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From progressive to regressive? Income tax reform and inequality in the Republic of Moldova

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Abstract: This study examines whether the Republic of Moldova's 2018 transition from a progressive income tax system to a flat 12% tax altered the trajectory of income inequality. The research objective is to empirically assess both the immediate and long-term distributional effects of the reform. Using Interrupted Time Series Analysis (ITSA) on annual data from 2014 to 2023 and the Gini coefficient of disposable income as the primary inequality proxy, the study evaluates changes in both level and trend before and after the reform. Newey-West standard errors address mild negative autocorrelation. Results indicate an initial decline in inequality following the reform, but a subsequent sustained increase, suggesting regressive long-term effects. The findings show the reform disproportionately benefited high-income earners and weakened the redistributive role of the tax system. These outcomes challenge the presumed neutrality of flat taxes and underscore the need to reintroduce progressive elements for fairer income distribution in Moldova.

Keywords: taxation, inequality, Moldova, fiscal reform, flat tax

Introduction

A tax system is appropriate if it is efficient, equitable and simple (Slemrod, 2002, p. 8). The primary purpose of a tax system is to lead to revenue generation, while also fulfilling distributive and regulatory functions. In addition, the tax system can play a vital role during times of uncertainty by promoting stability and supplying essential information to guide government policies be it in economic, social, health, or environmental domains (Daly, 2023, p. 542). Given its wide range of functions, it's only natural for governments to rely on tax systems to address certain issues, even systemic problems, seeking immediate results and sometimes ignoring long-term circumstances. Tax systems change over time due to two main factors: government demands, i.e. what they want the tax system to achieve and external forces such as economic shifts, technological developments, globalization, and fiscal decentralization (Tanzi, 2018, p. 1). These factors are considered in the literature to

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influence what kind of tax system is possible and effective in a given country. Moreover, the optimal tax theory, in its current form, is sometimes criticized for being incomplete for guiding real-world tax policy because it overlooks the coercive nature and resource costs of tax collection, as different tax systems vary significantly in administrative costs, which is crucial for policy design (Slemrod, 1990, p. 168).

Inequality, whether it refers to economic disparities between individuals, groups, social classes, or countries (European Commission, 2018), represents a phenomenon that can be mitigated through government intervention via appropriate fiscal, social, and economic measures. The tax system is recognized as being one of the main instruments to ensure a balance in the income distribution to achieve equity in such a way mitigating the inequality-related market failure. Progressive taxation is widely regarded as an effective tool to prevent the deepening of income inequality. However, some countries advocate for flat rate taxation due to its simplicity in administration.

The Republic of Moldova currently applies a flat personal income tax (PIT), meaning that a single uniform rate is levied regardless of income level. Prior to 2018, Moldova operated under a progressive taxation model, which differentiated between income groups. Specifically, individuals earning up to 33,000 MDL were taxed at 7%, while income exceeding this threshold was subject to a higher 18% rate. This structure reflected the principle of vertical equity, whereby higher earners contribute proportionally more to the state budget.

The fiscal reform of 2018, codified in Article 15 of the Fiscal Code, fundamentally altered this framework by introducing a flat 12% income tax applicable to most individuals and legal entities. This marked a decisive policy shift, with far-reaching economic and social implications. The reform applied broadly, encompassing employees, entrepreneurs, and professionals in sensitive sectors such as justice and healthcare. At the same time, exceptions were maintained for specific categories: farmer households continued to pay a reduced 7% rate, while economic agents with estimated income faced a corrective mechanism whereby 15% was levied on any earnings surpassing their declared estimates (Republica Moldova Parlamentul, Codul Fiscal [Parliament of the Republic of Moldova, Fiscal Code], 1997).

Another component of the reform was the adjustment of the non-taxable income threshold. The ceiling was raised to 24,000 MDL annually, aligning it with the subsistence minimum. This measure aimed to provide relief to low-income households and mitigate, at least partially, the regressive nature of the flat tax. In policy terms, the government justified the reform as a tool to simplify tax administration, attract investment, and stimulate business activity by reducing compliance costs. Indeed, flat taxation is often praised for its administrative efficiency and potential to limit tax evasion by removing complex brackets that incentivize misreporting.

Nevertheless, the reform also carried important distributive consequences. Under the previous progressive model, the PIT was one of the most effective fiscal

instruments for reducing inequality through redistribution. By contrast, the flat system weakened this redistributive effect, raising concerns that higher-income groups would disproportionately benefit from reduced marginal rates. Empirical analyses conducted after the reform (Cojocaru et al., 2019) suggest that the progressivity of the tax system declined significantly, eroding its capacity to correct market-driven income disparities. This shift coincided with broader debates in Eastern Europe, where several post-Soviet states experimented with flat taxes in the 2000s, often achieving mixed results in terms of equity.

