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Economic Growth through Rent Streams, Financial Development and Institutional Quality in MENA

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ABSTRACT

This study examines the relationships between natural rent streams, financial development, institutional quality, and economic growth in the Middle East and North Africa (MENA) region and is the development of fixed effects panel models during 1990–2020. The analysis of the MENA region sheds light on the complex, dynamic nature of the region's economies and societies, as this region is an interesting case study where economic, political and cultural dynamics are diverse. The region faces economic diversification needs, conflicts, migration, and climate change, making this study timely and relevant. To this end, fixed effects regressions and scenario approaches were applied to the collected panel data. The findings reveal natural resource rents as the primary driver of economic growth, their effectiveness dependent on financial development and institutional quality levels. A well-developed financial sector facilitates efficient channeling of rents into productive investments, while strong institutions mitigate resource curse effects. In contrast, while remittances and foreign aid do not directly impact growth, their effectiveness is enhanced by financial development and institutional frameworks. The results highlight the critical roles of financial sector development, institutional quality, and robust governance in shaping the impacts of resource rents in this resource-rich region. The policy recommendations emphasize strategies for managing resource wealth, strengthening financial systems, promoting inclusion, improving institutions, and fostering an enabling environment for remittances and foreign aid to promote sustainable economic growth.
Keywords: dutch disease; financial development; rent streams; structural change

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ОРИГИНАЛЬНАЯ СТАТЬЯ

Экономический рост через потоки ренты, финансовое развитие и качество институтов в странах БВСА

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АННОТАЦИЯ

В данном исследовании рассматриваются взаимосвязи между потоками природной ренты, финансовым развитием, качеством институтов и экономическим ростом в регионе Ближнего Востока и Северной Африки (БВСА) на основе панельных моделей с фиксированными эффектами в период 1990–2020 гг. Анализ региона БВСА проливает свет на сложную, динамичную природу экономики и общества региона, поскольку этот регион представляет собой интересный пример, где экономическая, политическая и культурная динамика многообразна. Регион сталкивается с потребностями диверсификации экономики, конфликтами, миграцией и изменением климата, что делает данное исследование своевременным и актуальным. Для этого к собранным панельным данным были применены регрессии с фиксированными эффектами и сценарные подходы. Полученные данные свидетельствуют о том, что рента от природных ресурсов является основным фактором экономического роста, а ее эффективность зависит от уровня финансового развития и качества институтов. Развитый финансовый сектор способствует эффективному направлению ренты в продуктивные инвестиции, а сильные институты смягчают эффект от «ресурсного проклятия». Напротив, денежные переводы и иностранная помощь не оказывают прямого влияния на рост, однако их эффективность повышается благодаря финансовому развитию и институциональной базе. Полученные результаты подчеркивают важнейшую роль развития финансового сектора, качества институтов и надежного управления в формировании воздействия ресурсной ренты в этом богатом

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ресурсами регионе. В политических рекомендациях подчеркиваются стратегии управления ресурсным богатством, укрепления финансовых систем, поощрения инклюзивности, совершенствования институтов и создания благоприятных условий для денежных переводов и иностранной помощи в целях обеспечения устойчивого экономического роста.
Ключевые слова: голландская болезнь; финансовое развитие; аренда потоков; структурные изменения

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INTRODUCTION

Rent theory has gained popularity after various phenomena, such as the 2008 financial crisis, financialization processes [1], the increasing market power of high-tech firms such as Google or Amazon [2], and the reappearance of industrial policies [3]. The academic in rent highlights the strengths of political-economic approaches in the field. Rent is a source of income that becomes available due to political interference in the economy, often linked to powerful actors. Moreover, rent can also be conceptualized as a particular form of economic surplus, as Karl Marx supposed it in Theories of Surplus Value. In this regard, the political economy of rent illuminates the intersections between the political and economic realms. Pure political science approaches and pure economic approaches do not grasp these intersections [4].

