

Institutional Quality and Youth Unemployment in the MENA Region: Panel Data Evidence and Policy Implications

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ABSTRACT:

This study investigates the impact of institutional quality on youth unemployment across 15 MENA countries over the period 1996-2023. Despite the growing body of research on youth unemployment in the region, its institutional dimension has received limited scholarly attention, notwithstanding the persistent governance challenges characterizing many MENA economies. Employing fixed and random effects estimators, selected via the Hausman specification test, on a balanced panel of 420 observations, the study integrates the six World Governance Indicators into a panel labour market framework. Empirical results confirm that economic growth and population growth are the most robust macroeconomic determinants of youth unemployment outcomes, with faster growth reducing and faster demographic expansion increasing joblessness among youth. Human capital, foreign direct investment and inflation do not exhibit consistent or statistically significant effects across specifications. All six dimensions of institutional quality are negatively and significantly associated with youth unemployment, with government effectiveness and political stability emerging as the most influential channels. These findings underscore the importance of complementing macroeconomic stability strategies with institutional reforms, particularly strengthening political stability, government effectiveness, and accountability mechanisms, to effectively address the chronic challenge of youth unemployment in the MENA region. The study provides actionable policy guidance for MENA governments, recommending that institutional reform encompassing public administration capacity, anti-corruption measures, and regulatory improvement, be treated as a central and indispensable pillar of any credible youth employment strategy.

Keywords: Youth Unemployment, Institutional Quality, Panel Data, MENA Countries.

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Introduction

Youth unemployment constitutes a chronic economic problem for the MENA region, which consistently records the highest youth unemployment rate globally. This persistent phenomenon threatens long-term economic development, political stability, and social cohesion. According to World Bank data, in 2024, the youth unemployment rate in the MENA region reached 19% of the total labour force aged 15-24, substantially exceeding the global rate of 13.6%. Country-level disparities are pronounced: Jordan and Tunisia recorded the highest rates at 41.7% and 40.1%, respectively, while Qatar (0.4%) and Bahrain (5.2%) displayed the lowest.

In most MENA countries, youth unemployment constitutes a long-run phenomenon, as young labour market entrants typically require extended periods to secure employment commensurate with their qualifications. Identifying the structural drivers of this phenomenon is therefore a prerequisite for designing effective policy interventions.

The existing literature attributes youth unemployment in the MENA region to several well-documented factors: low and volatile economic growth, mismatches between educational outputs and labour market demands, high labour market rigidities, and rapid demographic expansion (Assaad and Roudi-Fahimi, 2007; Ahmed et al., 2012; Salehi-Isfahani, 2012; Assaad, Krafft, and Salehi-Isfahani, 2018). This paper does not seek to revisit the full spectrum of these determinants; rather, it focuses specifically on one underexplored dimension: institutional quality. Specifically, this study asks: to what extent does improving institutional quality constitute an effective instrument for reducing youth unemployment in the MENA region?

There is growing recognition that institutional quality influences labour market outcomes. Kilishi et al. (2021) argue that insufficient institutional support impairs labour market performance and governance capacity, thereby exacerbating unemployment. Fakih et al. (2020) contend that strong institutions enhance economic activity, facilitate job creation, and

ultimately reduce unemployment. Similarly, Dietrich and Möller (2016) demonstrate that youth access to education, training, and employment is shaped by the institutional environment. More recently, Binuyo et al. (2024) find that weak institutions and governance deficiencies amplify unemployment in developing countries. Against this backdrop, this study investigates the relationship between institutional quality and youth unemployment across 15 MENA countries during the period 1996-2023.

The persistence of youth unemployment in the MENA region reflects a confluence of structural, demographic, and institutional forces that have accumulated over several decades. Demographically, the share of the 15–24 age cohort in the total working-age population consistently exceeds the world average, generating sustained labour supply pressure that economic growth has largely failed to absorb (Assaad and Roudi-Fahimi, 2007). What might have constituted a demographic dividend has, in much of the region, become a demographic burden: the rapid educational expansion of the 1980s and 1990s produced a large cohort of relatively educated young people for whom the labour market offered insufficient formal employment opportunities commensurate with their qualifications. Structurally, the dependence of many MENA economies on public sector employment as the primary destination for educated graduates has entrenched a dual labour market in which public jobs offer security and wage premiums that the private sector cannot match, encouraging prolonged queuing for state employment rather than productive private sector entry (Assaad, 2014). This pattern itself reflects a governance failure: the inability or unwillingness of state institutions to foster a private sector capable of absorbing labour at scale. The governance deficits that characterise much of the MENA region are, in this sense, constitutive of the youth unemployment problem rather than merely contextual to it.