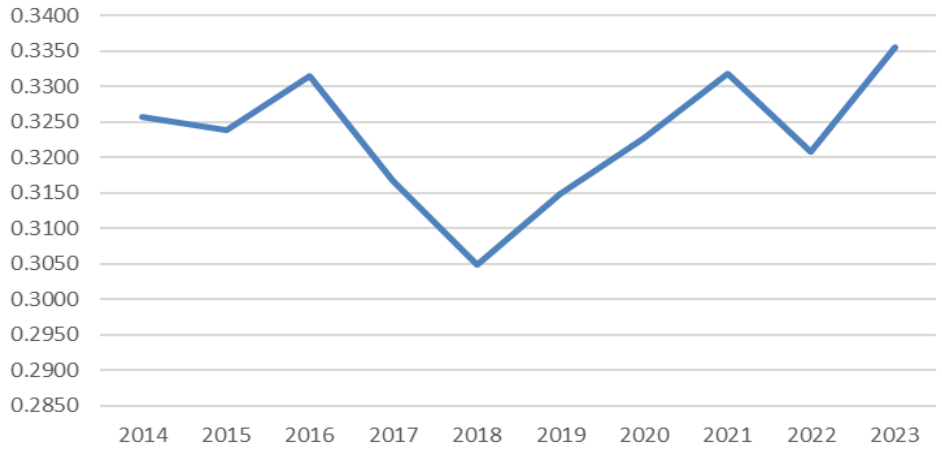
For Moldova, the reform's implications extend beyond fiscal efficiency. A flatter tax structure risks exacerbating income inequality at a time when social cohesion and inclusive growth are critical for economic stability and EU integration prospects. While low-income earners gained slightly from the higher non-taxable threshold, middle- and upper-income groups benefitted far more from the reduced overall tax burden. This imbalance has fueled debates among policymakers, economists, and civil society about whether efficiency gains justify the social trade-offs. Thus, while the 2018 reform streamlined Moldova's PIT and aligned it with broader regional experiments in flat taxation, it also marked a retreat from progressivity and redistribution. The resulting tension between efficiency and equity remains central to understanding the evolving role of taxation in Moldova's economic development model.

Moreover, according to Ionita (2018), an economist from IDIS Viitorul think tank, the flat tax reform of 12% has also led to significant budgetary losses, estimated at over 1 billion lei annually, primarily affecting local budgets. While the reform aimed to simplify tax administration and provide relief to low-income earners, only 10% of the total tax savings benefit them, with high-income earners receiving the most substantial advantages. The flat tax has reduced personal income tax revenues by 35%, with the capital city alone losing approximately 350 million lei annually. Although low-income earners save around 74 lei monthly, high earners gain significantly more, with top executives saving over 6,000 lei monthly (Ionita, 2018). In a report issued soon after the shift from a progressive to a predominantly flat tax system acknowledges that although this transition sought to stimulate investment and economic growth it also posed challenges for income distribution and social equity (Agenția de Stat pentru Proprietatea Intelectuală [State Agency on Intellectual Property], 2019).

Thus, even though the flat tax system aimed to simplify tax administration and improve fiscal efficiency, concerns have been raised about its long-term impact on social inequality, as it may disproportionately benefit higher-income groups while reducing the state's capacity to fund social programs.

Concurrently the Gini trend from 2014-2023 shows a sharp increase in the income inequality after 2018 when the flat tax system was introduced (Figure 1).

Figure 1. Gini coefficient by disposable income



Source: author's representation based on data from National Bureau of Statistics of Moldova (NBS, 2014-2023).

The line chart above shows the Gini coefficient by disposable income, illustrating the trend of income inequality in Moldova from 2014 to 2023. The Gini coefficient is a commonly used measure of income inequality, where 0 represents perfect equality and 1 represents perfect inequality. From 2014 to 2016, inequality rose, peaking at 0.3314 in 2016. A significant decline followed in 2017 and 2018, reaching the lowest point at 0.3049. From 2019 onward, the Gini coefficient began rising again, reaching 0.3356 in 2023, the highest level in the dataset. Thus, while Moldova made progress in reducing income inequality in the late 2010s, inequality has increased again in recent years.

Given the above, in this research a first step is made to assess empirically (1) Has the implementation of a flat tax system altered the trajectory of income inequality in the Republic of Moldova? (2) If so, did inequality increase following the reform? The hypothesis is that the flat rate system might have been related to the increase in income inequality in the Republic of Moldova.

This study contributes to the Moldovan and regional tax equity debate by providing an empirical assessment of whether the 2018 flat tax reform altered the trajectory of income inequality. While earlier discussions focused on theoretical or fiscal impacts, this research applies Interrupted Time Series Analysis (ITSA) to test the relationship between the reform and changes in inequality, thereby filling an existing gap in the literature.