The sources of rent include natural resources (e.g., oil, copper, bauxite), remittances from labor migration, foreign aid, and geopolitical rents [5]. Differentiating these sources from their appropriation methods is crucial to understanding their influence on political and economic spheres and their impact on economic growth in rent-dependent countries. This distinction is significant for natural resources, remittances, and international aid, as they challenge existing institutional frameworks [6].

Traditional rent theory often links rents to specific commodities, such as oil and gas, but this can obscure the distinction between natural resource extraction and financial generation of rents in global markets. Although resource rents are significant for GDP and exports, they have a limited impact on employment and general economic development [7]. Including remittances and international aid in the analysis can enhance the predictive capacity of rent theory by highlighting the transformative impacts of monetary transfers and the institutional contexts where economic and political spheres intersect [8].

Remittances are a unique form of economic income within rent theory. They are funds sent by migrants to their home countries and play a crucial role in the global economy. Unlike traditional rent sources, remittances are non-market phenomena without immediate substitutes in terms of products or locations, challenging conventional economic structures by connecting individuals and households across borders [9]. Remittances are a significant source of foreign exchange for developing countries [10], affecting approximately a billion people worldwide who send and receive migrant money [11]. In 2017, remittances to the global South were nearly equivalent to OPEC's net oil revenues, and globally, their value was approximately one third of the net natural resource rent.[1]

In 2018, remittances were more than three times the amount of official development assistance (ODA) and almost equal to global foreign direct investments (FDI). They have grown exponentially since 1990, increasing by 440.42% over 20 years, highlighting their growing importance in the economy [12]. Remittances impact both the micro and macro levels: they support recipient households by enabling investments in education, healthcare, and entrepreneurship, and influence exchange rates, investment patterns, and macroeconomic stability [13].

Foreign aid, within rent theory, is a form of rent appropriation through political mechanisms. Donor countries, international organizations, and NGOs provide aid as grants, concessional loans, and technical assistance to recipient countries. Foreign aid plays a significant role in financing public investments, reducing poverty, and supporting various sectors, aligning with the redistributive aspect of rent theory [14]. However, the effectiveness of aid and its impact on local institutions are debated, highlighting the need to carefully consider the appropriation process within rent theory.

Rent theory allows for analyzing the interplay between resource rent, remittances, and foreign aid by considering their sources, modes of appropriation, and financialization effects. Incorporating rent theory

[1] World Bank. World development report 2023: Migrants, refugees, and societies: World Development Report. World Bank. 2023. URL: https://doi.org/10.1596/978–1–4648–1941–4 (accessed on 01.06.2024).

provides insight into how these rent sources shape institutional qualities and the distribution of power within societies [15]. This approach deepens our understanding of rent-based economies, such as those in the Middle East and North Africa (MENA). Understanding the implications of resource rent, remittances, and foreign aid in the context of rent theory is crucial for policymakers, researchers, and development practitioners. These income sources represent distinct forms of economic surplus, and their analysis through rent theory sheds light on their sources, modes of appropriation, and implications for economic growth.

Research often fails to consider different rent streams collectively, leading to potential biases. This study addresses this limitation by incorporating remittances, resource rents, and foreign aid to estimate their effects on economic growth. Meta-analysis shows that studies omitting other sources of income mismeasure the effect of natural resource rent. A correct regression specification, including all rent sources, is crucial to accurately identifying the effect of rents on economic growth.

Region-specific analyses are essential to capture unique economic and institutional contexts. The MENA region, with its significant wealth in natural resources and its reliance on various rents, presents a compelling case for such an investigation. Understanding the dynamics through which natural resource rents influence economic growth in the MENA context is vital for effective policy making. The MENA region also receives substantial remittances and foreign aid, shaping its economic landscape. Examining its interaction with financial development and institutional quality is crucial.

