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Assessing the Impact of Macroeconomic Factors on Economic Growth in the Kurdish Regions

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Abstract

This study aims to examine the influence of key macroeconomic factors, including consumption, investment, government expenditures, and net exports, on economic growth within the Kurdish regions. Using balanced panel data spanning 1980 –2020, this study investigates the cointegration relationship between these variables using the PMG-ARDL cointegration method and employs the Dumitrescu and Hurlin causality test to unveil causal linkages among the variables. The PMG analysis uncovers a long-term positive relationship between consumption, investment, and net exports on economic growth, while government expenditure exhibits a negative long-term association with economic growth. In the short-run, PMG results reveal a positive connection between investment and government expenditures on economic growth. The Dumitrescu and Hurlin heterogeneous causality test reveals causal relationships running from economic growth to consumption and investment, as well as from consumption and net exports to government expenditures. Bidirectional causality is observed between investment and government expenditures, investment and consumption, and net exports and economic growth. These findings hold substantial policy implications for how fiscal strategies should be reviewed to stimulate economic growth and align them with SDGs for targeted investments.

Keywords: *Kurdish Region, Economic Growth, Panel Cointegration, Causality, Macroeconomic Factors.*

Introduction

The economy of the Kurdish regions —in Iran, Iraq, Syria, and Turkey—is diverse and varied across the different countries where Kurdish populations reside (Gunter, 2019). Each region faces unique challenges and opportunities shaped by factors such as political stability, natural resources, government policies, and external influences. Table 1 presents the average growth rates of four countries (Iran, Iraq, Syria, and Turkey) over periods from 1980 to 2020. The growth rates are expressed as percentages and indicate the average annual rate of change in the countries' economies during each specific time frame. In Iran, growth rates fluctuated over the years, with periods of negative growth—0.04% (1980–1994), followed by contraction of –1.61% (1985–1990)—followed by phases of rebound and expansion of 5.29% (1991–1994), 2.84% (1995–1999), 5.86% (2000–2004), 3.52% (2005–2009), 1.63% (2010–2014), 1.05% (2015–2019), and 3.33% (2020), mainly driven by oil and gas production, foreign investments, and trade. Iraq witnessed remarkable economic growth during the 1990s, surging to 17.36% (1995–1999), then moderation to 4.97% (2015–2019), but a –12.04% contraction (2020), attributed to oil revenues and reconstruction efforts after the Gulf War, but faced a severe contraction in 2020 due to multiple challenges, including conflicts and declining oil prices. Syria experienced relatively steady growth in the earlier years, including 7.55% (1991–1994), steady at 3.96% (2000–2004), followed by a sharp downturn since 2011, like –10.98% (2010–2014), due to the civil war and political instability. Turkey demonstrated consistent and sustained growth over the years, where the growth rate was 7.57% (2010–2014) but

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decreased to 1.94% (2020), bolstered by a diverse economy, export-oriented industries, and government policies supporting investment and trade. Thus, this study is motivated to analyse the relationship between various macroeconomic variables, e.g., consumption, investment, government expenditures, net exports, and economic growth in the Kurdish regions.

Table 1: Gross Domestic Product (GDP) Growth (Annual Average In %).

Year Countries	1980–1994	1985–1990	1991–1994	1995–1999	2000–2004	2005–2009	2010–2014	2015–2019	2020
Iran	-0.04	-1.61	5.29	2.84	5.86	3.52	1.63	1.05	3.33
Iraq	2.58	2.45	12.10	17.36	5.44	4.16	7.14	4.97	-12.04
Syria	3.95	1.49	7.55	5.02	3.96	5.46	-10.98	-1.74	-3.87
Turkey	3.53	4.67	3.60	4.40	4.64	3.40	7.57	4.13	1.94

Source: World Bank, World Development Indicators (WDI) database.

