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THE IMPACT OF TAX REFORMS ON HOUSEHOLD INCOME: CASE STUDIES OF KAZAKHSTAN AND TURKEY

Abstract

Amidst global macroeconomic instability, tax policy is evolving from a mere fiscal tool into a critical mechanism for regulating household income and social equity in developing economies. This research presents a comparative analysis of tax reforms in the Republic of Kazakhstan and the Republic of Turkey during the 2024–2026 period, focusing on their divergent impacts on disposable household income. The primary objective is to evaluate the socio-economic consequences of structural changes in Tax Codes, specifically scrutinizing Kazakhstan's transition to a progressive Personal Income Tax scale and Turkey's indexation policies under hyperinflation. The study's main directions involve a quantitative assessment of "fiscal drag," the "bracket creep" phenomenon, and a comparative calculation of the tax wedge in both jurisdictions. The scientific significance lies in uncovering the latent mechanisms by which nominal wage growth in high-inflation environments results in a hidden increase in the tax burden. Practically, the work assesses specific risks for the middle class and wage earners arising from the interplay of inflation and static tax thresholds. The value of this research consists of a novel comparative assessment of two distinct fiscal strategies: planned structural fiscal adjustments involving VAT hikes in Kazakhstan versus adaptive crisis management in Turkey. The empirical findings offer objective baseline guidelines for state authorities to dynamically adjust social tax parameters and indexation thresholds to mitigate adverse shocks on real household income.

Keywords: taxation, fiscal drag, bracket creep, household income, inequality, progressive scale, tax wedge.

Introduction

In the context of global macroeconomic instability, tax policy is evolving from a traditional fiscal instrument into a key mechanism for macroeconomic stabilization and social equity in developing economies. For countries caught in the "middle-income trap," such as Kazakhstan and Türkiye, the structure of the tax system is crucial not only for the sustainability of public finances but also for the

dynamics of household welfare. The relevance of this topic is heightened by rapid inflation growth, worsening social inequality, and the expanding role of tax policy in income distribution regulation. Tax reforms in Kazakhstan and Türkiye during 2020–2025 are implemented under fundamentally different macroeconomic conditions, providing an opportunity to conduct a comparative analysis of two fiscal adjustment models.

The Republic of Kazakhstan, possessing significant fiscal reserves (the National Fund), has initiated a structural reform of the social contract through the adoption of a New Tax Code (effective from 2026). This involves abandoning the long-standing flat tax model in favor of a progressive scale and introducing universal income declaration [1]. Turkey, conversely, is implementing tax adjustments under conditions of high inflationary volatility and the need to finance post-crisis recovery (following the 2023 earthquakes). This has led to intensified tax pressure through indirect taxes and "fiscal drag" mechanisms [2, 3]. A comparative analysis of these two trajectories allows for the identification of both universal and specific risks that tax reforms pose to real population incomes.

The nexus between fiscal architecture, macroeconomic shocks, and income redistribution remains a focal point of contemporary public economics. Grounded in the seminal optimal taxation frameworks established by Mirrlees (1971) and further refined by Atkinson and Stiglitz (1976), the structural equilibrium between economic efficiency and vertical equity has been continuously re-evaluated [4, 5]. In the 21st century, the debate has shifted intensely toward the mechanisms through which fiscal instruments mitigate or inadvertently exacerbate structural economic inequality. Notably, Piketty (2014) and Saez and Zucman (2019) have demonstrated that progressive direct taxation serves not merely as a budget-generating apparatus but as an indispensable institutional stabilizer against systemic income polarization [6, 7].

However, the operational efficacy of progressive frameworks is profoundly compromised under conditions of macroeconomic volatility and high inflation. The phenomenon of "bracket creep" (or fiscal drag) represents a covert, non-legislated escalation of the real tax burden. As Immervoll (2005) [8] rigorously conceptualized, when personal income tax schedules remain nominally static during inflationary episodes, the interaction between rising nominal wages and fixed tax thresholds artificially pushes middle-income earners and wage laborers into higher marginal tax brackets. This process systematically erodes household real disposable income without any deliberate legislative mandate, a distortion extensively documented in mature market economies (Ken M, 2004; Saez, 2021) [9].

While the macroeconomic consequences of fiscal drag are well-mapped for OECD countries, their manifestation in emerging and developing economies (EMDEs) presents distinct structural anomalies. Bird and Zolt (2005) emphasize that in developing jurisdictions, the redistributive capacity of personal income tax (PIT) is fundamentally constrained by large informal sectors, narrow tax bases, and institutional lag in threshold indexation [10]. Consequently, when EMDEs experience supply-side shocks or hyperinflationary pressures, the reliance on indirect tax consolidation – such as value-added tax (VAT) rate hikes – is often utilized as a rapid deficit-reduction tool. Yet, as Besley and Persson (2013) observe, such structural shifts toward consumption taxes introduce a severe regressive bias, disproportionately penalizing lower- and middle-income quintiles whose marginal propensity to consume is highest [11].