Consistent with this framing, all six World Governance Indicators record negative sample means in this study's dataset, confirming that MENA countries collectively underperform

relative to the global average across every dimension of governance. These deficits are not incidental: they reflect deep-seated political economy constraints, including rentier state dynamics in hydrocarbon-exporting economies, restricted accountability mechanisms under authoritarian governance arrangements, and legal and regulatory frameworks that impede market entry in both product and labour markets. Against this background, the central argument of this paper is that institutional quality is not merely a contextual factor shaping youth employment outcomes, but one of its principal determinants, operating through multiple, identifiable channels, and that any credible youth employment strategy for the MENA region must engage directly with institutional reform.

The contribution of this paper is twofold. First, while relationship between institutional quality and aggregate unemployment has attracted growing scholarly attention, studies focusing specifically on youth unemployment remain limited. Second, although Fakihi et al. (2025) examine governance quality and overall labour market outcomes across MENA countries, no prior study has, to the authors' knowledge, systematically investigated the institutional quality–youth unemployment nexus across the MENA region using a comprehensive multi-country panel. This paper aims to fill this dual gap.

The empirical results reveal that all six dimensions of institutional quality are negatively and significantly associated with youth unemployment, with government effectiveness and political stability emerging as the most influential channels, underscoring the primacy of institutional reform in any credible youth employment strategy for the region. The remainder of the paper is organised as follows. Section 2 reviews the relevant literature. Section 3 presents data and methodology. Section 4 reports and discusses the empirical results. Section 5 concludes with policy implications.

2. Literature review

Governance and institutional quality are widely recognised as key determinants of economic growth and employment generation. Strong institutions foster employment through multiple

channels. Edison (2003) finds that improvements in institutional quality are associated with higher per capita income. Knack and Keefer (1995) demonstrate that countries with stronger institutional frameworks achieve higher economic growth rates and, consequently, greater job creation. Kaufmann et al. (1999) argue that enhanced governance quality promotes educational attainment and raises both economic growth and labour productivity. Conversely, weak governance is associated with reduced investment and fewer employment opportunities (Mauro, 1995). Kirsanli (2023) and Fagbemi et al. (2023) further contend that institutional and governmental inefficiency impedes economic growth and raises unemployment.

Nabila et al. (2015) examine the effect of institutional quality on economic growth in developing Asian economies over the period 1990-2013. Using the panel ARDL method, they find that institutional quality exerts a positive effect on economic growth, a conclusion reinforced by Alam et al. (2017), who demonstrate that government effectiveness has a positive impact on economic growth.

At the unemployment level, Mukisa and al. (2020) using an unbalanced panel of 37 Sub-Saharan Africa nations over 1995-2018, confirm that stronger institutions are associated with lower unemployment. This finding is consistent with Cicen (2023), who examines 38 OECD countries over 2000-2018 and concludes that improvements in national institutional structures reduce unemployment rates. Vicente (2023), applying the generalised method of moments to Asian countries over 2007-2020, similarly finds that institutional quality is a principal determinant of unemployment. More recently, Binuyo et al. (2024), studying 24 Sub-Saharan African countries over 1996-2021, conclude that higher-quality state institutions are associated with lower unemployment, a result corroborated by Fakihi et al. (2025), who apply a fixed-effects model to 15 MENA countries over 2002–2019 and find that improving governance quality reduces unemployment in the region.

The literature specifically addressing the relationship between institutional quality and youth unemployment is more limited. Abé Ndjié

et al. (2019), using dynamic panel estimation on African states over 2002-2016, conclude that good governance significantly reduces youth unemployment. Gouider and Ben Haddad (2024), investigating non-linear effects of corruption on male and female youth unemployment across 33 African countries over 2002-2021, find that improving institutional quality and curbing corruption constitute effective tools for reducing youth unemployment. Most recently, Azu et al. (2025), studying Nigeria over 1991-2023, highlight the central importance of institutional reforms and governance improvements in addressing youth unemployment and reducing gender disparities in labour market outcomes.