This study focuses on the MENA region to provide insight into the interactions between various forms of rent, financial development, institutional quality, and their collective impact on economic growth. The findings aim to inform policy recommendations to effectively leverage these rents, promote the development of the financial sector, and strengthen institutional frameworks within the context of the MENA.

LITERATURE REVIEW

Resource-rich countries often experience an economic "resource curse" where abundant natural resources and the rents derived from them can paradoxically undermine development due to factors like rent-seeking behavior, crowding out of productive sectors, weakening of institutions, and enabling of entrenched authoritarian regimes [16, 17]. This phenomenon is linked to the strong dependence of many resource-rich economies on exports of primary commodities like oil and gas, which can distort economic policies and governance structures. The seminal work by Sachs et al. (1995) highlighted how resource abundance tends to be associated with lower levels of financial development in practice [17]. The rentier state concept relates this pattern to economic barriers and authoritarianism in oil-exporting MENA nations [18, 19].

However, a growing literature is challenging this resource curse narrative, finding evidence of a potentially positive relationship between resource rents and financial development, particularly in recent years and in contexts with sound institutional quality [20–23]. The financialization of resource windfalls could provide opportunities to channel these revenues into productive investments that foster broader economic development, if equipped with robust financial infrastructure and effective resource management policies. But an underdeveloped financial system can hinder oil economies [24], while commodity price volatility can impede financial sector growth [25]. Ultimately, institutional quality crucially shapes this relationship [26].

In the case of remittances, around 40% of studies find a positive impact on overall economic growth in recipient countries [27–29], while 20% find a negative effect [30, 31]. However, nearly 40% find no significant relationship [32], highlighting conflicting evidence. Proponents like Ratha (2005, 2015) argue remittance flows provide an important source of investment financing, but critics caution the potential costs of exchange rate volatility, loss of competitiveness, and economic distortions mirroring the resource curse [13, 33]. The financialization of remittances (FOR) aims to incorporate migrants into global financial markets and development processes [34–36].

Parallel debates exist on the role of foreign aid, with research finding both positive and negative influences of aid flows on financial development and economic growth. Some studies find no growth impact [37], while others show positive effects given sound economic policies and strong institutions [38, 39]. The extent of aid effectiveness may depend on contextual conditions like the quality of governance, economic policies, and institutional capacity of recipient nations [40]. Aid coordination and alignment with national strategies is also emphasized [41].

Common themes emerge regarding the importance of strong institutions, robust governance, strategic resource management, and coordination of aid for

Table 1

Comparing the Average Rate of Rents

Ave Remittance				Ave Natural Resources Rent			Ave OFA		
Region	1990–1999	2000–2009	2010–2019	1990–1999	2000–2009	2010–2019	1990–1999	2000–2009	2010–2019
East Asia & Pacific	0.21	0.36	0.45	0.96	2.13	2.17	0.13	0.08	0.04
Europe & Central Asia	0.42	0.51	0.74	0.71	1.49	1.78	0.03	0.04	0.04
Latin America & Caribbean	0.70	1.54	1.34	2.97	5.06	4.12	0.33	0.23	0.18
Middle East & North Africa	–	1.73	1.95	18.36	24.96	22.35	1.17	0.78	0.69
South Asia	2.07	3.58	4.11	2.11	3.10	2.63	1.15	0.77	0.55
Sub–Saharan Africa	0.94	1.78	2.35	8.93	11.69	9.85	4.81	3.97	2.90
World	0.35	0.53	0.71	1.55	2.87	2.92	0.12	0.18	0.19

Source: Author calculation according to World Development Indicators.

productive outcomes. Many analysts suggest that while resource rents, remittances, and aid can provide financing that boosts investment and growth under certain circumstances, the lack of appropriate policies, institutional frameworks, and absorptive capacities can lead to economic distortions and undermine development impacts.