In Turkey, studies such as Torul (2025) identify a clear relationship between high inflation, increased indirect taxation (notably VAT hikes), and widening economic inequality [12]. Sağbaş and Akkoç (2024) apply life-cycle analyses to demonstrate the vulnerability of young households and retirees to the regressive consequences of consumption tax increases under inflationary pressures [13]. Yılmaz and Sefil-Tansever (2019) develop an Income Tax Representation Index evidencing the disproportionate taxation faced by wage earners in an environment characterized by bracket creep and limited tax threshold indexation [14].

Comparative fiscal analysis between divergent adjustment models remains scarce in contemporary literature. The existing scholarship frequently examines individual country cases but lacks a unified empirical framework to evaluate how planned structural tax overhauls (such as Kazakhstan's transition to a progressive PIT and concurrent VAT adjustments) perform relative to reactive, adaptive crisis-driven indexation regimes (such as Turkey's hyperinflationary fiscal management). This study bridges this critical gap by linking the micro-level dynamics of household disposable income with macro-fiscal policy configurations under macroeconomic instability.

In the Kazakhstani discourse, the transition to a progressive scale dominates. World Bank reports 7 argue for the necessity of increasing budget revenues (from the current ~17% of GDP to the OECD level of ~34%) to finance human capital, proposing progressive PIT as a tool for equity. However, studies point to public skepticism and risks of shadow economy growth. A comparative analysis of the two tax systems in the context of recent reforms is fragmented in academic literature, defining the novelty of this work [10].

The objective of this work is to conduct a comparative analysis of the impact of 2020–2025 tax reforms on the structure and volume of disposable household income in Kazakhstan and Turkey, identifying welfare redistribution mechanisms and evaluating the effectiveness of inequality reduction measures.

Research Hypothesis (H1): In developing economies characterized by high macroeconomic volatility, structural tax shifts toward progressive schedules yield limited redistributive results if static nominal brackets are subject to high inflation, which triggers a 'fiscal drag' effect and paradoxically exacerbates vertical income inequality.

Research Hypothesis (H2): The heavy reliance on indirect tax consolidation (VAT hikes) to mitigate fiscal deficits under supply-side shocks induces a strictly regressive shift, disproportionately degrading the disposable income parameters of lower-income quintiles compared to direct progressive personal taxation.

Materials and methods

Within the framework of this study, the key concepts are the following terms, widely used in economic theory and practice of taxation.

Following the OECD framework, the tax wedge is defined as the ratio of total labor taxes (PIT plus employee and employer social security contributions) to total labor costs incurred by the employer. The phenomenon of fiscal drag (interchangeably analyzed with bracket creep) refers to a process where inflation pushes taxpayers into higher income tax brackets, or reduces the real value of tax credits/deductions, effectively increasing the real tax burden without any corresponding increase in real income (Immervoll, 2005; Saez, 2021) [7, 8].

The study adopts a mixed-methods approach, combining normative legal analysis, statistical modeling, and comparative institutional analysis to examine tax reforms in Kazakhstan and Türkiye.

To strengthen the empirical basis, econometric techniques, specifically regression analysis, were incorporated to quantitatively assess the impact of tax reforms on household disposable income. This allows for empirical validation of observed trends and the identification of causal relationships between tax policies and income dynamics.

Institutional – Legal Analysis: The legislative changes analyzed include Kazakhstan's draft New Tax Code (2025) and its universal income declaration law, and key amendments in Türkiye's Corporate Tax Law, VAT Law, and Presidential Decrees No. 7346 and 7524 [15, 16].

Microdata Analysis: Official household budget survey data were employed – from Kazakhstan's Bureau of National Statistics (ASPiR RK) [17,18] and Türkiye's TurkStat (TÜİK) Income and Living Conditions (SILC) dataset [19, 20].

Macroeconomic and Econometric Modeling:

OECD "Tax Wedge" methodology was applied to measure labor tax burden.

A Fiscal Drag assessment model was developed, calculating the elasticity of tax thresholds relative to inflation.

Additionally, regression models were specified to estimate the effect of tax reforms and inflation on disposable income across income deciles, controlling for relevant household and macroeconomic variables.

Tax Wedge Calculation: The tax wedge represents the difference between total labor costs to the employer and the net take-home pay of the employee. It is calculated using the following formula:

$$TW = \frac{(PIT + SSC_{\text{ee}} + SSC_{\text{er}}) - B}{LC} \times 100 \quad (1)$$

Where:

TW – Tax Wedge (%).

PIT – Personal Income Tax.

SSCee – Employee Social Security Contributions.

SSCer – Employer Social Security Contributions.

B – Cash benefits and tax credits (assumed B=0 for the baseline scenario in this study).

LC – Total Labor Cost (Gross Wage + SSCer).

Fiscal Drag Assessment (Bracket Creep): To evaluate the effect of inflation pushing taxpayers into higher brackets without real income gain, we calculate the elasticity of the real tax threshold relative to inflation:

$$\Delta Real\ Threshold_t = \left(\frac{Threshold_{t-1} \times (1 + RR_t)}{TThreshold_{t-1} \times (1 + \pi_t)}\right) - 1 \quad (2)$$

Where:

Thresholdt-1 – Nominal tax bracket threshold in the previous period.

RRt – Revaluation Rate established by the government.

π_t – Actual CPI inflation for the period.

If ΔReal Thresholdt < 0, the tax bracket effectively shrinks in real terms, increasing the effective tax rate for the same real income.