Within the MENA context specifically, Fakhri et al. (2020) document that political transitions following the Arab Spring significantly deteriorated youth labour market outcomes across the region, as institutional fragility undermined both investor confidence and the capacity to implement active labour market policies. Assaad et al. (2018) demonstrate that even highly educated graduates face poor employment prospects in countries such as Egypt and Jordan where institutional environments constrain private sector development. Campante and Chor (2012) further show that the combination of rising educational attainment and governance-driven labour market failures constituted a structural trigger for the 2010-2011 uprisings, underscoring the political stakes of unresolved youth unemployment. At the policy level, Assaad and Krafft (2016) document that MENA governments have historically substituted public employment guarantees for genuine institutional reform, a strategy that absorbed educated youth in the short run but entrenched labour market rigidities over time, and one that is increasingly unsustainable under mounting demographic pressure. Taken together, these studies expose a clear gap in the literature: while the institutional quality-youth unemployment nexus has been examined for Africa and, in limited cases, for individual MENA countries, no systematic multi-country panel analysis has been conducted for the MENA region as a whole. This paper aims to fill that gap.

3. Methodology

3.1 Data

The dataset of this study comprises a balanced panel data of 15 selected Middle East and North Africa (MENA) countries including Algeria, Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, United Arab Emirates and Yemen. Country selection is governed by the data availability. The panel spans the period 1996-2023, yielding 420 observations, and is designed to capture the diversity of institutional settings and labour market conditions across the region.

3.2 Empirical Model

To investigate the effects of institutional quality on youth unemployment in MENA countries, the following panel model is specified:

$$YUN_{it} = \alpha_i + \gamma_i IQ_{it} + \beta_1 Rgdpg_{it} + \beta_2 HCI_{it} + \beta_3 FDI_{it} + \beta_4 INFR_{it} + \beta_5 POPG_{it} + \varepsilon_{it}$$

where:

- YUN_{it} denotes the Youth Unemployment rate;
- IQ_{it} represents a vector of institutional quality approximated by the six governance indicators of Kaufmann et al. (2010);
- Control variables include the Real Gross Domestic Product Growth rate ($Rgdpg$), Human Capital index (HCI), Foreign Direct Investment (FDI), Inflation rate ($INFR$), and Population Growth rate ($POPG$);
- ε_{it} is the error term.
- The subscript i and t denote country and year, respectively.

The panel methods are well-suited to this empirical context, as they exploit both cross-sectional and time-series variation and allow for unobserved country-specific heterogeneity. The choice between fixed and random effects estimators is determined by Hausman (1978) specification test in each model. Static panel estimators are favored in this study for their parsimony and interpretability given the balanced, long-horizon panel; the potential

persistence of youth unemployment over time and concerns about endogeneity are acknowledged as limitations and are discussed further in Section 5, where dynamic panel extensions are recommended for future research.

3.3 The variables

The dependent variable is the youth unemployment rate (YUN), measured as the share of the labour force aged 15-24 years that is unemployed. The key independent variable is institutional quality (IQ), approximated by the six World Governance Indicators (WGI) of Kaufmann et al. (2010): Government Effectiveness (GEF), Regulatory Quality (REQ), Rule of Law (ROL), Control of Corruption (CCR), Political Stability and Absence of Violence (PST), and Voice and Accountability (VAC). Each indicator ranges from -2.5 (weak performance) to 2.5 (strong performance) and is introduced separately in the regressions to avoid multicollinearity, given the high pairwise correlations among them reported in section 4.

The control variables are as follows:

- The real GDP growth rate (Rgdp): in conformity with the Okun's law, the coefficient of Rgdp should be negative. Hence, promoting economic growth is associated with a decrease in the unemployment rate (Okun, 1962);
- Human Capital Index (HCI): Based on years of schooling and returns to education (Becker, 1964; Barro, 2001), accumulation of human capital is expected to improve employment prospects (negative coefficient expected). This variable is retrieved from the Penn World Table (PWT) version 11.0.

- Foreign Direct Investment (FDI): Net FDI inflows as a percentage of GDP, a key instrument for employment generation (Alfaro et al., 2004). A negative coefficient is expected.
- Inflation Rate (INFR): Annual percentage change in the consumer price index. Consistent with the Phillips (1958) curve relationship, an inverse relationship with unemployment is expected (negative coefficient expected).
- Population Growth Rate (POPG): Annual population growth rate, capturing demographic pressure on labour markets (Bloom and Freeman, 1986; Assaad and Krafft, 2016). As faster population growth expands the labour supply and intensifies competition for available jobs, a positive coefficient is expected.

All variables, with the exception of HCI, are sourced from the World Development Indicators (WDI) database. Institutional quality data are drawn from the World Governance Indicators (WGI) portal.

4. Results and Discussion

The present study investigates the role of institutional quality in determining youth unemployment in 15 MENA countries for the period 1996-2023 using static panel data models. In the first step, we conduct a descriptive analysis of all variables, featuring a balanced panel of 420 observations. Results are summarized in Table 1.

