 10% significance level) .the unit root test results also indicates that the two variables are stationary in the first difference at a significant level of 1%, thereby fulfilling one of the conditions for the stability of the time series that allows the employment of the ARDL model.

### **3-3-3-Selection of the optimal lags for the model:**

The selection of the optimal lags for the model is illustrated by Figure 04, which, based on the AIC criterion, demonstrates that the ARDL model (2,4) corresponds to the optimal number of lags for the present study.

**Fig.04.** Selection of the optimal lags for the model.



Source: EVIEWS 12.

### **3-3-4-Estimation results of the ARDL model**

As per table 02, it is evident that influence of social transfer allocations on the balance of the public budget in Algeria is high (87.21%).

The results also denote that the statistical significance of the model parameters is indicated by the value of Prob. (F-statistics) = 0.04, which is less than the 5% significance level. Thus, the model parameters are statistically significant. Additionally, the Durbin-Watson statistic is 2.57, indicating that the model does not exhibit autocorrelation problem.

### 3-3-5-The model quality tests:

The performance of the ARDL (2.4) model in estimating the short-term and long-term effects between social transfer allocations and the balance of public budget must be ensured through the following diagnostic:

**Table.02.** Estimation results of the ARDL model

| Dependent Variable: BP                              |             |                       |             |        |
|-----------------------------------------------------|-------------|-----------------------|-------------|--------|
| Method: ARDL                                        |             |                       |             |        |
| Date: 12/24/24 Time: 00:08                          |             |                       |             |        |
| Sample (adjusted): 2011 2023                        |             |                       |             |        |
| Included observations: 13 after adjustments         |             |                       |             |        |
| Maximum dependent lags: 4 (Automatic selection)     |             |                       |             |        |
| Model selection method: Akaike info criterion (AIC) |             |                       |             |        |
| Dynamic regressors (4 lags, automatic): ST          |             |                       |             |        |
| Fixed regressors: C                                 |             |                       |             |        |
| Number of models evaluated: 20                      |             |                       |             |        |
| Selected Model: ARDL(2, 4)                          |             |                       |             |        |
| Variable                                            | Coefficient | Std. Error            | t-Statistic | Prob.* |
| BP(-1)                                              | 0.086169    | 0.367114              | 0.234720    | 0.8237 |
| BP(-2)                                              | -0.210731   | 0.228946              | -0.920437   | 0.3996 |
| ST                                                  | -0.038860   | 0.508860              | -0.076367   | 0.9421 |
| ST(-1)                                              | 1.372453    | 0.899146              | 1.526396    | 0.1874 |
| ST(-2)                                              | 0.296791    | 0.964184              | 0.307816    | 0.7706 |
| ST(-3)                                              | -0.991070   | 0.938816              | -1.055659   | 0.3394 |
| ST(-4)                                              | -1.615047   | 1.121618              | -1.439927   | 0.2094 |
| C                                                   | -295.6129   | 1325.786              | -0.222972   | 0.8324 |
| R-squared                                           | 0.872186    | Mean dependent var    | -1345.862   |        |
| Adjusted R-squared                                  | 0.693246    | S.D. dependent var    | 790.0857    |        |
| S.E. of regression                                  | 437.5918    | Akaike info criterion | 15.27571    |        |
| Sum squared resid                                   | 957433.0    | Schwarz criterion     | 15.62337    |        |
| Log likelihood                                      | -91.29210   | Hannan-Quinn criter.  | 15.20425    |        |
| F-statistic                                         | 4.874188    | Durbin-Watson stat    | 2.570180    |        |
| Prob(F-statistic)                                   | 0.040034    |                       |             |        |

\*Note: p-values and any subsequent tests do not account for model selection.

Source: EVIEWS 12.

### 3-3-6-Autocorrelation test:

As reported by table.03, The P- value of chi-squared is estimated at 12%, which is greater than 5%. Thus, the model does not represent Autocorrelation problem.

**Table.03.**Autocorrelation test

|                                                        |          |                     |        |
|--------------------------------------------------------|----------|---------------------|--------|
| Breusch-Godfrey Serial Correlation LM Test:            |          |                     |        |
| Null hypothesis: No serial correlation at up to 2 lags |          |                     |        |
| F-statistic                                            | 1.820516 | Prob. F(2,3)        | 0.3036 |
| Obs*R-squared                                          | 7.127419 | Prob. Chi-Square(2) | 0.1283 |

Source: EVIEWS 12.

### 3-3-7-Homoscedasticity test

The present study employs Breush-Pagan-Godfrey test to assess the homogeneity of variances. The results are exhibited in table.04.