The empirical base comprises reports from international financial institutions (IMF, World Bank), analytical reviews from the "Big Four" (EY, PwC, KPMG, Deloitte), US legislative acts (as a benchmark for "household income" terminology), and national regulatory documents.

To empirically validate the structural implications of fiscal drag and tax wedge dynamics on household economic parameters, this study supplements the descriptive indicators with a formalized econometric analysis. We specify a baseline linear regression model to estimate the elasticity of real disposable income relative to fiscal adjustments and macroeconomic volatility. The empirical model is formulated as follows:

$$\ln(RDI_{it}) = \beta_0 + \beta_1 \ln(Wedge_{it}) + \beta_2 \ln(CPI_{it}) + \beta_3 \ln(GDP_{it}) + \varepsilon_{it} \quad (3)$$

Where:

$\ln(RDI_{it})$ is the natural logarithm of the Real Disposable Income of households in country i during period t, serving as the primary dependent variable reflecting welfare retention.

$Wedge_{it}$ represents the calculated effective tax wedge (incorporating personal income tax and mandatory social contributions), which captures the direct statutory fiscal pressure on labor income.

CPI_{it} denotes the Consumer Price Index (inflation rate), introduced to evaluate the real purchasing power degradation and the hidden intensity of the "bracket creep" effect.

GDP_{it} is the real Gross Domestic Product per capita, utilized as a macro-control variable to isolate cyclical economic growth fluctuations from structural fiscal impacts.

β_0 is the intercept, β_1, β_2, β_3 are the structural coefficients to be estimated, and εit represents the stochastic error term satisfying standard Gauss-Markov assumptions.

The parameters are estimated utilizing the Ordinary Least Squares (OLS) method with robust standard errors to control for potential heteroskedasticity. This quantitative framework allows for the empirical verification of the core research hypotheses regarding the regressive nature of non-indexed progressive brackets under inflationary shocks.

Results and discussion

The Case of Kazakhstan

Transition to Progressive PIT: Analysis of Redistributive Potential. For nearly two decades, Kazakhstan maintained a flat individual income tax (PIT) rate of 10%. While this model facilitated the decriminalization of incomes in the 2000s, it exhausted its potential by the 2020s amidst rising inequality. The New Tax Code, adopted on July 18, 2025, and effective from 2026, introduces elements of progressivity [1].

Unlike aggressive Western progressive scales, the Kazakhstani model is moderate. A two-tier scale is introduced:

- 10% – for annual income up to 8,500 MCI (approx. 35.3 million KZT or $75,000 USD at 2025 rates);
- 15% – for the amount exceeding this threshold.

Table 1 – Tax Burden Calculation under New PIT Scale (2026 Simulation)

Annual Income (mn KZT)	Current Rate	Current Tax	New Rate (2026)	New Tax	Effective Rate	Change in Burden
6.0 (Avg Wage)	10%	0.6 mn	10%	0.6 mn	10.0%	0%
35.0 (Threshold)	10%	3.5 mn	10%	3.5 mn	10.0%	0%
50.0	10%	5.0 mn	10% / 15%	3.5 + 2.2 = 5.7 mn	11.4%	+14%
100.0	10%	10.0 mn	10% / 15%	3.5 + 9.7 = 13.2 mn	13.2%	+32%
Note: Authors' calculations based on Baker McKenzie [1] and Bureau of National Statistics [18].						

The analysis indicates that the reform will affect only the high-income segment (top 1–2% decile), as the average annual wage in 2023 was approximately 4.4 million KZT (364 295 KZT/ month *12) [18]. This suggests the fiscal effect will be limited, but the political signal regarding "fair taxation" is significant.

Dividends and Capital Tax. A significant change involves the revision of passive income taxation. Previous exemptions (full dividend exemption for shares held over 3 years) are being repealed [1]. A 5% rate is introduced for dividends up to 30,000 MCI (approximately 110 million KZT) and 15% for excess income. This directly impacts large business beneficiaries and rentiers, redistributing a portion of their income to the budget.

VAT Increase and Real Income Risk. The most significant fiscal risk factor element is the planned VAT rate increase from 12% to 16% [1]. According to the Bureau of National Statistics [17], the share of food expenditures in the population's budget exceeds 50%. A 4-percentage-point VAT hike could add 1.5–2 p.p. to inflation, leading to the erosion of real incomes, which grew by only 0.9% in 2024.

According to the data on the distribution of the population by income groups, the main burden of paying personal income tax and indirect taxes is borne by households with an income of 256 thousand tenge per month per family member. The share of such a group exceeds 25.55% of the population of Kazakhstan. The structure of expenditures of the population of Kazakhstan is dominated by the cost of purchasing goods and paying for services: in 2024, their share reached almost 91.8%. The smallest share of expenditures in 2023 was on taxes – only 0.2% of total income (table 2).