1. Literature review

The debate on tax reform in Moldova has long revolved around the balance between efficiency and equity. Vragaleva-Sireţeanu (2010) contributed to this discussion by simulating the effects of replacing Moldova's dual-rate progressive tax (7% and 18%) with a flat rate of 15% alongside a higher personal deduction. While her findings showed that low- and high-income earners would benefit, middle-income groups would face a heavier burden, potentially eroding trust in institutions. Although the flat tax would yield higher revenues, the study cautioned that without strong social policies, such a reform could exacerbate inequality which is a concern echoed in broader fiscal literature that warns of equity trade-offs under flat tax regimes. The implications of Moldova's actual shift to a flat tax in 2018 have been critically examined after the tax reform. A study shows that in the case of Moldova there is limited redistributive capacity within the current national tax system. The evidence highlights the importance of institutional quality and the structure of tax systems in shaping income distribution, aligning with broader findings in the literature that progressive taxation remains a key lever for promoting inclusive economic development (Balan, 2021). Serduni (2023) finds that this reform disproportionately favored high-income earners, notably millionaires whose effective tax burden dropped from 10.3% in 2017 to 6.49% in 2019. In contrast, low- and middle-income earners experienced minimal benefit and, in some cases, increased fiscal pressure. Structural inequities are further reinforced by the lower taxation (6%) of capital income like sources dividends, royalties, and interest primarily accessed by the wealthy. A more favorable view of the reform is provided by Noroc (2022), who highlights its positive impact on formalizing the labor market, raising declared wages, and reducing employer costs. However, these benefits did not resolve the regressive nature of the system. This is consistent with Hutsebaut (2021), who attributes Moldova's persistently high informal economy (estimated at 23%–44% of GDP) to structural flaws in the tax system, including the flat tax's regressive burden, poor public services, and weak tax morale.

Comparative perspectives, in the cases of other countries, reinforce the above concerns. Ban and Buciu (2023) critiques Romania's experience with a flat tax, citing a low tax-to-GDP ratio, sectoral exemptions, and growing inequality. He argues for a return to moderate progressive taxation, improved compliance, and stronger institutions, recommendations that are highly applicable to Moldova, given similar structural weaknesses. More broadly, Wiśniewska-Kuźma (2020) introduces the Steepness Progression Index (SPI) to measure personal income tax (PIT) progressivity across OECD countries. Her study finds that post-socialist states, display regressive progression, with tax burdens increasing more steeply for low-income than for high-income earners. This reflects the widespread adoption of flat taxes and limited redistributive features in the region.

The effectiveness of tax policy in reducing inequality is not solely determined by tax design. A longitudinal panel study (1981–2005) finds that the institutional quality of a country is a crucial determinant of how effective progressive taxation is in reducing inequality. In countries with weak administrative capacity, even well-designed progressive tax systems have limited redistributive impact (Duncan & Sabirianova, 2016). Moldova's relatively weak institutions suggest that tax reform must be accompanied by enforcement and administrative improvements. Supporting this, a cross-national study (2014–2018) comparing progressive and flat tax systems finds that countries with progressive regimes achieve lower Gini coefficients, better poverty reduction, and slower wealth concentration. While inequality rose under both systems, its increase was sharper under flat tax regimes, particularly those lacking strong redistributive mechanisms (Celestin, 2019). A comparative analysis of EU-28 countries finds that progressive taxation is associated with stronger automatic stabilizers and better equity outcomes. In contrast, flat tax regimes tend to have regressive effects, especially when paired with consumption-heavy taxes or minimal welfare spending (Popescu et al., 2019).

Taken together, the literature highlights significant concerns about flat taxation and its distributive effects, both in Moldova and internationally. However, despite these warnings, there is still no empirical study that directly tests whether Moldova's 2018 flat tax reform altered the trajectory of income inequality. This research addresses that gap by applying Interrupted Time Series Analysis (ITSA) to annual inequality data, thereby moving beyond theoretical and descriptive accounts to provide an empirical assessment of the reform's distributive impact, which to the best of our knowledge has not been done before.

2. Data and methodology

The data on income inequality, proxied by the Gini coefficient (disposable income), was collected from the National Bureau of Statistics for the period of ten years (2014–2023). To assess the impact of the transition to a flat rate tax of 12%, the Interrupted Time Series Analysis (ITSA) was used. The Interrupted Time Series Analysis (ITSA) is particularly suitable for this study because the 2018 flat tax reform in Moldova represents a clearly defined intervention point within a continuous time series of annual inequality data. Unlike simple descriptive analysis, ITSA allows for the separation of immediate (level) effects from longer-term (trend) changes, providing a more nuanced assessment of how inequality evolved before and after the reform. Moreover, since the analysis focuses on a single country without an appropriate control group, alternative methods such as difference-in-differences are not applicable. ITSA is therefore an appropriate quasi-experimental design to take a first step in evaluating the causal impact of the tax reform on inequality dynamics.