In the field of economic growth, the influence of economic and non-economic factors is widely acknowledged (e.g., Mallick, 2002; Mohamed Aslam, 2017; Dudzevičiūtė, Šimelytė & Liučvait, 2018; Chirwa & Odhiambo, 2019). A small portion of studies explored the effects of non-economic factors on economic growth in Kurdish regions, including the work by Alozairi (2018). This particular study examined the effects of non-economic factors such as corruption, education, human capital, social, and political factors on economic growth within the Kurdistan region of Iraq. The results derived from the questionnaire indicated a significant and positive correlation between human capital, education, political dynamics, and corruption on economic growth in Iraq. Additionally, a body of empirical research investigated the effects of macroeconomic factors like foreign direct investment (FDI) on economic growth in the context of Middle Eastern and North African (MENA) countries (Abdouli & Hammami, 2017; Abdouli & Hammami, 2018). On the other hand, empirical research focusing on the impacts of trade or government spending on economic growth in Kurdish is limited (e.g., Hamdi & Sbia, 2013; Al & Tugdar, 2017; Nouira & Kouni, 2021). The prevailing literature predominantly accentuates key macroeconomic factors, leaving a relatively confined exploration of consumption, investment, government expenditures, net exports, and their intricate interplay with economic growth within the Kurdish regions of Iran, Iraq, Syria, and Turkey.

The objective of this study is to analyse the influence of macroeconomic factors on economic growth within the Kurdish regions using panel data analysis. The significance of this study is underscored by its potential to offer invaluable insights into the intricate economic dynamics characterizing the Kurdish region in some aspects. First, it is the first study in the literature that analyses the relationship between macroeconomic factors and economic growth for the Kurdish regions' countries with the autoregressive-distributed lag (ARDL) cointegration technique. Second, this paper also uses the Dumitrescu and Hurlin causality methods to clarify the direct relationship between the macroeconomic factors and economic growth. The implications of the study's findings are substantial, equipping policymakers within the Kurdish region with nuanced insights to craft and implement targeted policies that foster economic growth, attract investments, and elevate the overall economic well-being of the populace.

The subsequent section of this study will concisely outline the model specification, data, and methodology. Subsequently, the empirical findings will be illustrated in the third section. The final section of the study will encompass the conclusion and policy implications.

Model Specification, Data and Methodology

Guided by the Keynesian theoretical framework, which accentuates the intricate synergy of the different components of aggregate demand such as consumption, investment, government expenditure, and net exports

as pivotal drivers of overall economic growth (Keynes, 1936). The specification of the empirical model is:

$$Y_{i,t} = \beta_0 + \beta_1 Cons_{i,t} + \beta_2 I_{i,t} + \beta_3 G_{i,t} + \beta_4 Nx_{i,t} + \varepsilon_{i,t} \quad (1)$$

where the dependent variable is the economic growth, Y_{it}, $Cons_{it}$ is the consumption expenditure, I_{it} represents investment, G_{it} is the government expenditure, and Nx_{it} is the net exports. The model is transformed into logarithmic form to linearize it, simplifying elasticity calculations (Gujarati and Porter, 2008). The model is represented by equation (2), where Ln signifies the natural logarithm and ε_{it} represents the residuals.

$$LnY_{i,t} = \beta_0 + \beta_1 \Delta LnCons_{i,t} + \beta_2 \Delta LnI_{i,t} + \beta_3 \Delta LnG_{i,t} + \beta_4 \Delta LnNx_{i,t} + \varepsilon_{i,t} \quad (2)$$

Data

This study employs annual data encompassing four Kurdish regions: Iran, Iraq, Syria, and Turkey. The analysis utilizes a balanced panel covering the years 1980 to 2020, with data sourced from the World Bank's World Development Indicators (WDI). Economic growth is approximated using the real GDP per capita of each economy. The computation of consumption expenditures involves net household final consumption expenditure, obtained by subtracting general government final consumption expenditure from the total final consumption. Investment is proxied by gross fixed capital formation, while net exports are self-compiled as the difference between exports and imports of goods and services. All data are presented at constant 2015 prices and denominated in US dollars.