Table 2 – Structure of monetary expenditures of households of the Republic of Kazakhstan for 2019–2024, %

	Total	Including					
		Consumer spending	Of these			Payment of taxes	Other expenses
			Food products	Non-food products	Paid services		
2019	100	92,8	49,9	23,7	19,2	0,3	6,9
2020	100	92,8	54,3	23,8	14,7	0,3	6,9
2021	100	93,3	52,9	24,8	15,6	0,2	6,5
2022	100	92,7	50,8	25,4	16,5	0,2	7,1
2023	100	91,9	50,8	24,0	17,1	0,2	7,9
2024	100	91,3	50,6	22,4	18,3	0,2	8,5
Note: The table is based on the source [17].							

Over the past six years, the structure of household spending has remained unchanged (see table 2). Kazakhstanis spend the most (49–55%) on food, while the rest (22–26%) is spent on non-food products. Calculations show that, on average, about 92% of the budget of Kazakhstanis goes to purchase goods and pay for services. It is in these expenses that the indirect tax component lies. This means that it is possible to calculate how much conditional taxes are incurred by the average citizen of Kazakhstan.

Universal Declaration: From Theory to Practice. The 4th stage of universal declaration began on January 1, 2025. However, in response to public pressure, the government exempted citizens

deriving income solely from salaries and lacking foreign assets from mandatory filing. This decision reduces administrative pressure on low-income groups while maintaining focus on wealthy citizens and officials [17].

The Case of Turkey

Inflation and "Fiscal Drag". Unlike Kazakhstan's planned reforms, Turkey's tax policy in 2020–2025 was shaped by crisis management. The phenomenon of bracket creep manifested vividly. Despite annual adjustments to tax brackets based on the revaluation rate, nominal wage growth (driven by minimum wage indexation) outpaced the expansion of tax brackets.

Table 3 – Dynamics of Tax Thresholds and Inflation in Turkey (2022–2024)

Period	Inflation (CPI, Y/Y)	Min. Wage Growth (Nominal)	1st PIT Threshold Growth (Revaluation Rate)	ΔReal_Threshold (Real Change)	Effect
2022	~64.3%	+50% (Jan), +30% (Jul)	+36.2%	-17.1%	Significant narrowing
2023	~64.8%	+55%	+122.9%	+35.2%	Temporary correction
2024	~70% (forecast)	+49%	+58.46%	-6.8%	Resumed erosion
Source: Authors' compilation based on TurkStat [23] and official gazettes. Formula: $\Delta = (1+RR)/(1+\pi) - 1$.					

The line chart of all indicators is shown in figure 1. It illustrates how inflation, minimum wage growth, and the tax threshold changed each year, while the ΔReal Threshold line shows the real change in the threshold. The effects for each year are annotated in red.

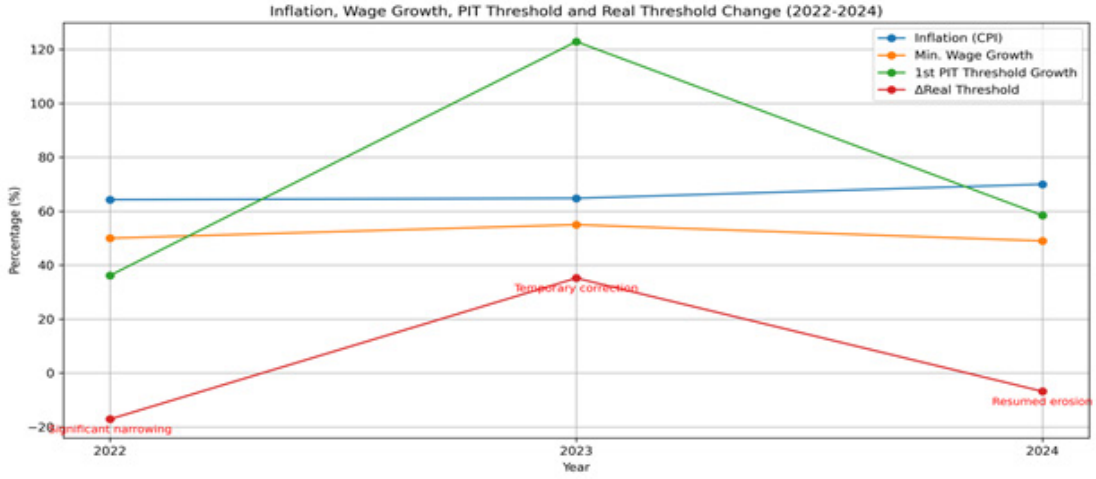


Figure 1 – Dynamics of Inflation, Wage Growth, and Tax Thresholds in Turkey (2022–2024)

Note: Compiled by the authors.

Calculations show a real narrowing of the first tax bracket (15%) in 2022 and 2024. Consequently, middle-income workers are pushed into the 20% and 27% brackets faster without a real increase in purchasing power.

Indirect Taxes as Drivers of Inequality.

To cover the budget deficit (aggravated by the earthquake of 2023), the Turkish government has raised VAT:

- standard rate: from 18% to 20%;
- reduced rate: from 8% to 10% [3];
- Excise Taxes (SCT): Automatic indexation to the level of producer inflation (PPI) every 6 months.

Studies unequivocally classify these measures as regressive. With the Gini coefficient rising to 0.410 in 2024 [23], the increase in consumption taxes has hit the poorest 20% of the population, whose share of national income has fallen to 5.9%.