The trend in the inequality indicator (Gini disposable income) over time is modeled, introducing a dummy variable for the tax reform period. Then an

assessment is carried out of whether the trend in inequality changed significantly after the reform. While a line chart offers a helpful visual narrative, it is descriptive, but ITSA quantifies immediate (level) change to answer the question of whether inequality suddenly increased or decreased after the reform, as well as whether the slope, i.e. the rate of change of inequality, increased or decreased afterward.

First, the dataset is analyzed for suitability (Table 1). The main insights that the dataset in the table below provides are that the Gini values show minimal variation, but the post-reform period appears dominant. The range of the time_post variable indicates a clear period after the reform which is essential for assessing trend changes in inequality. The descriptive statistics further suggest that while the variation in the Gini coefficient appears limited, the temporal structure of the data is crucial for ITSA. The clear identification of a pre- and post-reform period allows for testing both level and slope changes in inequality. Although the post-reform observations dominate the dataset, the inclusion of several pre-reform years strengthens the model by establishing a baseline trend against which to compare subsequent developments. This balance between pre- and post-intervention periods is vital for ensuring that any observed changes in inequality can plausibly be attributed to the 2018 flat tax reform.

Table 1. Descriptive statistics

Variable	Observation	Mean	Std. dev.	Min	Max
GINIdispos~o	10	.32283	.0091558	.3049	.3356
time	10	8.5	3.02765	4	13
post	10	.6	.5163978	0	1
time_post	10	6.3	5.598611	0	13

Source: author's representation based on data from National Bureau of Statistics of Moldova (NBS, 2014-2023), processed in Stata18.

The descriptive statistics also highlight several additional aspects of the dataset. The mean Gini coefficient of 0.3228, with a narrow standard deviation of 0.009, confirms relatively stable inequality levels over the observed period, though the minimum and maximum values indicate noticeable fluctuations around the reform years. The time variable, ranging from 4 to 13, reflects the balanced coverage of years required for ITSA, while the post variable average of 0.6 suggests that most observations fall after the intervention. Importantly, the time_post variable's mean of 6.3 demonstrates that sufficient post-reform data points are available to detect both immediate and trend effects.

Then, the ITSA is run and given that autocorrelation in the residuals of the regression model was suspected, the Durbin–Watson statistic was run to detect it. The Durbin–Watson d-statistic = 2.60 suggested the presence of mild negative autocorrelation, which is generally not a serious issue, but the decision was to run the Newey-West standard errors which is a common solution in this situation. Thus,

further the Interrupted Time Series Analysis (ITSA) with Newey-West standard errors was resorted to.

The formula of the model is:

$$GINI_t = \beta 0 + \beta 1 * time_t + \beta 2 \cdot post_t + \beta 3 * time\_post_t + \epsilon_t \quad (1)$$

Where:

Dependent Variable:

$GINI_t$ - is the Gini coefficient at time t, which measures income inequality.

Independent Variables:

1. β_0 (Intercept)
    - This is the estimated level of the Gini coefficient at the start of the time series (baseline year), i.e., when time=0. It gives the starting point of the inequality trend before any tax reform occurs.
2. $\beta_1 \cdot time_t$ (Pre-reform trend coefficient)
    - time here is a continuous variable counting years.
    - β_1 captures the underlying trend in inequality *before* the reform was implemented.
3. $\beta_2 \cdot post_t$ (Level change due to reform)
    - post is a dummy variable:
        - 0 for years before 2018
        - 1 for years 2018 and after
    - β_2 estimates the immediate shift in the Gini coefficient in the year the reform was implemented.
4. $\beta_3 \cdot time\_post_t$ (Post-reform trend change)
    - time_post is an interaction term defined as:
        - 0 for years before the reform
        - Starting at 1 in 2018 and increasing by 1 each year after
    - This term measures how the trend in inequality changed after the reform compared to the pre-reform trend.

Error Term (ε_t):

- Captures all other unexplained variations in inequality at time *t*.

The output is presented below (Table 2).

Table 2. Interrupted Time Series Analysis (ITSA) with Newey-West standard errors

Linear regression					**Number of obs = 10** **F(3,6) = 8.94** **Prob > F = 0.0124** **R-squared = 0.6656** **Root MSE = .00648**	
GINIdisposabl~o (GINI Disposable Income):	Coefficient	Robust std. err.	t	P>|t|	[95% conf. interval]	
time (Time variable):	-.00191	.0022063	-0. 87	0.420	-.0073085	.0034885
post (Tax Policy Change Dummy)	-.0674033	.0158527	-4.25	0.005	-.1061935	-.0286132
time_post (Interaction Term for Post-Reform Trend):	.0070757	.0025414	2.78	0.032	.0008572	.0132942
_cons	.33493	.0100658	33.27	0.000	.3102998	.3595602

Source: author's representation based on data from National Bureau of Statistics of Moldova (NBS, 2014-2023), processed in Stata18.