**Table.04.** Homoscedasticity test

|                                                |          |                     |        |
|------------------------------------------------|----------|---------------------|--------|
| Heteroskedasticity Test: Breusch-Pagan-Godfrey |          |                     |        |
| Null hypothesis: Homoskedasticity              |          |                     |        |
| F-statistic                                    | 0.349239 | Prob. F(7,5)        | 0.8986 |
| Obs*R-squared                                  | 4.268923 | Prob. Chi-Square(7) | 0.7483 |
| Scaled explained SS                            | 0.445472 | Prob. Chi-Square(7) | 0.9996 |

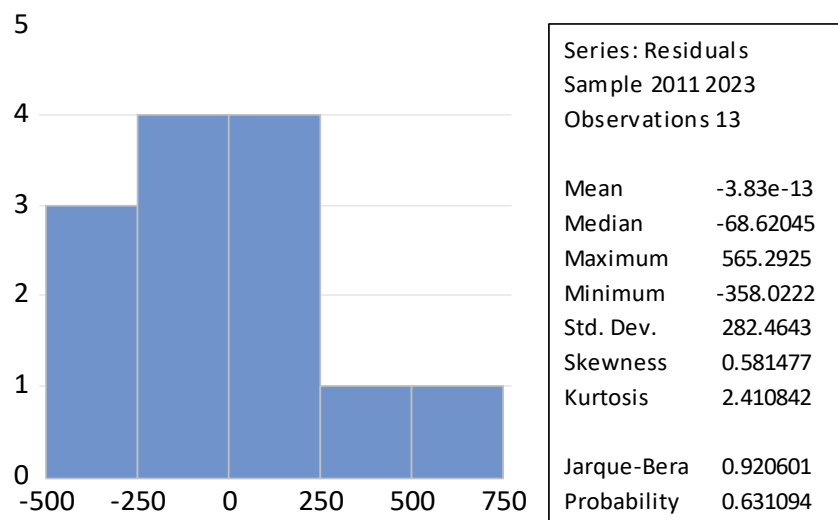
**Source: EVIEWS 12.**

As per table.04.theProb.f = 0.89 ,which is greater than 5% , which implies that the variance of the residuals is constant across all levels of the s variables.

### **3-3-8-Normality test :**

As reported by figure.05.If the p-value = 0,68 which is greater than the significance level 5% , the null hypothesis is accepted, indicating that the data is normally distributed.

**Fig.05.**Normality test results.

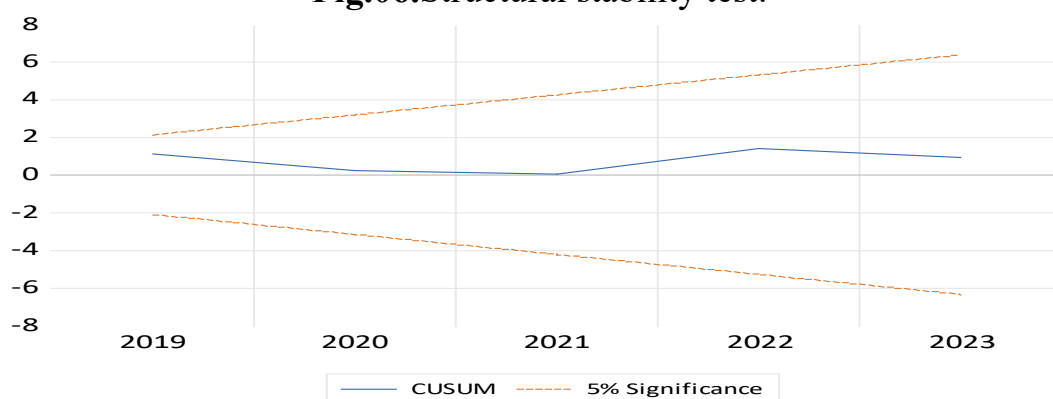


**Source: EVIEWS 12.**

### **3-3-9-Parameter and structural Stability test :**

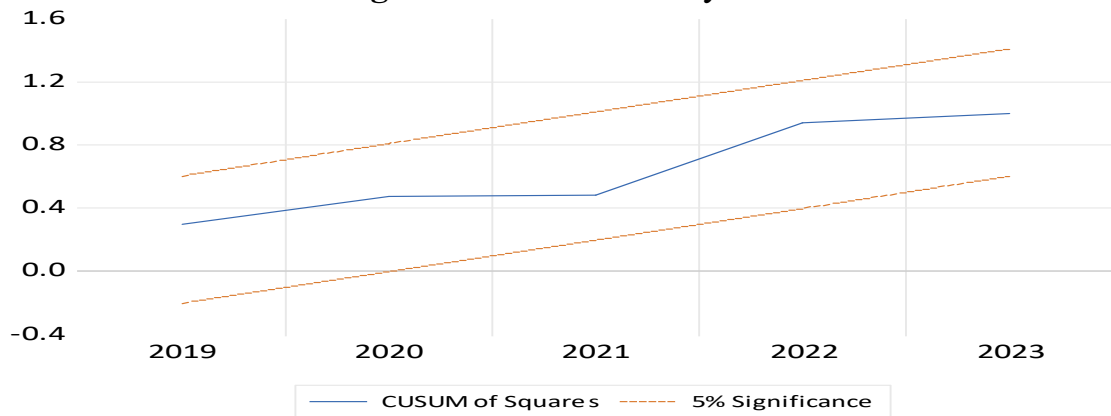
We use this test to ensure that the model is free of any structural changes.