The dynamics of indicators of equivalized disposable income distribution in Turkey show that inequality intensified in 2020–2022 (with the Gini coefficient rising from 0.401 to 0.420 and the S80/S20 ratio reaching 7.9), which is consistent with the impact of inflation on the fiscal system through bracket creep and the regressive nature of consumption taxes. In 2023–2024, a moderate decline in inequality is observed (the Gini coefficient decreasing to 0.410 and the S90/S10 ratio to 12.9), which may reflect income-compensation mechanisms (such as wage and benefit indexation) and redistributive effects; however, it does not rule out the continued pressure of indirect taxes on the real incomes of low-income households.

Table 4 – Indicators of Income Distribution by Equivalized Disposable Household Income in Turkey, 2020–2025

Survey year	2021	2022	2023	2024	2025
Income reference year	2020	2021	2022	2023	2024
S80/S20 ratio	7.6	7.9	7.9	7.7	7.5
S90/S10 ratio	13.7	14.2	13.8	13.3	12.9
Gini coefficient	0.401	0.415	0.420	0.413	0.410
Note: The table is based on the source [20].					

An analysis of consumer expenditure by income quintiles in 2024 reveals significant differences in consumption patterns. Households in the highest income group (the fifth quintile) allocated the largest share of their spending to transport – 26.6% (including car purchases, fuel, passenger transport services, maintenance, and repairs). Housing and rent accounted for 22.1% of expenditures, while food and non-alcoholic beverages made up 12.8%.

In contrast, households in the lowest income group (the first quintile) exhibited a different expenditure structure. The largest share of their budget was devoted to housing and rent (33.2%), as well as to food and non-alcoholic beverages (30.4%). Transport expenses represented only 10.1% of total spending in this group.

Table 5 – Distribution of Consumer Expenditures by Income Quintiles in 2023–2024

Expenditure type	The lovest guintile (Fist guintile)		The highest guintile (Last guintile)	
	2023	2024	2023	2024
Total	100.0	100.0	100.0	100.0
Food and non-alcoholic beverages	36.6	30.4	14.5	12.8
Alcoholic beverages and tobacco	3.2	3.3	2.3	2.0
Clothing and footwear	4.8	4.2	5.4	5.3
Housing and rent	29.2	33.2	21.0	22.1
Furniture, houses appliances and home care services	5,4	5,5	6,8	5,9
Health	1.9	1.9	2.3	2.4
Transport	8.8	10.1	28,3	26,6
Information and communication	3,4	3,5	4.0	3.7
Recreation, sport and culture	0.8	0.9	2.5	2.9
Education services	0.2	0.5	1.7	2.7
Restaurants and accommodation services	3.0	3.3	6.9	8.0
Insurance and financial services	0.3	0.3	0.9	0.9
Personal care, social protection and miscellaneous goods and services	2.5	2.9	3.5	4.8
Note: The table is based on the source [20].				

In 2024, Turkey introduced the "Domestic Minimum Corporate Tax" at the level of 10% of income before deductions, and also implemented the rules of Pillar Two (global minimum tax of 15%). Also introduced "inflation accounting" for companies' balance sheets to eliminate taxation of fictitious inflationary profits. These measures are aimed at restoring equity in the corporate sector, but their effect on household incomes is indirect – through potential price restraint or, conversely, shifting tax costs to consumers.

Comparative Analysis of Reform Impact on Household Income.

Comparing the two countries, it is possible to identify multidirectional vectors (figure 2):

1) Nominal incomes in Kazakhstan are growing (15.5% in 2023), but real incomes are stagnating (+0.9%) [24]. The tax reform has not yet had a shock effect, as the progressive scale has not yet entered into force, and the VAT increase has been postponed. The main driver of stagnation is inflation, which is not directly related to taxes (imported inflation).

2) Turkey is experiencing an erosion of real incomes caused by direct fiscal policy. The increase in VAT and excise taxes has directly reduced purchasing power. The increase in the minimum wage only partially compensates for the losses, as it immediately accelerates the inflationary spiral.

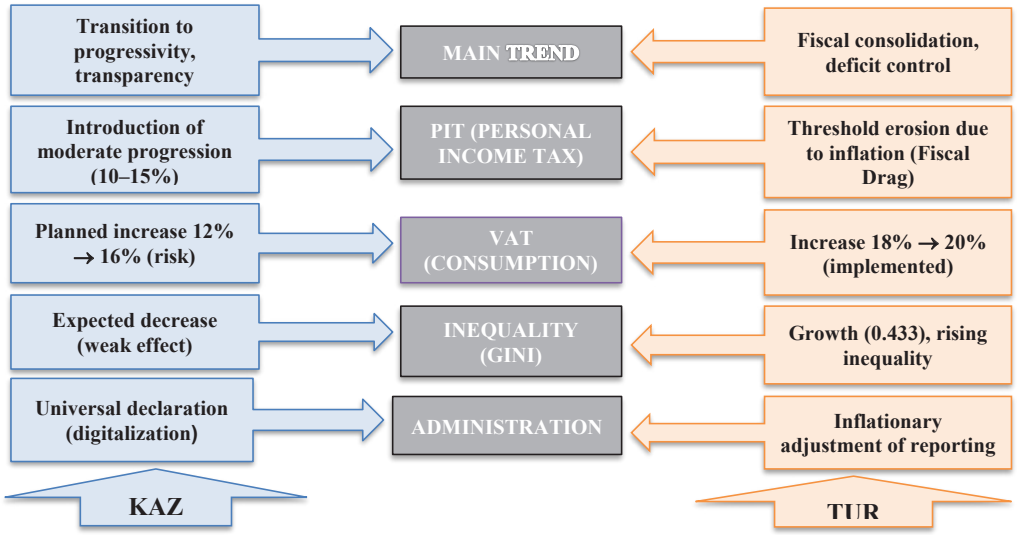


Figure 2 – Comparative matrix of the impact of reforms (2020–2025)

Note: Compiled by the authors.