As seen in Table 2, overall the model is statistically significant. The Newey-West correction accounts for heteroskedasticity and mild negative autocorrelation. The pre-reform trend is negative but not statistically significant, indicating inequality was relatively stable before the reform. A statistically significant decrease in inequality is noted immediately after the tax reform. There is a statistically significant increase in inequality over time after the reform and this suggests that while the immediate effect was a reduction in inequality, the trend reversed, and inequality began to rise steadily in the post-reform period.

Thus, the results presented in Table 2 provide valuable insights into the dynamics of inequality in Moldova during the period under analysis and the implications of the 2018 flat tax reform. The first important observation is that the model itself demonstrates good explanatory power. With an R-squared value of approximately 0.666, the specification explains approximately two-thirds of the variation in the Gini coefficient over time, which is substantial given the relatively short time series of only ten annual observations. Moreover, the F-statistic of 8.94 with a p-value of 0.0124 indicates that the joint contribution of the independent variables is statistically significant at conventional levels. This suggests that the inclusion of time, post, and time_post captures meaningful variation in inequality beyond what could be expected from chance alone. The use of Newey–West standard errors further reinforce confidence in the results by correcting for heteroskedasticity

and mild negative autocorrelation, which, if left unaddressed, could have biased inference.

Turning to the specific coefficients, the pre-reform time trend ($\beta_1 = -0.00191$) is negative but not statistically significant. This implies that prior to 2018, income inequality in Moldova, as measured by the Gini coefficient, was not undergoing a significant directional change. In fact, this result is consistent with the descriptive evidence, where inequality was relatively stable in the years immediately preceding the reform, with only minor year-to-year fluctuations. In other words, Moldova entered the 2018 reform from a baseline of relative stability in distributional outcomes.

The immediate effect of the reform is captured by the post dummy ($\beta_2 = -0.0674$, $p = 0.005$), which is both large in magnitude and statistically significant. Substantively, this indicates a sudden drop in the Gini coefficient following the introduction of the flat tax. At first glance, this result may appear paradoxical, as theoretical expectations and prior evidence from other countries would suggest that a flat tax reduces progressivity and therefore increases inequality. Several explanations could be advanced for this finding. One possibility is that the concurrent increase in the non-taxable threshold to 24,000 MDL provided an immediate and relatively more beneficial effect for lower-income groups, which translated into a temporary equalizing effect. Another explanation could be related to short-term behavioural adjustments, such as increased compliance or shifts in reported income in the first year of the reform, which temporarily masked longer-term inequality dynamics.

The interaction term for post-reform trend ($\beta_3 = 0.0071$, $p = 0.032$) paints a more concerning picture. Its statistical significance and positive sign indicate that inequality began to increase steadily after the reform, at a rate of roughly 0.007 points in the Gini coefficient per year relative to the pre-reform trend. This suggests that while the reform may have produced an immediate reduction in inequality, this effect was not sustained. Instead, the longer-term trajectory points to a reversal, with inequality climbing to levels higher than those observed before the reform by the end of the period (2023). This finding aligns with the broader critique of flat tax systems in post-transition economies: while they may simplify administration and initially offer relief to low- and middle-income households, they erode the redistributive function of the tax system over time, disproportionately benefiting high-income groups.

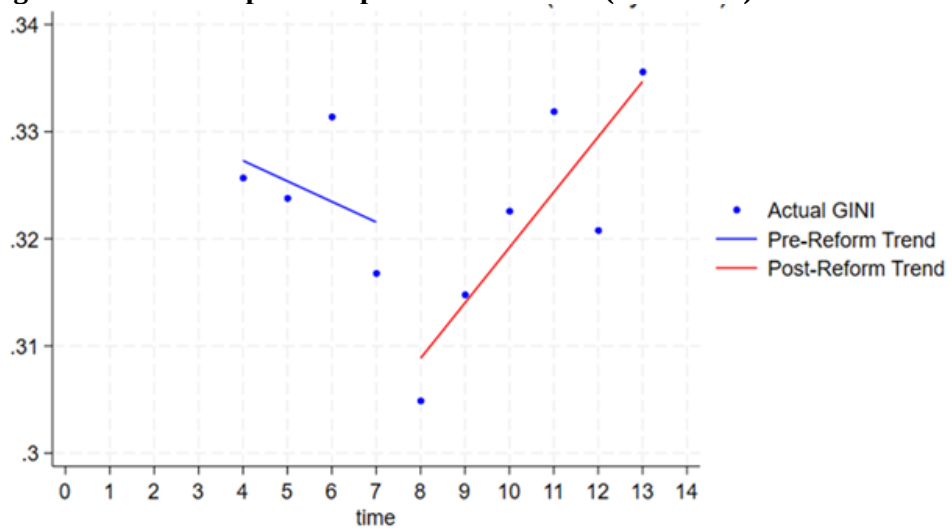
From a policy perspective, the pattern uncovered by the ITSA carries important implications. The short-term decline in inequality might have been presented politically as evidence of the reform's success, but the longer-term rise undermines its equity rationale. By 2023, the Gini coefficient had reached 0.3356, the highest in the series, highlighting that the flat tax's redistributive weakness eventually outweighed any initial benefits. For policymakers, this underscores the importance of distinguishing between immediate and structural effects when evaluating tax reforms. A reform that produces short-lived relief but drives