**Fig.06.**Structural stability test.



**Source: EVIEWS 12.**

as reported if figure.06 and figure.07,the graphical representation is within the critical limits at the level of significance 5%, accordingly, the model does not represent a problem of structural changes.

**Fig.07.**Structural stability test.

Source: EVIEWS 12.

**3-3-10-Bounds test:**

In order to confirm the relationship level between the social transfer allocations and the balance public budget in Algeria, the boundary test has been applied, the results of the test are shown in table 05.

**Table.05.**Bounds test results.

| F-Bounds Test       |          | Null Hypothesis: No levels relationship |       |       |
|---------------------|----------|-----------------------------------------|-------|-------|
| Test Statistic      | Value    | Signif.                                 | I(0)  | I(1)  |
| Asymptotic: n=1000  |          |                                         |       |       |
| F-statistic         | 4.698329 | 10%                                     | 3.02  | 3.51  |
| k                   | 1        | 5%                                      | 3.62  | 4.16  |
|                     |          | 2.5%                                    | 4.18  | 4.79  |
|                     |          | 1%                                      | 4.94  | 5.58  |
| Finite Sample: n=35 |          |                                         |       |       |
| Actual Sample Size  | 13       | 10%                                     | 3.223 | 3.757 |
|                     |          | 5%                                      | 3.957 | 4.53  |
|                     |          | 1%                                      | 5.763 | 6.48  |
| Finite Sample: n=30 |          |                                         |       |       |
|                     |          | 10%                                     | 3.303 | 3.797 |
|                     |          | 5%                                      | 4.09  | 4.663 |
|                     |          | 1%                                      | 6.027 | 6.76  |

Source: EVIEWS 12.

We note from Table 05 that  $F \text{ stat} = 4.698 > 4.16$ , and therefore we reject hypothesis  $H_0$ , and accept the alternative hypothesis  $H_1$ , that there is a long-term common integration between social transfer allocations and the balance of public budget in Algeria during the period of study from 2007 to 2023. this leads to accept ARDL model results at a 5% significance level.

**3-3-11-Estimating long-run relationship:**

The long-run relationship of the impact of social transfer allocations on public budget balance in Algeria for the period 2007-2023 is as follow (table.06):

From table.06, we observe that the impact of social transfer allocations on the public budget balance in Algeria is by a factor of - 0.867, which means that an increase in social transfer allocations by 1%, the balance of Algeria's public budget changes by - 0.867%, which is confirmed by several studies.

**Table.06.**Estimating Long-run relationship results.

ARDL Long Run Form and Bounds Test  
Dependent Variable: D(BP)  
Selected Model: ARDL(2, 4)  
Case 2: Restricted Constant and No Trend  
Date: 12/24/24 Time: 00:56  
Sample: 2007 2023  
Included observations: 13

| Conditional Error Correction Regression |             |            |             |        |
|-----------------------------------------|-------------|------------|-------------|--------|
| Variable                                | Coefficient | Std. Error | t-Statistic | Prob.  |
| C                                       | -295.6129   | 1325.786   | -0.222972   | 0.8324 |
| BP(-1)*                                 | -1.124562   | 0.300293   | -3.744884   | 0.0134 |
| ST(-1)                                  | -0.975733   | 0.795824   | -1.226067   | 0.2748 |
| D(BP(-1))                               | 0.210731    | 0.228946   | 0.920437    | 0.3996 |
| D(ST)                                   | -0.038860   | 0.508860   | -0.076367   | 0.9421 |
| D(ST(-1))                               | 2.309326    | 0.796653   | 2.898784    | 0.0338 |
| D(ST(-2))                               | 2.606118    | 0.843456   | 3.089808    | 0.0272 |
| D(ST(-3))                               | 1.615047    | 1.121618   | 1.439927    | 0.2094 |

\* p-value incompatible with t-Bounds distribution.