Table 1. Descriptive statistics

Variable	YUN	RGDPPG	FDI	HCI	INFR	POPG	ROL	REQ	CCR	GEF	VAC	PST
Mean	19.593	0.9193	3.0741	2.1941	6.6825	2.7491	-0.1616	-0.1646	-0.16814	-0.0936	-0.9274	-0.3907
Median	20.578	1.3549	1.7964	2.1800	3.4571	2.0939	-0.0202	-0.0778	-0.1744	-0.0990	-0.9037	-0.3753
Maximum	50.600	24.900	33.566	9.9960	221.300	19.360	1.1700	1.1066	1.5586	1.6000	0.3037	1.2235
Minimum	0.3000	-27.994	-10.953	0.4300	-4.8632	-3.2000	-1.8519	-2.0406	-1.7126	-2.3623	-1.9071	-2.9962
Std. Dev.	10.940	5.0138	4.1972	1.6966	16.631	2.7445	0.6607	0.6885	0.6425	0.6547	0.4224	0.9123
Skewness	0.0849	-0.8345	2.5900	2.5038	9.4443	2.6726	-0.3483	-0.4712	0.1462	-0.3988	-0.0018	-0.3216

Kurtosis	2.4239	10.3556	14.3967	10.6605	105.594	13.9207	2.17834	2.6351	2.6763	4.1289	2.9614	2.6661
Jarque-Bera	6.3118	995.594	2742.55	1455.32	190442.	2587.12	20.020	17.618	3.259	32.964	0.025	9.060
Probability	0.00425	0.0000	0.0000	0.0000	0.0000	0.0000	0.00004	0.00014	0.0059	0.0000	0.0071	0.0017

Source: Authors' own calculations using Eviews 13.

Table 1 shows the mean value of dependent variable, Youth Unemployment, of approximately 19.6% confirms that joblessness among young people represents a structural, rather than cyclical, challenge in the MENA region. The high standard deviations for GDP growth, FDI, and inflation reflect the considerable macroeconomic volatility experienced across the sample countries and period. Population growth rates are uniformly elevated, sustaining persistent demographic pressure on already strained labour markets. The

Human Capital Index exhibits notable heterogeneity, reflecting uneven educational outcomes across the region. All six governance indicators record negative mean values, indicating that MENA countries collectively perform below the global governance average. The Jarque-Bera test rejects normality for most variables, underscoring the appropriateness of robust panel estimators for the subsequent analysis.

Moreover, the correlation matrix between the variables of the econometric model is presented in Table

Table 2. The Correlation Matrix

Variables	YUN	RGDPPG	FDI	HCI	INFR	POPG	ROL	REQ	CCR	GEF	VAC	PST
YUN	1											
RGDPPG	-0.0157	1										
FDI	-0.0749	0.0952	1									
HCI	-0.1935	-0.0696	0.0052	1								
INFR	0.1184	-0.0919	0.0040	-0.1874	1							
POPG	0.3665	-0.2746	0.0806	0.1563	-0.0864	1						
ROL	-0.5270	-0.0547	0.0600	0.5587	-0.1745	0.3277	1					
REQ	-0.5759	-0.0035	0.1740	0.5056	-0.2994	0.3023	0.8426	1				
CCR	-0.5752	0.0143	0.0401	0.5040	-0.3008	0.3660	0.8705	0.8197	1			
GEF	-0.5557	0.0729	0.1029	0.4374	-0.3299	0.2775	0.8464	0.8581	0.8923	1		
VAC	-0.0665	0.0252	0.1356	-0.0411	-0.0081	0.0440	0.1610	0.2002	0.1383	0.1652	1	
PST	-0.5898	0.0314	0.0010	0.5085	-0.2668	0.3450	0.7915	0.7335	0.8380	0.8010	0.2305	1

Source: Authors' determined values using Eviews 13

The correlation analysis offers an initial idea of the direction and strength of a linear association between factors, and it serves as a diagnostic instrument to check for possible collinearity before estimating regression equations.

Youth unemployment is negatively and moderately correlated with five governance indicators: rule of law (ROL), regulatory quality (REQ), control of corruption (CCR), government effectiveness (GEF) and political stability and absence of violence (PST), indicating that stronger institutions are systematically

associated with lower youth unemployment. Voice and accountability (VAC) exhibits a substantially weaker correlation (-0.067), suggesting a more limited direct association. Population growth also displays a meaningful positive correlation with youth unemployment (0.367), while the human capital index shows a weaker relationship (-0.194). GDP growth, FDI, and inflation display only marginal correlations with the dependent variable, suggesting that their effects may be more indirect or operate over time horizons.