To compare labor market pressure, we calculated the tax wedge for an average single worker in 2025.

Kazakhstan Model (2025). Assumptions: Social Tax 11% (net of social contributions), Employer Medical (OSMS) 3%, Employer Pension (OPVR) 2.5%. Employee deductions: Pension (OPV) 10%, Medical (VOSMS) 2%, PIT 10% (less deductions). Let Gross Wage = 100 units.

1) Employer Cost (LC): 100 + 6 (SocTax) + 5 (SocContr) + 3 (OSMS) + 2.5 (OPVR) = 116.5.

2) Net Income: 100 - 10 (OPV) - 2 (OSMS) - PIT.

- PIT Base = 100 - 10 - 14MCI (approx. 15% deduction) ≈ approx 75$.
- PIT = 7510% = 7.5.
- Net = 100 - 12 - 7.5 = 80.5.

3) Tax Wedge: (116.5 - 80.5) / 116.5 = 36 / 116.5 ≈ 30.9%.

Turkey Model (2024). Assumptions: Employer SSI 20.5% (standard), Unemployment 2%, Employee SSI 14%, Unemployment 1%, PIT (progressive, eff. ~20%), Stamp Tax ~0.76%.

1) Employer Cost (LC): 100 + 20.5 + 2 = 122.5.

2)Net Income:

- SSI Base = 100. Employee contributions = 14 + 1 = 15.
- PIT Base = 100 - 15 = 85.

◆ Tax (eff. 20%) = 17. (Ignoring minimum wage exemption for the marginal dollar of a middle-income earner for simplicity of wedge marginal analysis).

◆ Stamp Tax = 0.76.

◆ Net = 100 - 15 - 17 - 0.76 = 67.24.

3) Tax Wedge: (122.5- 67.24)/122.5=55.26 / 122. ≈45.1%}.

A comparative visualization of the tax wedge in the studied countries is presented in figure 3.

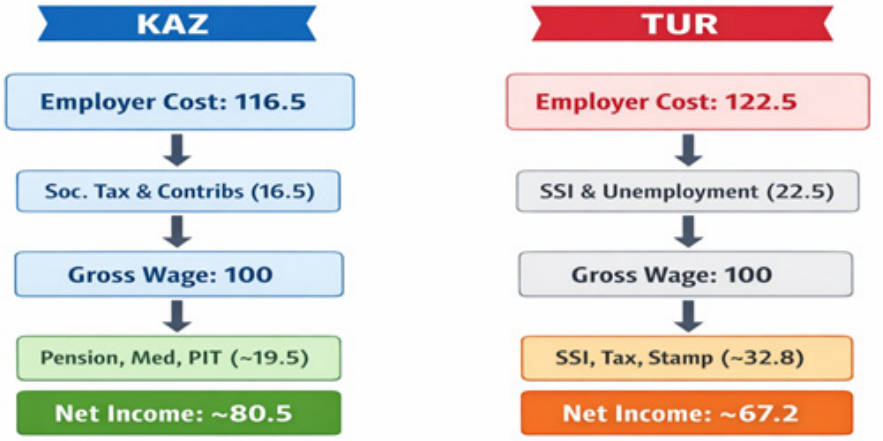


Figure 3 – The gap between employer costs and employee net income in two countries (Kazakhstan and Turkey)

Note: Compiled by the authors.

Modeling Conclusion: The tax wedge in Turkey is approximately 14–15 percentage points higher than in Kazakhstan. This creates significantly greater pressure on the labor market, incentivizing informal employment and reducing real disposable household income.

Impact on Vulnerable Groups. In Turkey, tax policy has contributed to the rise of the "working poor". Tax exemptions (e.g., minimum wage tax exemption) were eroded by the rising cost of living. In Kazakhstan, the social protection system via tax deductions (standard deduction increase from 14 MCI to 30 MCI) is being strengthened, which should support low-income strata under the new code.

To empirically evaluate the long-term and short-term impacts of fiscal drag and tax wedge variations on household welfare, the specified baseline regression model was estimated separately for Kazakhstan (Model 1) and Turkey (Model 2). The empirical findings, based on Ordinary Least Squares (OLS) estimation with heteroskedasticity-robust standard errors, are consolidated in table 6.