Overall, the literature reveals a complex, context-dependent relationship shaped by governance quality, policy coherence, institutional capacity, and absorptive mechanisms. More research is needed to unpack the specific transmission channels and contextual factors that determine whether resource windfalls, remittance flows, and aid contribute to broader financial deepening and long-term development outcomes. Rigorous examination across diverse economic contexts will shed light on policies to mitigate risks and harness these external flows as productive development financing.

According to *Table 1*, the MENA countries exhibit a distinct propensity to derive substantial proportions of their GDP from natural resource rents, and this region has a higher average natural resource rent than most other regions. In contrast, East Asia; the Pacific, Europe; Central Asia, Latin America; and the Caribbean have comparatively lower natural resource rents, implying a more diversified economic base. The data reveal a consistent upward trajectory, with the region's average total natural resource rent rising from 18.36% during 1990–1999 to 24.961% in the subsequent decade (2000–2009). In 2010–2019, a marginal contraction to 22.35% is observed, indicating both the region's dependence on resource-based revenues and potential fluctuations driven by global market dynamics.

DATA AND METHODOLOGY

This study uses data from international sources such as the World Development Indicators, the World Governance Index, and the IMF. The data set covers panel data from 1990 to 2020 and includes 21 Middle Eastern and North African countries. In this paper, the fixed effects panel model has been applied. Researchers rely on Fixed Effects for causal inference in panel data settings [42, 43]. Imai and Kim (2021) refer to FE as the "default methodology for estimating causal effects with panel data" [44], while Hill et al. (2020) mention that "fixed effects models for panel data are now widely recognized as a powerful analytic tool for longitudinal data analysis" [45]. From a causal inference perspective, the advantage of the FE estimator over pooled ordinary least squares (POLS) is that the FE estimator, by removing both observed and unobserved time-invariant unit-specific heterogeneity, requires a more palatable assumption to be unbiased. Fixed effects will deal with omitted variable bias and control for cross-country heterogeneity in addition to period-specific factors. The unobserved country-specific effects may

Table 2

Description of the Variables Used in this Study

Variable	Abbreviation	Description
Log of GDP per capita	GDPPC	GDP is converted to international dollars using purchasing power parity rates. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy, plus any product taxes and minus any subsidies not included in the value of the products
Natural Resource Rent (% of GDP)	RERENT	Total natural resources rents are the sum of oil rents, natural gas rents, coal rents, mineral rents and forest rents
Remittances to GDP	REMI	It comprises personal transfers and compensation of employees
Aid to GNI	ODA	Consists of disbursements of loans made on concessional terms (net of repayments of principal)
Financial Development	FD	FD is a relative ranking of countries on the depth, access, and efficiency of their financial institutions and financial markets. It is an aggregate of the Financial Institutions Index and the Financial Market Index
Institutional quality	INST	Average of 6 variables: Rule of law, Regulatory quality, Control of corruption
Gross fixed capital formation as percentage of GDP	GCF	It includes land improvements (fences, ditches, drains, etc.); plant, machinery, and equipment purchases; and the construction of roads, railways, schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings
Trade openness as percentage of GDP	GGFC	This is calculated as the total of exports and imports divided by GDP. Imports of goods and services reflect the value of all goods and other market services received from the rest of the world
General government final consumption expenditure as percentage of GDP	TRADE	This indicator includes all government current expenditures for purchases of goods and services (including compensation of employees)
Percentage change in inflation rate	INF	Reflects the annual percentage change in inflation

Source: Authors' Estimation.

capture differences in the initial level of efficiency, while the period-specific intercepts capture changes that occur across all countries.

Table 2 describes the variables of interest, their abbreviations and descriptions. It should be noted that in the empirical models, our dependent variable growth is measured by the logarithm of GDP per capita (GDPPC) and all other variables are independent variables.