| Levels Equation<br>Case 2: Restricted Constant and No Trend |             |            |             |        |
|-------------------------------------------------------------|-------------|------------|-------------|--------|
| Variable                                                    | Coefficient | Std. Error | t-Statistic | Prob.  |
| ST                                                          | -0.867656   | 0.660134   | -1.314365   | 0.2458 |
| C                                                           | -262.8694   | 1180.002   | -0.222770   | 0.8325 |

EC = BP - (-0.8677\*ST - 262.8694)

**Source:** EVIEWS 12.

### **3-3-12-ARDL Error Correction Regression and the Short-run relationship test:**

**Table.07.** Results ARDL Error Correction Regression test.

ARDL Error Correction Regression  
Dependent Variable: D(BP)  
Selected Model: ARDL(2, 4)  
Case 2: Restricted Constant and No Trend  
Date: 12/24/24 Time: 01:05  
Sample: 2007 2023  
Included observations: 13

| ECM Regression<br>Case 2: Restricted Constant and No Trend |             |            |             |        |
|------------------------------------------------------------|-------------|------------|-------------|--------|
| Variable                                                   | Coefficient | Std. Error | t-Statistic | Prob.  |
| D(BP(-1))                                                  | 0.210731    | 0.164818   | 1.278564    | 0.2572 |
| D(ST)                                                      | -0.038860   | 0.375160   | -0.103583   | 0.9215 |
| D(ST(-1))                                                  | 2.309326    | 0.627892   | 3.677903    | 0.0143 |
| D(ST(-2))                                                  | 2.606118    | 0.649223   | 4.014211    | 0.0102 |
| D(ST(-3))                                                  | 1.615047    | 0.885630   | 1.823614    | 0.1278 |
| CointEq(-1)*                                               | -1.124562   | 0.253155   | -4.442182   | 0.0068 |

|                    |           |                       |           |
|--------------------|-----------|-----------------------|-----------|
| R-squared          | 0.868077  | Mean dependent var    | -124.0000 |
| Adjusted R-squared | 0.773846  | S.D. dependent var    | 777.6836  |
| S.E. of regression | 369.8326  | Akaike info criterion | 14.96802  |
| Sum squared resid  | 957433.0  | Schwarz criterion     | 15.22876  |
| Log likelihood     | -91.29210 | Hannan-Quinn criter.  | 14.91442  |
| Durbin-Watson stat | 2.570180  |                       |           |

\* p-value incompatible with t-Bounds distribution.

**Source:** EVIEWS 12.

From table.07.,social transfer allocations have a statistically significant positive impact on Algeria's public budget balance in the short-run, which is consistent with several studies through the positive impact of social transfers on the rest of

the country's macroeconomic variables. The value of CointEq (-1) error correction coefficient is equal to -1.124 and it is statistically significant  $< 5\%$ , which indicates a long-term relationship between the social transfer allocations and the balance of Algeria's public budget during the period 2007-2023.

#### **4-Results discussion:**

The results of the study reveals that social transfer allocations affect Algeria's public budget balance between 2007 and 2023, so that the 1% increase in social transfer allocations results in a 0.87% decline in the government's financial position, which corresponds to the findings of the study entitled: "From Evidence to Action, The story of cash transfers and impact evaluation in sub-Saharan Africa" (DAVIS, HANDA, HYPHER, ROSSI, WINTERS, & YABLONSKI, 2016).

The negative and statistically significant impact of social transfer allocations on the balance of the public budget indicate the burden that social transfer allocations have on the government's finances. In which this latter constitute more than 20% of the public budgets. This requires a necessary review of the current public support policy and the orientation towards more efficient support programmes by targeting eligible groups for social transfers rather than inclusive ones.

The results of the study also report that social transfers have a positive and statistically significant impact on the balance of the public budget in the short-run, reflecting the impact of social transfers on domestic demand that leads to stimulating other sectors which corresponds to the findings of the study entitled: "The local economy impacts of social cash transfers" (Thome, Taylor, Filipski, Davis, & Handa, 2016). This result also reflects the improvement of fiscal collection outside the hydrocarbon sector, which reflects the dynamism of the economic sector's activities supported by the demand arising from social transfers annually allocated by the State to different groups of society.

#### **Conclusion:**

Algeria is distinguished by its social orientation, as evidenced by its policymakers' extensive reliance on support policies to achieve their social, economic, and political objectives. The present study was conducted with the objective investigating the impact of this policy on the government's finances, particularly in the context of the persistent increase in social transfers in comparison to the fluctuations in budget revenues. The study's findings indicate that social transfers exert an inverse effect on the public budget of Algeria, with a coefficient of - 0.86, thereby substantiating the hypothesis that was initially put forward. Furthermore, the study determined that social transfers exert a positive influence on the government's public finance in the short term. This is attributable to the positive effect that social transfers have on stimulating local demand, which, in turn, leads to an improvement in the performance of various economic variables.

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