Critically, the governance variables are highly intercorrelated, with most pairwise coefficient greater than 0.80. This multicollinearity confirms that each indicator cannot be included simultaneously in a single regression. The strategy of running separate specifications, each incorporating one governance indicator, appropriately addresses this concern. These preliminary findings motivate a more rigorous

econometric analysis, presented in the next subsection.

Furthermore, the estimation results from seven model specifications, where a different institutional quality indicator is added to each regression along with the common set of control variables, are summarized in Table 3. The decision between fixed effects and random effects estimators is based on the result of the Hausman test.

Table 3: The relationship between institutional quality and youth unemployment

Variables	Equation 1	Equation 2	Equation 3	Equation 4	Equation 5	Equation 6	Equation 7
	Dependent variable: youth unemployment rate (YUN)						
Constant	20.729 (18.574)***	20.275 (8.149)***	19.888 (8.183)***	19.410 (7.588)***	19.934 (7.907)***	19.523 (7.344)***	20.268 (8.379)***
RGDP	-0.2099 (-4.645)***	-0.1267 (-3.028)***	-0.1557 (-3.464)***	-0.1955 (-4.465)***	-0.172565 (-3.949)***	-0.1986 (-4.364)***	-0.14675 (-3.492)***
HCI	-0.1293 (-0.267)	-0.1486 (-0.353)	-0.0944 (-0.211)	-0.0706 (-0.1571)	-0.2421 (-0.5468)	-0.4120 (-0.887)	-0.7683 (-1.799)*
FDI	-0.0624 (-1.037)	-0.0484 (-0.887)	-0.0415 (-0.710)	-0.09007 (-1.542)	-0.0358 (-0.6205)	-0.0711 (-1.180)	-0.1069 (-1.929)*
INFR	0.0154 (1.122)	-0.0275 (-2.063)**	-0.0015 (-0.115)	0.0249 (1.847)*	0.0050 (0.376)	0.0141 (1.018)	0.0097 (0.761)
POPG	0.1895 (2.062)**	0.1974 (2.372)**	0.2067 (2.317)**	0.2058 (2.317)**	0.1732 (1.966)**	0.1741 (1.876)*	0.1176 (1.817)*
GEF	-	-6.972 (-9.819)***	-	-	-	-	-
REQ	-	-	-4.811 (-5.807)***	-	-	-	-
ROL	-	-	-	-5.515 (-6.083)***	-	-	-
CCR	-	-	-	-	-5.178 (-6.700)***	-	-
VAC	-	-	-	-	-	-1.924 (-2.276)***	-
PST	-	-	-	-	-	-	-4.540 (-9.251)***
Observations	420	420	420	420	420	420	420
Hausman Test P-value	10.768 (0.046)	5.187 (0.520)	6.726 (0.346)	5.4007 (0.493)	5.545 (0.476)	9.641 (0.140)	6.342 (0.385)
Preferred Model	Fixed effects	Random Effects	Random Effects	Random Effects	Random Effects	Random Effects	Random Effects

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are in parentheses.

To choose the suitable panel data estimator, the Hausman specification test was used for each model. The test applies to the null where the coefficients for both fixed and random effect estimator are currently consistent, against the alternative that there is consistency of the fixed effect only as a result of correlation between

unobserved individual specific effects and regressors (Hausman, 1978; Wooldridge, 2010).

The results show that the null hypothesis is rejected, cannot be rejected for the first specification at a 5% level of confidence ($\chi^2 = 10.76$, $p = 0.046$), so that the fixed effects model is preferred. This result indicates that the

unobserved individual heterogeneity is correlated with the explanatory variables in this specification.

In the other specifications, the Hausman test does not reject the null hypothesis (p -values > 0.10) and therefore no statistical differences between fixed and random effects estimators are observed. For these specifications, the random effects specification is preferred; it is consistent and more efficient if the maintained assumptions hold (Greene 2018, Wooldridge 2010).