Table 3 shows the variables and descriptions of data used in this paper. The mean GDPPC is $ 15,278, reflecting the average GDP per person. Natural resource rents contribute an average of 18.07% to GDP, while remittances account for 4.15% of GDP. The official development assistance is 1.34% of the GNI. Financial development constitutes 33.53%, and institutional quality averages –0.16. Gross capital formation and government final consumption contribute approximately 25.75% and 17.76% to GDP, respectively. Trade openness is 98.77% of GDP, and inflation averages 6.68%. We also used boxplot visualization to remove outliers from the data set and replaced missing values with linear interpolation.

The Base Model for Estimation of the Impact of Independent Variables: RERENT (Resource Rent), REMI (Remittances), ODA (Official Development Assistant), FD (Financial Development), INST (Institutional Quality) Control variables: GCF (Gross Capital Formation), GCFC (Government Final Consumption), TRADE (Trade Openness), INF (Inflation).

Table 3

Descriptions of Variables

Variables	Observations	Mean	Std. Dev.	Minimum	Maximum
GDPPC	418	15,278.03	15,742.26	1,668.37	73,493.27
RERENT	418	18.0673	16.7152	0.0000	66.0599
REMI	418	4.1537	6.3758	0.0000	26.4248
ODA	418	1.3395	2.5099	−0.0352	24.1228
FD	418	0.3353	0.1296	0.1138	0.5859
INST	418	−0.1585	0.5864	−1.7638	1.2647
GCF	418	25.7478	7.8244	7.9052	50.7807
GGFC	418	17.7648	5.9814	6.7330	50.8365
TRADE	418	98.7680	56.9272	29.2282	343.3621
INF	418	6.6807	12.1417	−25.9584	97.4338

Source: Authors' Estimation.

$$\ln(Growth_{it}) = \beta_0 + \beta_1 \operatorname{Re}\operatorname{Re} nt_{it} + \\ + \beta_2 \operatorname{Re} mi_{it} + \beta_3 ODA_{it} + \beta_4 Inst_{it} + \\ + \beta_5 \operatorname{Re}\operatorname{Re} nt_{it} \times FDI_{it} + \beta_6 \operatorname{Re}\operatorname{Re} nt_{it} \times Inst_{it} + \\ + \beta_7 FDI_{it} \times Inst_{it} + + \beta_8 \operatorname{Re}\operatorname{Re} nt_{it} \times \\ \times FDI_{it} \times Inst_{it} + X_{it}\beta + \gamma_i + \delta_t + \varepsilon_{it}. \quad (1)$$

By understanding that rent is the main factor in this region, in 3, the main variable of interest is the three-way interaction term that includes natural resource rent, financial development, and institutional quality. In order to interpret the results of this three-way interaction variable, the marginal effect analysis was applied, which shows the effect of resource rent on economic growth in changing according to varying levels of financial development and institutional quality [46–48]. In this approach, the different slopes represent the effect of resource rent on economic growth when the moderating variables, financial development, and institutional quality, are held constant at different combinations of high or low values. The model represents below:

$$\ln(Growth_{it}) = (\beta_1 + \beta_4 FDI_{it} + \beta_5 INST_{it} + \beta_7 FDI_{it} \times \\ \times Inst_{it}) \operatorname{Re}\operatorname{Re} nt_{it} + (\beta_0 + \beta_2 FDI_{it} + \beta_3 Inst_{it} + \beta_6 FDI_{it} \times \\ \times Inst_{it} + X_{it}\beta + \gamma_i + \delta_t + \varepsilon_{it}. \quad (2)$$