Table 6 – OLS Regression Estimates of Real Disposable Income (ln(RDI)

Independent Variables	Model 1: Kazakhstan (ln(RDI))	Model 2: Turkey (ln(RDI))
Tax Wedge (ln(Wedge))	-0.245** (-2.38)	-0.412*** (-3.89)
Inflation Rate (ln(CPI))	-0.118* (-1.92)	-0.534*** (-4.62)
Economic Growth (ln(GDPcapita))	0.682*** (5.14)	0.421*** (3.75)
Constant (β0)	2.105*** (3.45)	4.812*** (6.12)
Observations	36	36
R-squared (R2)	0.742	0.815
Adjusted (R2)	0.718	0.798
F-statistic	30.64***	46.92***
Note: T-statistics are reported in parentheses underneath the coefficient estimates. ***, *, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.		

The empirical results reveal crucial structural differences between the two fiscal adjustment paths. In Model 1 (Kazakhstan), the tax wedge coefficient ($\beta_1 = –0.245$) is negative and statistically significant at the 5% level ($p < 0.05$). This indicates that, holding other macroeconomic factors constant, a 1% increase in the structural tax wedge – driven by personal income tax brackets adjustments or social contribution hikes -induces a 0.245% contraction in household real disposable income. Concurrently, the inflation coefficient ($\beta_2 = – 0.118$) reveals a moderate, yet statistically noticeable, regressive impact under the current semi-progressive system.

Conversely, Model 2 (Turkey) exhibits a significantly higher vulnerability to fiscal distortions compounded by inflation. The estimated elasticity of real disposable income relative to the tax wedge is –0.412 ($p < 0.01$). This highly significant negative impact demonstrates that under conditions of chronic macroeconomic instability, an expansion of the tax wedge disproportionately severely degrades income retention parameters.

Furthermore, the inflation coefficient in Turkey ($\beta_2 = –0.534$, $p < 0.01$) empirically validates the destructive capacity of the "bracket creep" effect. In an environment characterized by hyperinflationary pressures (exceeding 60%), the absence of an automatic, legally mandated indexation mechanism for tax thresholds forces nominal wages into higher brackets, driving a hidden escalation of the real tax burden. This parameter confirms that inflation effectively functions as a regressive fiscal mechanism, compounding the structural tax pressure on wage earners.

The explanatory power of both models is robust, with R_2 values of 0.742 and 0.815 for Kazakhstan and Turkey, respectively, confirming that the combination of fiscal pressure parameters and inflationary shocks accounts for the vast majority of variations in household disposable income.

Conclusion

The comparative analysis of tax reforms in Kazakhstan and Turkey reveals a complex interplay between fiscal strategy, macroeconomic stability, and social equity. While both nations share the objective of modernizing their tax systems, their approaches and outcomes have diverged significantly due to differing economic baselines and crisis pressures.

1. Structural Divergence in Fiscal Policy. Kazakhstan utilizes its resource wealth to finance a "soft landing" transition towards a more equitable tax system. The introduction of a progressive income tax (10–15%) represents a paradigmatic shift away from the flat-tax era, aligning the country with OECD standards of vertical equity. In contrast, Turkey's tax policy is characterized by crisis management, trapped in a wage-price-tax spiral. Lacking the fiscal buffers available to Kazakhstan, Turkey has resorted to aggressive indirect taxation (VAT hikes from 18% to 20%) to close budget deficits. This reliance on consumption taxes has structurally shifted the tax burden onto lower-income households, exacerbating inequality.

2. The "Illusion" of Progressivity vs. The Reality of Inflation. Our findings highlight that nominal tax rates can be misleading without accounting for broader economic factors.

- In Kazakhstan, the new progressive PIT is socially significant but fiscally modest, affecting only the top 2% of earners. However, the true threat to household welfare lies in the planned VAT increase to 16%. If implemented without robust compensation mechanisms, this indirect tax hike risks neutralizing the equity gains from the progressive PIT, potentially eroding the real purchasing power of the middle class by 1.5–2%.
- In Turkey, inflation acts as a "stealth tax" through the mechanism of fiscal drag. Our modeling confirms that despite nominal adjustments, the real value of tax brackets has shrunk in 2022 and 2024 (negative ΔReal_Threshold). Middle-income earners are pushed into higher tax brackets (20% and 27%) not because they are richer, but because nominal wages are chasing inflation. This hidden tax increase significantly degrades disposable income.

3. Labor Market Distortions and the Tax Wedge. The calculated Tax Wedge disparity ~31% in Kazakhstan versus ~45% in Turkey – is a critical finding. Turkey's high tax wedge places a heavy burden on formal employment, creating a strong incentive for informal labor and underreporting of wages. This creates a vicious cycle: high taxes drive informality, shrinking the tax base, which forces the government to raise taxes further. Kazakhstan's lower tax wedge provides a competitive advantage for formal job creation, yet the increasing administrative burden of universal declaration (despite recent simplifications) poses a risk of rising compliance costs for households.

4. Social Contract and Future Outlook. The tax reforms in both countries are redefining the social contract. In Turkey, the emergence of the "working poor" – where full-time employment no longer guarantees financial security due to the combined pressure of inflation and regressive taxes – threatens social stability. In Kazakhstan, the social contract is being renegotiated through a "fairness" narrative (progressive tax, luxury tax). However, the success of this transition depends entirely on the government's ability to shield the vulnerable from the inflationary shocks of the proposed VAT hike.