Table 2 displays the descriptive statistics for the panel dataset. The yearly panel data for all variables reflect a positive trend, which is consistent with the proposed hypothesis. Analysing the standard deviation highlights increased volatility across all indicators of economic growth over the observed periods. Furthermore, the skewness measure reveals a predominant negative skewness, indicating a higher occurrence of negative shocks in contrast to positive ones. Moreover, each variable exhibits a notable positive kurtosis. This observation gains support from the Jarque-Bera test statistics, which reject the null hypothesis of normal distribution for all cases, signifying significance at a minimum level of 5 percent.

Table 2: Summary of Descriptive Statistics.

	LnY	***LnCons***	***LnI***	***LnG***	***LnNx***
Mean	8.0569	24.9131	23.5983	23.4105	10.7323
Median	8.2305	25.0198	24.1160	23.9256	10.8532
Maximum	9.3987	27.0804	26.4043	25.7610	12.3468
Minimum	6.5886	22.6887	19.6237	20.4420	3.3879
Std. Dev.	0.7120	1.1961	1.8876	1.6011	1.4191
Skewness	–0.3406	0.0618	–0.3583	–0.5772	–1.1725
Kurtosis	2.1947	1.7063	1.6636	1.8757	5.8552
Jarque-Bera	7.6023	11.5413	15.7128	17.7452	93.2839
Probability	0.0223	0.0031	0.0004	0.0001	0.0000

Notes: Std. Dev. stand for standard deviation.

Methodology

This study examines the influence of consumption, investment, government expenditure, and net exports on economic growth in Kurdish regions. The econometric analysis employs three primary methods. First, to assess variable stationarity, unit root tests, including augmented Dicky Fuller (ADF), Phillips Perron (PP) tests by Maddala and Wu (1999), Choi (2001) and Hadri (2000), Levin, Lin, and Chu (2002) (LLC), and Im, Pesaran, and Shin (2003) (IPS), were conducted. Second, the co-integration analysis employs the ARDL model introduced by Pesaran et al. (1999) to explore both long-run and short-run relationships among the

variables. The ARDL model also incorporates an error correction model. Furthermore, the Pooled Mean Group (PMG) model, an adaptation of the cointegration form of the ARDL model for panels, is employed, allowing for variations in intercepts, short-run coefficients, and cointegrating terms across sections. Moreover, to ensure the robustness of our results, we have employed the Pedroni (1999) method for conducting panel co-integration tests. This approach considers heterogeneity by incorporating specific parameters that are permitted to vary across individual members of the sample. This additional step serves to reinforce and validate the outcomes obtained from the PMG analysis.

The ARDL model offers significant advantages over other methods. Notably, it remains applicable regardless of whether the variables exhibit $I(0)$ stationarity, $I(1)$ stationarity, or a combination of both, while excluding the scenario where any variables are $I(2)$. However, it is essential to acknowledge that this technique cannot be applied in situations where the variables are $I(2)$. Moreover, the ARDL model facilitates the examination of both long- and short-term relationships between the variables. Furthermore, this method displays a relatively higher degree of consistency and efficiency, particularly in scenarios involving infinite or small sample sizes. The ARDL model is formulated as follows:

$$\Delta LnY_{it} = \alpha_0 \sum_{j=1}^{m} \varphi_{i,j} \Delta LnY_{i,t-j} + \sum_{j=1}^{m} \theta_{i,j} \Delta LnCons_{i,t-j} + \sum_{j=1}^{m} \omega_{i,j} \Delta LnI_{i,t-j} + \sum_{j=1}^{m} \delta_{i,j} \Delta LnG_{i,t-j} + \sum_{j=1}^{m} \pi_{i,j} \Delta LnNx_{i,t-j} + \lambda_1 LnY_{i,t-1} + \lambda_2 LnCons_{i,t-1} + \lambda_3 LnI_{i,t-1} + \lambda_4 LnG_{i,t-1} + \lambda_5 LnNx_{i,t-1} + \varepsilon_{i,t} \quad (3)$$