The use of different estimators across specifications, fixed effects for Equation 1 and random effects for Equations 2 to 7, warrants a brief clarification. This mixed selection does not compromise the comparability of estimates across equations. Under the null hypothesis of the Hausman test, both fixed and random effects estimators are consistent, and the Hausman statistic for Equation 1 ($\chi^2 = 10.76$, $p = 0.046$) indicates only marginal rejection at the 5% level, implying limited correlation between the country-specific effects and the regressors in that specification. More substantively, the comparability of governance coefficients across equations is preserved because: (i) each governance indicator is entered in isolation, so no cross-equation interaction affects interpretation; (ii) the control variable set is held constant across all seven specifications; and (iii) under the Hausman null, which is not rejected for Equations 2 to 7, the random effects estimator is consistent and more efficient than fixed effects. The model-selection procedure therefore serves statistical efficiency rather than introducing any systematic difference in the governance

coefficients that would distort cross-equation comparisons.

Table 3 shows that the real GDP growth rate (Rgdpg) is negative and statistically significant at the 1% level in all specifications. This suggests that faster economic growth is connected with lower youth unemployment, which validates the influence of business cycle movement in determining labor market outcomes for young people, confirming the results of Blanchard and Wolfers, (2000).

The Human capital index (HCI) coefficient is negative across all specifications but statistically insignificant in six of the seven equations, attaining only marginal significance (10%) in Equation 7. This weak result is consistent with Assaad (2014), who documents that human capital accumulation in the MENA region is frequently mismatched with actual labour market demands, limiting its unemployment-reducing effect.

The foreign direct investment (FDI) coefficient is consistently negative but statistically insignificant in most specifications, with only marginal significance in Equation 7. This suggests that aggregate FDI inflows do not exert a strong direct effect on youth employment in the MENA region, a finding consistent with Alfaro (2003), who notes that the employment effects of FDI depend critically on host-country conditions and absorptive capacity.

The Inflation (INFR) yields mixed results, attaining significance in only two specifications and displaying different signs. This pattern suggests that inflationary pressures do not exert a consistent or robust effect on youth

unemployment across the sample, in line with Karanassou et al., (2010).

POPG is positively and significantly associated with youth unemployment across all specifications (significant at the 5% level in most), confirming that sustained demographic expansion exerts persistent upward pressure on youth joblessness in the MENA region (Bloom and Williamson, 1998). This result highlights the importance of accounting for demographic dynamics in any regional employment strategy.

All six governance indicators (GEF, REQ, ROI, CCR, VAC, and PST) carry negative and statistically significant coefficients, confirming that improvements in institutional quality are robustly associated with lower youth unemployment. Among these, government effectiveness (GEF, coefficient equal -6.972) and political stability (PST, coefficient equal -4.541) display the largest absolute values, indicating that these two dimensions of governance exert the strongest influence on youth employment outcomes. This is consistent with theoretical arguments that effective public administration supports job creation and private sector development, while political stability provides the stable environment required to sustain investor confidence and long-term employment growth (Rodrik, 2008; Acemoglu and Robinson, 2012; Cazes et al., 2024). Voice and accountability (VAC) yield a comparatively smaller and less robust coefficient (-1.924), suggesting that this dimension of governance operates through more diffuse or indirect channels in the MENA context.

Disaggregating each governance dimension provides a deeper understanding of this aggregate

finding. Government effectiveness (GEF), has the biggest estimated coefficient (-6.972) capturing quality of public services, civil service and credibility of government commitment to policies stated, etc. Better governance has a plausible dominant effect on youth unemployment in the MENA context: ineffective public administration directly impedes efforts to design and deliver active labour market programmes (i.e. job placement services, vocational training, employment subsidies) which are especially important for reducing youth joblessness in view of their wider accessibility reliant on government capacity. In addition, effective governments can better streamline the business environment reforms that draw private investment and spur job creation. The second most influential indicator (coefficient -4.541), Political stability and absence of violence (PST) covers perceptions of the likelihood of political instability, armed conflict and terrorism. The power of its impact encapsulates the specific susceptibility of youth labour markets: unstable environments cause investors to signal a reduction in hiring decisions and long-term capital commitments; young workers all too often occupy positions lower down the hierarchy in firms, with scant contractual protections compared to older workers who benefit from greater job security, leaving them disproportionately exposed to the employment consequences of political shocks. Tunisia, Egypt, and Yemen as three of the two dozen Arab Spring episodes experienced within the sample period illustrate this mechanism in stark terms.

The control of corruption (CCR) indicating the degree to which public power is exercised for

private gain has a coefficient of -5.179. Corruption in MENA labour markets distorts access to employment by favoring patronage networks or other forms of non-competitive recruitment over merit-based hiring (Cooray and Dzhumashev 2018), increases the effective costs of entry into the private sector through informal payments and regulatory burden (Bertrand et al. 2007), and reduces returns to human capital investment by decoupling educational attainment from labour market outcomes (Abdulla 2021).