inequality upwards in the medium term may exacerbate socio-economic divisions, reduce the capacity to finance social services, and undermine inclusive growth.

3. Discussions

The charts below (Figure 2 and 3) illustrate via the blue dots the actual Gini values over time. The Interrupted Time Series Analysis (ITSA) plot with Newey-West standard errors shows the trend of Moldova's Gini coefficient before and after the taxation reform, where the country transitioned from a progressive to a regressive taxation system.

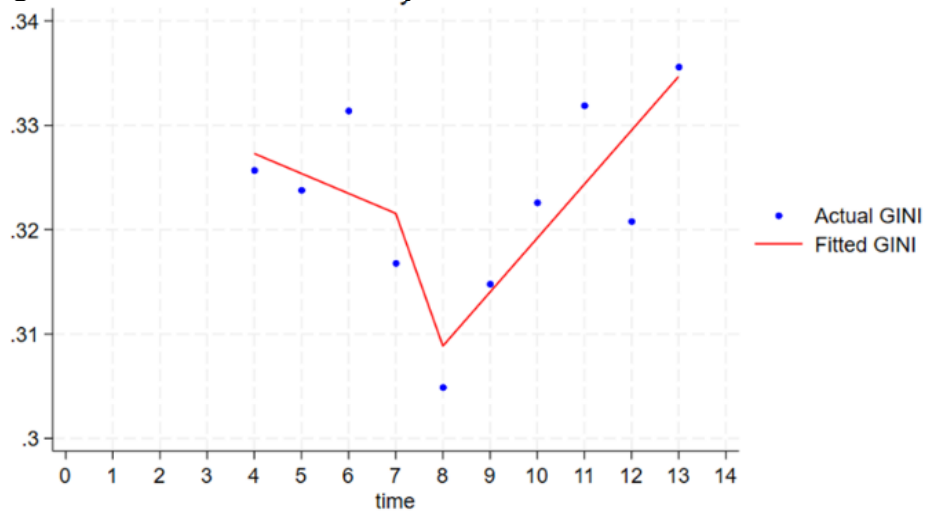
Figure 2. ITSA with pre- and post-reform trends (New-West)



Source: author's representation based on data from National Bureau of Statistics of Moldova (NBS, 2014-2023), processed in Stata18.

Thus, in Figure 2, the blue line that represents the pre-reform line shows that the Gini coefficient was relatively stable with a slight downward trend, suggesting a modest decrease in inequality over time. The red line represents the post-reform trend which indicates that after the reform, the Gini coefficient exhibits a sharp upward trend, indicating a notable increase in income inequality. There seems to be an immediate level shift after the reform, with the Gini coefficient increasing almost instantly after the tax policy change. The slope of the post-reform trend is steeper compared to the pre-reform period, implying that inequality not only increased immediately after the reform but continued to worsen at a faster rate afterward.

Figure 3. ITSA results with Newey-West standard errors



Source: author's representation based on data from National Bureau of Statistics of Moldova (NBS, 2014-2023), processed in Stata18.

The red line in Figure 3, displays the fitted Gini values from the Interrupted Time Series Analysis model (ITSA) with Newey-West standard errors. The left side of the graph shows the pre-reform period. One can observe that the inequality is relatively stable with a slight downward trend before the tax reform, as shown by the gentle slope of the fitted line. At the same time the graph shows a sharp drop in inequality immediately after the tax reform which matches the significant negative coefficient for post in the model, indicating that the shift to regressive taxation initially reduced inequality. However, in the post-reform period which is reflected in the right side of the graph, after the initial drop, shows a steady increase in inequality over time. This aligns with the positive and statistically significant time_post coefficient, suggesting that inequality started rising in the years following the tax reform.

The transition to regressive taxation therefore appears to have had a dual effect: a short-term adjustment that temporarily lowered inequality, followed by a sustained upward trend that eroded equity in the longer term. The initial decline may be linked to one-off policy measures such as the simultaneous increase in the non-taxable threshold, which temporarily favored lower-income groups. However, as redistribution weakened under the flat tax, the benefits became increasingly concentrated among high-income earners, consistent with the arguments advanced by Ionita (2018) and Serduni (2023).