where Δ represents difference operator; λ_1, λ_2, λ_3, λ_4, and λ_5 denote the long-run coefficients; α_0 signifies the country-specific intercept in equation (3), m denotes the lag length, and $\varepsilon_{i,t}$ stands for error correction term. The null hypothesis of no cointegration is denoted as $(H_0: \lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = \lambda_5 = 0)$, while, the alternative hypothesis indicating the presence cointegration is represented by $(H_1: \lambda_1 \neq , \lambda_2 \neq, \lambda_3 \neq, \lambda_4 \neq, \lambda_5 \neq 0)$.

Empirical Results

Table 3 presents the outcomes of the unit root tests conducted for both the level and first difference of the variables. The results highlight that, apart from economic growth and net exports, all other variables display non-stationarity in their levels. Consequently, it can be inferred that a subset of the variables exhibits an integrated of order 0 $(I(0))$, while the remaining variables manifest an integrated order of 1 $(I(1))$. This mixed order of integration is corroborated by the collective findings of the LLC, IPS, ADF, and PP unit root tests.

Table 3: Panel Unit Root Tests Results.

	Level-Individual intercept				**First Difference-Individual intercept**			
Variables	*LLC*	*IPS*	*ADF*	*PP*	*LLC*	*IPS*	*ADF*	*PP*
LnY	0.6822	1.6933	1.9688	2.9180**	–11.6745***	–10.7912***	96.3782***	104.8630***
LnCons	–1.2374	0.3350	4.5143	2.9678	–4.5447***	–6.5280***	58.4671***	88.9956***
LnI	–0.1895	0.9122	3.1045	3.8084	–9.6127***	–8.4291***	75.5913***	98.6688***
LnG	1.0076	2.0149	1.8030	2.5812	–9.4153***	–9.2340***	81.8240***	82.2875***
LnNx	–1.8637**	–3.3523***	30.5818***	31.5061***	–6.4702***	–8.1557***	73.8176***	102.1130***

	Level-Individual Intercept & Trend				First Difference-Individual Intercept & Trend			
Variables	*LLC*	*IPS*	*ADF*	*PP*	*LLC*	*IPS*	*ADF*	*PP*
LnY	–0.7097	–1.0928	14.0234*	10.9517	–8.0502***	–7.6126***	68.2836***	106.7110***
LnCons	3.1211	2.0093	5.1720	5.2151	–6.5100***	–8.3532***	70.8955***	81.7911***
LnI	-0.1524	–0.9507	11.5344	7.0234	–8.8915***	–7.5367***	61.4133***	86.6095***
LnG	0.8134	–1.2469	12.0822	8.7630	–8.7020***	–8.2832***	65.4693***	65.6022***
LnNx	–1.1752	–2.8970***	28.2693***	28.1266***	–6.0820***	–7.1617***	59.3382***	413.0790***

Notes: Significance levels are denoted by asterisks: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The unit root tests include Levin, Lin and Chu (LLC), Im, Pesaran and Shin (IPS), Augmented Dickey Fuller (ADF), and Phillip Perron (PP). The optimal lag length is determined using the AIC, while the bandwidth is selected through Newey-West and Barlett Kernel methods.