It underpins contract enforcement, property rights protection, and judicial independence (rule of law [ROL], coefficient -5.516), all of which are prerequisites for the private sector investment and expansion that generate youth employment at scale. Regulatory quality (REQ, coefficient -4.811), assesses whether governments have a high degree of capacity to design and implement rules and regulation conducive to private sector development; the effect on youth unemployment works mainly through ease of starting up businesses, greater flexibility in its work markets or to removing hurdles in entering and exiting firms.

Finally, voice and accountability (VAC), while statistically significant, has a smaller coefficient (-1.924) than the others, further demonstrating the indirect influence democratic participation and press freedom likely have on youth employment. For those MENA settings that may be termed autocratically constrained or semi-autocratic, where democratic accountability and consequent reform pressure are formally constrained, the impact of VAC on labour market outcomes is more likely to operate through more gradual channels, longer-run processes of political

learning and reform pressures, that extend beyond the 28-year panel horizon considered here.

These results collectively indicate that institutional quality is a more powerful and consistent predictor of youth unemployment in the MENA region than standard macroeconomic variables. Weak institutions impede private sector development, reduce investment incentives, and perpetuate structural labour market inefficiencies that disproportionately affect young labour market entrants.

Notwithstanding the robustness of the aggregate panel results, important cross-country heterogeneity is evident in the raw data and warrants discussion. MENA is not a homogeneous space: it includes oil-rich GCC states, such as Bahrain, Kuwait, Oman, Qatar and Saudi Arabia as well as the UAE, whose labour market structures differ substantially from those of non-oil MENA economies such as Jordan, Tunisia and Egypt. Youth unemployment rates are significantly lower in GCC countries (0.4% for Qatar and 5.2% for Bahrain in 2024) because nationals have been absorbed into the public sector, backed by hydrocarbon revenues; other factors include unique labour market institutions such as kafala sponsorship systems and very high levels of migrant labour which structurally understate official youth unemployment data. Indeed, non-oil economies such as Jordan (41.7%), Tunisia (40.1%) and Yemen experience ongoing high-stakes youth unemployment, a result of lower fiscal capacity, volatile political environments and deeper education-labour market mismatches. These diverging patterns indicate that the inverse association between

institutional quality and youth unemployment documented in this study is likely to occur through different channels across country groups.

The improvement of institutional quality, particularly as measured by regulatory quality and government effectiveness, in GCC states is most likely to have an impact through the development of the private sector and on structural economic changes that broadens employment opportunities outside of public jobs; this process has been clearly articulated in Saudi Arabia and UAE Vision 2030 frameworks. By contrast, in North African and Levantine economies political stability and control of corruption seems to be the binding constraints, as the immaturity of political transitions from governance fragility after the Arab Spring has directly undermined investor confidence and labour market functioning. In addition, the period 1996-2023 is characterized by temporal heterogeneity as it includes important structural breaks like the global financial crisis of 2008-2009, the Arab Spring of 2010-2011 and more recently the COVID-19 pandemic in 2020-2021 that had asymmetric implications for youth employment across the region. While the panel framework controls for time fixed effects implicitly through the variation exploited by the random and fixed effects estimators, future research using sub-period analysis or regime-switching models could usefully assess whether the institutional quality-youth unemployment relationship has strengthened or weakened across these distinct historical episodes.

5. Conclusion and Future Work

Youth unemployment represents one of the most acute and enduring socioeconomic challenges confronting the MENA region, which records the highest youth unemployment rates globally. This paper contributes to the growing literature on the institutional determinants of labour market outcomes by investigating the relationship between institutional quality and youth unemployment across 15 MENA countries over the period 1996-2023.

Using panel data methods, with fixed or random effects estimators selected on the basis of the Hausman specification test, and incorporating the six World Governance Indicators of Kaufmann et al. (2010) as proxies for institutional quality, the analysis yields several robust conclusions. First, economic growth is confirmed as a significant driver of youth employment, consistent with Okun's law. Second, population growth exerts persistent upward pressure on youth unemployment, reflecting the demographic realities of the MENA region. Third, and most importantly, all six governance dimensions are negatively and significantly associated with youth unemployment, with government effectiveness and political stability emerging as the most influential channels.