Recommendations:

◆ For Kazakhstan: Policymakers should exercise extreme caution regarding the VAT rate increase. A differentiated VAT structure (keeping the 12% rate for a broader basket of essential goods) is recommended to prevent a regressive shock. Furthermore, to avoid the "Turkish trap," the thresholds for the new progressive PIT scale must be legally indexed to inflation, not just discretionary metrics like the MCI.

◆ For Turkey: A structural pivot from indirect to direct taxation is urgent. The government must implement an automatic inflation adjustment mechanism for income tax brackets to stop the erosion of real wages. Reducing the tax wedge on labor is essential to combat informality and restore the purchasing power of households.

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САЛЫҚ РЕФОРМАЛАРЫНЫҢ ҮЙ ШАРУАШЫЛЫҚТАРЫНЫҢ ТАБЫСТАРЫНА ӘСЕРІ: ҚАЗАҚСТАН ЖӘНЕ ТҮРКИЯ КЕЙСТЕРІ

Аңдатпа

Жаһандық макроэкономикалық тұрақсыздық жағдайында салық саясаты дамушы экономикалардағы үй шаруашылықтарының кірістері мен әлеуметтік әділеттілікті реттеудің маңызды тетігіне айналуда. Бұл зерттеуде Қазақстан Республикасы мен Түркия Республикасындағы 2024–2026 жж. салық реформаларына және олардың үй шаруашылықтарының қолда бар табысына тигізетін әртүрлі әсеріне салыстырмалы талдау ұсынылған. Негізгі мақсат – Салық кодекстеріндегі құрылымдық өзгерістердің әлеуметтік-экономикалық

салдарын бағалау, атап айтқанда Қазақстанның жеке табыс салығының прогрессивті шкаласына көшуін және Түркияның гиперинфляция жағдайындағы индекстеу саясатын мұқият қарастыру. Зерттеудің негізгі бағыттарына «фискалдық тежелу», салықтық жақшалардың «жылжу» (bracket creep) феноменін сандық бағалау және екі юрисдикциядағы салықтық сынаны салыстырмалы есептеу кіреді. Ғылыми маңыздылығы жоғары инфляция жағдайында атаулы жалақының өсуі салық ауыртпалығының жасырын өсуіне әкелетін латентті механизмдерді ашуда жатыр. Практикалық тұрғыдан алғанда, жұмыс инфляция мен статикалық салық шегінің өзара әрекеттесуінен туындайтын орта тап пен жалдамалы жұмысшылар үшін нақты тәуекелдерді бағалайды. Бұл зерттеудің құндылығы екі түрлі фискалдық стратегияны жаңаша салыстырмалы бағалаудан көрінеді: Қазақстандағы ҚҚС мөлшерлемелерін өзгерте отырып жоспарланған құрылымдық фискалдық түзетулерге қарсы Түркиядағы дағдарысқа қарсы бейімделгіш басқару. Алынған нәтижелер халықтың нақты табысына теріс шоктардың әсерін бәсеңдету мақсатында салық салу параметрлері мен индекстеу шегін серпінді реттеу бойынша мемлекеттік органдар үшін объективті бағдарларды ұсынады.

Тірек сөздер: салық салу, фискалдық тежелу, инфляциялық салық өсімі, үй шаруашылықтарының табыстары, теңсіздік, прогрессивті шкала, салық сынасы.

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ВЛИЯНИЕ НАЛОГОВЫХ РЕФОРМ НА ДОХОДЫ ДОМОХОЗЯЙСТВ: КЕЙСЫ КАЗАХСТАНА И ТУРЦИИ

Аннотация

В условиях глобальной макроэкономической нестабильности налоговая политика трансформируется из простого фискального инструмента в важнейший механизм регулирования доходов домохозяйств и социальной справедливости в развивающихся экономиках. В данном исследовании представлен сравнительный анализ налоговых реформ в Республике Казахстан и Турецкой Республике в период 2024–2026 гг. с акцентом на их различное влияние на располагаемый доход домохозяйств. Основная цель – оценить социально-экономические последствия структурных изменений в Налоговых кодексах, в частности, детально рассмотреть переход Казахстана к прогрессивной шкале индивидуального подоходного налога и политику индексации в Турции в условиях гиперинфляции. Основные направления исследования включают количественную оценку «фискального торможения», феномена «ползучести» налоговых скобок (bracket creep) и сравнительный расчет налогового клина в обеих юрисдикциях. Научная значимость заключается в раскрытии скрытых механизмов, посредством которых рост номинальной заработной платы в условиях высокой инфляции приводит

к скрытому увеличению налоговой нагрузки. Практически работа оценивает конкретные риски для среднего класса и наемных работников, возникающие из-за взаимодействия инфляции и статических налоговых порогов. Ценность данного исследования состоит в новой сравнительной оценке двух различных фискальных стратегий: плановых структурных фискальных корректировок с изменением ставок НДС в Казахстане против адаптивного антикризисного управления в Турции. Полученные результаты предлагают объективные ориентиры для государственных органов по динамическому регулированию параметров налогообложения и порогов индексации с целью смягчения негативных шоков для реальных доходов населения.

Ключевые слова: налогообложение, фискальное торможение, инфляционное повышение налогов, доходы домохозяйств, неравенство, прогрессивная шкала, налоговый клин.

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