Table 4 presents the findings encompassing the long-run and short-run elasticities of output, focusing on consumption, investment, government expenditures, net exports, and economic growth. The negative and statistically significant error correction terms validate the model's convergence in the long run. The study establishes a significant positive relationship between economic growth and consumption, investment, and economic growth, all at the 1% significance level. Moreover, a 10% significance level is observed for the association between economic growth and net exports. In the long term, a 1% increase in consumption, investment, and net exports corresponds to economic growth increments of 0.3483%, 0.3023%, and 0.0678%, respectively. Conversely, a 1% expansion in government expenditure corresponds to a 0.2796% decrease in economic growth over the extended period. The adverse and significant impact of government expenditure on economic growth is confirmed at the 1% significance level, aligning with previous studies (Dudzevičiūtė, Šimelytė & Liučvait, 2018). Notably, the short-run results of the PMG analysis diverge from the long-run analysis. The outcomes indicate that while the estimated coefficients for consumption and net exports are positively related to economic growth, they are statistically insignificant in the short run. Conversely, investment and government expenditures exert a positive and significant impact on economic growth in the Kurdish regions, with significance levels of 1% and 5%, respectively.

Table 4: The Results of PMG.

Variables	Coefficient	t-statistics	P-value
	Long-run Equation		
$LnCons$	0.3483***	6.1632	0.0000
LnI	0.3023***	4.1113	0.0001
LnG	–0.2796***	–2.7459	0.0072
$LnNx$	0.0675*	1.7924	0.0762
	Short-run Equation		
$COINTEQ01$	–0.1653**	–2.2720	0.0248
$D(LnY(-1))$	–0.1007***	–3.5366	0.0006
$D(LnY(-2))$	0.0021	0.0390	0.9690
$D(LnCons)$	0.1144	1.1473	0.2534
$D(LnI)$	0.1405***	4.3343	0.0000
$D(LnG)$	0.1259**	2.2769	0.0245
$D(LnNx)$	0.0073	0.2356	0.8141
C	–0.3765**	–2.1066	0.0371

Notes: The asterisks ***, **, and * denote the significance of levels at the 1, 5, and 10 per cent, respectively. The maximum lag length is selected by Information-Criterion-Akaike (AIC).

The robustness of the long-term relationship connecting consumption, investment, government expenditures, net exports, and economic growth is fortified through the utilisation of both the Pedroni (1999) and Kao (1999) cointegration tests. Table 5 presents the panel cointegration test results, encompassing both the within and between dimensions of the dataset. Among the seven statistics derived from the Pedroni test, five exhibit statistical significance, attaining at least a 5% level of confidence. Furthermore, the findings are substantiated by the Kao test, as demonstrated in Table 6. The results from this test reveal the rejection of the null hypothesis of non-cointegration at the 5% significance level, conclusively affirming the existence of a long-run relationship among these variables.

Table 5: Pedroni and Kao Panel Cointegration Tests.

Pedroni residual test	**Panel statistics**			
	Statistic	**Prob.**	**Weighted Statistic**	**Prob.**
Panel v −Statistic	-0.2725	0.6074	-0.5567	0.7112
Panel rho −Statistic	-2.5812***	0.0049	-0.4191	0.3376
Panel PP −Statistic	-5.7133***	0.0000	-2.1398**	0.0162
Panel ADF −Statistic	-5.9636***	0.0000	-2.9591***	0.0015
	Group statistics			
Group rho −Statistic	0.0972	0.5387		
Group PP −Statistic	-1.9708**	0.0244		
Group ADF −Statistic	-1.9467**	0.0258		
Kao residual test	t-statistic	Prob.		
ADF	–2.1053**	0.0176		

In the final phase of this study, the Dumitrescu and Hurlin heterogeneous causality test was employed to scrutinize the causal relationships. The test permits the examination of both dimensions of heterogeneity, encompassing the diversity of causal relationships and the diversity of utilized regressions, when evaluating causality patterns. Two different statistics were employed: Wbar statistics and Zbar statistics. The Wbar statistic evaluates the overall presence of Granger causality, while the Zbar statistic assesses the consistency of causal relationships across heterogeneous units in panel data. Table 6 showcases the outcomes of the panel causality tests, while Figure 1 encapsulates a concise overview of the interrelationships among consumption, investment, government expenditures, net exports, and economic growth within the Kurdish regions. The findings reveal a one-way causality from economic growth to consumption and investment, as well as from consumption and net exports to government expenditures. Additionally, the analysis shows a bidirectional causal relationship not only between investment and government expenditure but also between investment and consumption, as well as between net exports and economic growth. Moreover, a bidirectional causal relationship between government expenditures and economic growth is identified. These results resonate with earlier research (Odhiambo, 2015; Gurdal & Aydin, 2021), underscoring the presence of a causal nexus between economic growth and government spending. This phenomenon arises because increased government expenditures stimulate increased production, thereby bolstering aggregate demand and ultimately driving GDP growth.