Policymakers in MENA countries should treat institutional reform as a central pillar of youth employment strategy, complementary to macroeconomic stabilisation and growth promotion. Priority should be accorded to strengthening government effectiveness, through investment in public service delivery capacity and credible, transparent policy-making, and to improving political stability, which underpins the long-term investment and labour market

confidence necessary to generate sustained employment. More broadly, reforms targeting accountability, anti-corruption measures, and regulatory quality are likely to yield meaningful dividends in addressing the structural dimensions of youth joblessness, with institutional strengthening constituting an indispensable lever for creating a more equitable employment opportunities for youth across the region.

These findings lend themselves to a number of specific policy directions. First, in an environment where government effectiveness is paramount, governments need to create stronger capacity of public institutions to design and deliver evidence-based labour market policy. One of these would be the professionalisation of civil services, cutting bureaucratic red tape that limits private sector access and growth and creating effective independent regulatory agencies with a track record in contract enforcement and property rights. Weak state capacity leaves public active labour market programmes unable to function and dissuades private sector investment that is the foundation on which sustainable youth employment must stand.

Second, building political stability involves preventing conflicts but also establishing inclusive political institutions that ensure diverse social groups have a real stake in political processes, including youth. Countries in this study's sample that have experienced prolonged conflict or entrenched authoritarian governance, Yemen, Jordan and Tunisia, consistently record the region's highest youth unemployment rates, a pattern that is far from coincidental. Sustained peace dividends and political settlements that

promote inclusive economic participation are therefore prerequisites for labour market renewal.

Third, anti-corruption reforms should be given special priority as a complement to direct employment policies. Corruption: Through distorting labour market signals, strengthening patronage-based hiring in the public sector and undermining investor confidence, corruption especially harms young people entering labour markets who may lack the social networks or resources to overcome opaque hiring systems. Such accountability can be done through tools like transparency initiatives, independent anti-corruption commissions and digitalisation of public procurement and hiring processes.

Fourth, better regulatory quality also means easier to register in business sector and fewer compliance obligations burdens on foreign investment. Follow-up policy directions each follows a stable directions on long-term investments as private investments are the most viable engine to create adequate jobs for youth employment since public work rarely sustains; Similarly, international experience shows that countries focusing solely on macroeconomic policy in the context of youth employment objectives have performed very much worse than those which were able to ensure both credible institutional reform and a favorable macroeconomic environment.

Fifth, the analysis may confirm that population pressure is a continuing upward force on youth unemployment, but demographic pressures can only be mitigated through not fertility-reducing policies but demand-side policies: faster growth in demand for labour-intensive sectors of the

economy; vocational training opportunities commensurate with market needs; and removing structural barriers to female entry into a small workforce (which has long been the nature of much of MENA's labour supply).

There are several limitations of this study that need to be rectified by future research. First, the use of static panel models decisively ignores the potential persistence of youth unemployment over time. Youth unemployment is highly hysteretic: long spells of unemployment erode human capital and reduce the chances to find a job in the future, generating self-fulfilling dynamics that static estimators are unable to detect. Dynamic panel specifications like the Arellano-Bond GMM estimator may be appropriate for future research to explicitly model this persistence and examine whether the institutional quality effects documented here hold after accounting for employment dynamics.

Second, lack of trade openness as a control variable is an acknowledged gap; including it in future works could strengthen the findings, especially given that liberalisation can change labour market conditions (particularly for youth employed in tradable goods sectors) as well.

Third, while the composite nature of WGI indicators makes them ideal for cross-country comparisons, this aggregation conceals important between-sub-national and within-country heterogeneity. Future research could examine subnational institutional data, where available, to ascertain whether variation in local youth unemployment outcomes across MENA countries is driven by regional governance differentials.

Fourth, this study is limited to just the quantity dimension of youth employment. There would be scope for future work on different dimensions of job quality, such as informality rates, levels of satisfaction with jobs and wage levels and stability of contracts, which are particularly salient in MENA labour markets with large informal sectors or a duality between public and private sector wages.

Fifth, at least equally productive to pursue would be an extension of the analysis to gender-disaggregated youth unemployment data since we know that female youth unemployment in MENA remains systematically and persistently higher than male youth unemployment and it may also respond differently to institutional reforms.

Finally, future research could beneficially test for non-linear or threshold effects in the institutional quality-youth unemployment nexus: improvements in governance may be associated with diminishing or accelerating returns at different stages of institutional development, a matter that is central to sequencing reform priorities across MENA economies characterised by vast heterogeneity.

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CRedit Author Statement

Abdessalem Gouider: Conceptualization; Editing; Formal Analysis; Writing-Original Draft. Sahbi Gabsi: Conceptualization; Data Curation; Formal Analysis; Methodology; Writing-Original Draft.

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