The evidence from Figures 2 and 3, reinforced by the ITSA estimates, highlights the dual effect of Moldova's 2018 transition to a flat personal income tax. In the short term, inequality declined modestly, likely reflecting concurrent measures

such as the increase in the non-taxable threshold and transitional compliance effects. Yet this adjustment proved temporary. Over the medium term, inequality resumed an upward trajectory, with the Gini coefficient rising steadily and ultimately reaching its highest level in a decade by 2023. This dual pattern is crucial for interpreting the reform: while policymakers may have claimed success based on immediate outcomes, the structural consequences were regressive and long-lasting.

Before the reform, inequality in Moldova was relatively stable, with a slight downward trend visible in both descriptive statistics and fitted pre-reform trends. This stability strengthens the causal interpretation, as ITSA relies on the assumption of a predictable baseline against which intervention effects can be measured. The reform thus represents a clear structural break, visible both in statistical estimates and in the divergence between pre- and post-reform lines in Figure 2. The discontinuity at 2018 confirms that taxation policy rather than unrelated shocks played a central role in altering inequality dynamics.

An apparent paradox arises when comparing the regression results with the visual evidence. The ITSA coefficient for the post dummy indicates a statistically significant decline in inequality immediately after the reform, while Figure 2 appears to suggest an upward jump. This discrepancy can be explained by the coding of the interaction term in the regression model, which conflates the level change with slope effects. Figure 3 helps reconcile this tension: it clearly shows a small post-reform dip consistent with the regression estimates, followed by a sustained upward climb. Substantively, this reflects a dual mechanism: a short-term equalizing shock from the raised non-taxable threshold, quickly overtaken by the longer-term redistributive weakening inherent in a flat PIT system.

The Moldovan case confirms long-standing critiques of flat taxation. Optimal tax theory emphasizes the need to balance efficiency with equity (Slemrod, 1990). Flat taxes are often promoted for their administrative simplicity and potential to reduce distortions, particularly in transition economies with weak compliance. However, as Tanzi (2018) argues, the distributive dimension of taxation cannot be overlooked. Figures 2 and 3 illustrate that by prioritizing simplicity, Moldova compromised equity: the PIT lost its redistributive function, and inequality accelerated. The charts demonstrate that evaluating reforms at a single point in time is insufficient; their trajectory over several years reveals deeper structural effects.

The charts, combined with regression results, suggest several mechanisms driving the long-run increase in inequality. One of them is the redistributive erosion. With a flat rate of 12%, high earners benefited disproportionately, while progressivity was eliminated. Also, fiscal losses, i.e. the reform reduced PIT revenues by an estimated 35% (Ionita, 2018), constraining social spending and local budgets, thereby indirectly worsening inequality. In addition, events like the COVID-19 pandemic and the energy crisis amplified disparities, but the upward slope in Figure 3 shows that inequality was already rising structurally even before these shocks.

The visual evidence from Figures 2 and 3 carries strong implications for fiscal policy. First, reforms should not be judged solely on immediate effects. Policymakers may highlight short-term improvements, yet these can be misleading if long-run outcomes move in the opposite direction. Second, flat taxes in transition economies require compensatory mechanisms to safeguard equity. Options include indexed allowances, targeted transfers, or parallel reforms in social protection. Without such measures, inequality is likely to rise steadily, undermining inclusive growth. Third, the Moldovan case illustrates the importance of transparent communication: clear visuals like Figures 2 and 3 make long-term trends visible, countering the tendency to focus only on immediate outcomes.

Moldova's trajectory offers broader lessons for small transition economies balancing the goals of investment attraction, administrative simplicity, and social equity. The evidence shows that sacrificing progressivity in pursuit of simplicity may yield only temporary fiscal relief, while entrenching inequality that threatens social cohesion and political stability. This insight is especially relevant as Moldova advances its EU accession process, where alignment with European social standards will require credible strategies to reduce disparities and promote inclusiveness.

While the Gini coefficient provides a useful summary measure, future work could extend this analysis by examining distributional effects across income groups. For example, percentile ratios (P90/P10, P50/P10) or income shares of the top decile would reveal whether inequality growth was driven by gains at the top, losses at the bottom, or stagnation in the middle. Complementary approaches, such as synthetic control methods, could strengthen causal claims by comparing Moldova's trajectory with a group of similar countries that retained progressive taxation. Such extensions would deepen the empirical evidence base and provide more granular guidance for policy.

Broader economic events between 2018 and 2023 may have amplified these dynamics. The COVID-19 pandemic in 2020–2021 disrupted labor markets and disproportionately affected low-income workers, contributing to rising inequality across many countries, including Moldova. The energy crisis of 2022, coupled with regional instability linked to the war in Ukraine, also placed additional pressure on household budgets, particularly for vulnerable groups. While such shocks are external to the tax reform, the regressive structure of the PIT likely limited the state's fiscal space to respond with redistributive measures, thereby reinforcing the inequality-increasing trend. This interaction between tax policy and external shocks highlights the importance of fiscal resilience and equity in times of crisis.