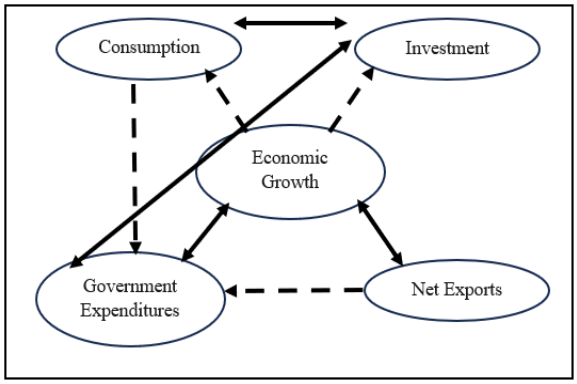
Table 6: The Dumitrescu and Hurlin Panel Causality Test Results.

Null Hypothesis	**Wbar- Stat**	**Zbar- Stat**	**Probability**		**Conclusion**
$LnCons$ does not homogeneously cause LnY	4.4924	0.9020	0.3671		$LnY \rightarrow LnCons$
LnY does not homogeneously cause $LnCons$	6.5117	2.3187	0.0204	**	
LnI does not homogeneously cause LnY	3.9651	0.5320	0.5947		$LnY \rightarrow LnI$
LnY does not homogeneously cause LnI	6.4991	2.3099	0.0209	**	
LnG does not homogeneously cause LnY	7.0934	2.7268	0.0064	***	$LnG \leftrightarrow LnY$
LnY does not homogeneously cause LnG	7.1659	2.7777	0.0055	***	
$LnNx$ does not homogeneously cause LnY	9.9848	4.7555	0.0000	***	LnNx↔LnY
LnY does not homogeneously cause $LnNx$	8.9863	4.0549	0.0001	***	
LnI does not homogeneously cause $LnCons$	6.3152	2.1809	0.0292	**	$LnI \leftrightarrow LnCons$
$LnCons$ does not homogeneously cause LnI	7.4679	2.9896	0.0028	***	
LnG does not homogeneously cause $LnCons$	4.3855	0.8269	0.4083		$LnCons \rightarrow LnG$
$LnCons$ does not homogeneously cause LnG	9.9055	4.6998	0.0000	***	
$LnNx$ does not homogeneously cause $LnCons$	5.9379	1.9161	0.0554		$LnNx \neq LnCons$
$LnCons$ does not homogeneously cause $LnNx$	3.4500	0.1705	0.8646		
LnG does not homogeneously cause LnI	15.1762	8.3978	0.0000	***	$LnG \leftrightarrow LnI$
LnI does not homogeneously cause LnG	8.2317	3.5255	0.0004	***	
$LnNx$ does not homogeneously cause LnI	3.2279	0.0147	0.9882		$LnNx \neq LnI$
LnI does not homogeneously cause $LnNx$	3.9145	0.4964	0.6196		
$LnNx$ does not homogeneously cause LnG	6.4283	2.2602	0.0238	**	$LnNx \rightarrow LnG$
LnG does not homogeneously cause $LnNx$	2.7759	–0.3024	0.7624		

Notes: The asterisks ***, **, and * denote the significance of levels at the 1, 5, and 10 per cent, respectively.

indicates unidirectional causality, ↔ implies bidirectional causality, and ≠ denotes the neutral causality, respectively.

Figure 1: Inter-Causality-Linkages of Consumption, Investment, Government Expenditures, Net Exports, and Economic Growth in Kurdish Regions.



Upon comprehensive analysis of the causality tests, the findings emphasize a compelling linkage: a robust market size significantly influences the expansion of consumption, investment, government expenditure, and net exports within the Kurdish region. Importantly, the results suggest the presence of a causal link flowing from economic growth to these four key macroeconomic determinants.

Conclusion and Policy Implications

This study aims to analyse the impact of key macroeconomic factors—namely, consumption, investment, government expenditures, and net exports—on economic growth within the Kurdish regions, employing a panel data analysis approach. Utilizing balanced panel data spanning the years 1980–2020 across Iran, Iraq, Syria, and Turkey, this research explores the cointegration relationship between these variables by employing the PMG-ARDL cointegration method. Additionally, the study employs the Dumitrescu and Hurlin causality test to uncover causal linkages among the variables. Regarding the empirical findings, a mixed order of integration was identified through the application of the LLC, IPS, ADF, and PP panel unit root tests. The PMG analysis uncovered a long-term positive relationship between consumption, investment, and net exports on economic growth. In contrast, government expenditure demonstrated a negative long-term association with economic growth. Shifting focus to the short-run PMG results, it unveils a positive connection between investment and government expenditures on economic growth in the short term. Concurrently, the Dumitrescu and Hurlin heterogeneous causality test revealed causality running from economic growth to consumption and investment, as well as from consumption and net exports to government expenditures. The analysis further exposed bidirectional causality between investment and government expenditures, investment and consumption, and net exports and economic growth. Among others, the findings imply the existence of a causal relationship extending from economic growth to these pivotal macroeconomic determinants.

These findings carry significant policy implications and highlight the necessity for additional research in this area. In the present study, government expenditure was claimed to have negative long-run and positive short-run relationship with economic growth in Kurdish regions. In addition to that, there is a bidirectional causality relationship between them. The results support the Keynesian argument that government expenditure plays a crucial role in economic policy, serving as an effective tool for

governments to foster robust and enduring growth. It seeks to invigorate economic expansion by means of budgetary enlargement, which in turn amplifies private sector outlays, thus generating growth through the multiplier impact. Amid the diverse challenges posed by internal political dynamics, an integrative approach that synergizes fiscal policy reforms with political engagement, social inclusivity, and targeted conflict resolution strategies will be pivotal in laying the groundwork for sustained stability and progress. To illustrate, policymakers should undertake a thorough reassessment of their fiscal strategies to invigorate economic growth. Accelerating the harmonization of these fiscal policies with the Sustainable Development Goals (SDGs) can provide a strategic impetus, channelling investments toward sectors that foster robust economic expansion. Furthermore, governments should be resolute in ensuring the equitable distribution of economic benefits through inclusive policies, thereby fostering a broader base for overall economic growth. Moreover, judicious utilization of fiscal incentives can serve as a catalyst for peaceful conflict resolution and reconciliation initiatives, offering a pragmatic pathway to stability.

This study presents both strengths and limitations, pointing towards intriguing avenues for future research. Notably, due to data unavailability, the analysis does not encompass the entirety of the Kurdish regions, implying the potential for a more comprehensive investigation. Furthermore, the scope of the analysed variables remains constrained, leading to a partially explored growth model. The study primarily focuses on the four major variables aligned with the Keynesian aggregate demand model, thereby offering a foundational but potentially incomplete exploration. To enhance the robustness of future inquiries, researchers could contemplate expanding the sample size or incorporating a broader spectrum of Kurdish regions, including those not covered in this study. Additionally, augmenting the analytical framework by introducing supplementary variables such as FDI, infrastructure development, price dynamics, and non-economic factors could yield a more comprehensive understanding of the dynamics influencing economic growth in these contexts. By addressing these limitations and broadening the analytical horizon, future studies can contribute to a more nuanced comprehension of the intricate interactions shaping economic growth within the Kurdish regions.

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