In light of the broader literature, these findings resonate with studies showing that flat tax systems tend to weaken redistributive capacity and exacerbate inequality over time (Popescu et al., 2019; Wiśniewska-Kuźma, 2020). At the same time, they echo Duncan and Sabirianova's (2016) argument that institutional quality shapes how tax policy translates into equity outcomes: in Moldova, weak administrative capacity and a large informal economy may have magnified the regressive effects of

the flat tax. The evidence also parallels regional experiences, such as Romania's, where flat taxes combined with exemptions and low compliance undermined fiscal equity (Ban & Buciu, 2023).

Taken together, the results suggest that Moldova's 2018 tax reform cannot be understood in isolation. While the ITSA identifies a significant structural break in inequality following the reform, the persistence of rising inequality afterward reflects both the regressive design of the flat tax and its interaction with broader economic vulnerabilities. The policy implication is that restoring progressivity in the PIT, alongside improving tax administration and strengthening social protection, is critical for ensuring that fiscal policy contributes to a more equitable distribution of income.

Conclusions

By running the Interrupted Time Series Analysis (ITSA), this study identified a dual effect of Moldova's 2018 tax reform. Immediately after the reform, the Gini coefficient dropped, indicating a short-term level effect of reduced inequality. However, the trend effect shows that inequality began rising again in the following years, with a steeper upward trajectory than in the pre-reform period. This pattern suggests that while the reform initially generated temporary relief, it ultimately contributed to a sustained increase in inequality. Given the abrupt nature of the taxation reform and the absence of other major domestic policy changes at the time, the timing and magnitude of the observed trend break point to the reform as a significant factor in shaping Moldova's inequality dynamics.

These results reinforce existing concerns in the Moldovan and regional literature. They align with Ionita's (2018) argument that the flat tax disproportionately benefited high-income earners while generating fiscal losses that constrained public budgets. They also support Serduni's (2023) findings that the effective tax burden of wealthy individuals declined sharply, and Hutsebaut's (2021) claim that weak redistribution and high informality were exacerbated by regressive fiscal design. More broadly, the results echo Ban's (2023) critique of flat taxes in post-socialist countries and Wiśniewska-Kuźma's (2020) observation that such systems reduce progressivity and tend to deepen inequality in weaker institutional contexts.

The findings carry important policy implications. They suggest that flat taxation, while administratively simple, undermines the redistributive capacity of the state and limits fiscal space for social spending. The Moldovan case illustrates how regressive tax structures can interact with external shocks, such as the COVID-19 pandemic and the energy crisis, to intensify income disparities.

Restoring progressive elements in personal income taxation, strengthening enforcement to reduce informality, and aligning fiscal policy with equity objectives are therefore critical steps for ensuring inclusive growth and convergence with European social standards.

At the same time, this study faces limitations stemming from the small sample size, the absence of a counterfactual, reliance on a single inequality measure, and the assumption of linear and immediate reform effects. Future research could address these shortcomings by incorporating control variables, extending the dataset, and applying comparative methods such as the Synthetic Control Method. Such approaches would help capture broader socio-economic factors and provide more robust evidence on the causal relationship between tax reforms and inequality.

The findings of this study extend beyond the national context and carry significant implications for Moldova's broader economic and political trajectory. The regressive effects of the flat tax reform underscore the importance of aligning fiscal policy with the principles of equity and inclusion enshrined in the European Pillar of Social Rights (PEDS). As the Republic of Moldova advances on its EU integration path, convergence with European social standards requires not only strengthening administrative capacity but also ensuring that fiscal systems promote fairness and cohesion.

The European Union has consistently emphasized the role of progressive taxation and adequate social protection in reducing income inequality and supporting inclusive growth. Comparative evidence from EU member states shows that progressive tax systems are associated with stronger automatic stabilizers, better poverty reduction, and more resilient economies during crises. In contrast, flat tax regimes, particularly in countries with high informality and weak enforcement, tend to exacerbate disparities and limit fiscal space for social investment.

For the Republic of Moldova, this implies that fiscal reforms cannot be evaluated solely on the basis of efficiency or simplicity. A more progressive income tax system, supported by improved compliance and transparency, would strengthen redistribution and enhance the country's ability to address external shocks such as the COVID-19 pandemic or the recent energy crisis. Moreover, by restoring progressivity and improving equity outcomes, the Republic of Moldova would take an important step toward meeting EU accession criteria related to social policy, labor markets, and inclusive development.

In this sense, the analysis presented here provides not only an academic contribution but also a policy message: fiscal reforms must be designed to balance efficiency with fairness, and to reinforce the Republic of Moldova's trajectory toward inclusive and sustainable growth within the European Union.

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