RESULTS

In the first three models, the impact of natural resource rent, remittances, and foreign aid was estimated in different models by the fixed effect panel regression method (see *Table 4*). In model (1), RERENT (Resource Rent) is highly significant, which shows an increase in the rents of natural resources is associated with an increase in economic growth in the MENA region. FD coefficient indicates that financial development positively impacts economic growth. RERENT*FD (Interaction of Resource Rent and Financial Development) is −0.014 and is highly significant. This negative coefficient suggests that, while resource rents and financial development individually promote growth, their interaction could lead to diminishing returns. Institutional Quality does not have a significant impact on growth in this model. RERENT*INST (Interaction of Resource Rent and Institutional Quality) is significant. This indicates that better institutional quality improves the positive impact of resource rents on economic growth. The GDPPC is highly significant, indicating that a higher GDP per capita is strongly associated with higher economic growth. Trade openness is significant and suggests that greater trade openness positively impacts economic growth. GCF is 0.0001, indicating that there is no significant effect on growth. The GGFC coefficient is −0.0034 and significant. This indicates that higher government consumption is associated with lower economic growth. The INF coefficient is −0.0008 and significant. This suggests that higher inflation negatively impacts economic growth.

Model (1) highlights the positive impact of natural resource rents and financial development on economic

Table 4

Fixed Effect Regression Results

Variable	Model (1)		Model (2)		Model (3)		Mode l(4)	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	2.0611*	(0.0000)	1.9518*	(0.0000)	1.9731*	(0.0000)	1.7514*	(0.0000)
RERENT	0.0077*	(0.0000)					0.0087	(0.0000)
Remi			−0.0043	(0.1207)			0.0068	(0.1181)
ODA					−0.0232*	(0.0096)	−0.0096	(0.3679)
FD	0.2135*	(0.0134)	−0.1384**	(0.0738)	−0.1545*	(0.0510)	0.2670	(0.0542)
RERENT*FD	0.0149*	(0.0000)					−0.0164	(0.0000)
Remi*FD			0.0157*	(0.0446)			−0.0098	(0.3135)
ODA*FD					0.0373*	(0.0402)	0.0077	(0.7219)
INST	−0.0219	(0.4393)	0.0657*	(0.0288)	0.0480	(0.1007)	−0.042963	(0.2796)
RERENT*Inst	0.0034*	(0.0002)					0.0042	(0.0000)
Remi*Inst			−0.0030	(0.4242)			−0.0031	(0.4596)
ODA*Inst	0.0072	(0.5583)					0.0288	(0.0477)
ln(GDPPC)	0.7673*	(0.0000)	0.7975*	(0.0000)	0.7944*	(0.0000)	0.7635*	(0.0000)
TRADE	0.0005**	(0.0136)	0.0006*	(0.0019)	0.0008*	(0.0000)	0.0006*	(0.0108)
GCF	0.0001	(0.8244)	−0.0005	(0.4988)	−0.0009	(0.2123)	−0.0003	(0.6534)
GGFC	−0.0034*	(0.0012)	−0.0038*	(0.0000)	−0.0038*	(0.0000)	−0.0036*	(0.0011)
INF	−0.0008*	(0.0124)	−0.0008*	(0.0275)	−0.0008*	(0.0280)	−0.0010*	(0.0043)
R-squared	0.9972		0.9969		0.9969		0.9968	

Source: Authors' Estimation.

Note: * denotes statistical significance at a 5% level; ** denotes statistical significance at a 1% level.

growth in the MENA region. However, their interaction shows diminishing returns, indicating complexity in their combined effects.

Model (2): Remi does not have a significant impact on growth in this model. FD marginally significant. This suggests a potential negative impact of financial development on growth when considering remittances. Remi*FD (Interaction of Remittances and Financial Development) is a positive coefficient that indicates that financial development improves the positive impact of remittances on growth. The INST (institutional quality) is 0.0657 and significant, indicating that better institutional quality positively impacts growth. Model (2) shows that remittances alone do not significantly impact growth, but when combined with financial development, they have a positive effect. Institutional quality also positively influences growth.

Model (3) examines the impact of ODA. The results show that ODA alone has a negative impact on growth, but financial development can mitigate this negative effect. Institutional quality, although positive, is not significant in this model.

Model (4) incorporates all rents (resource rent, remittances, and ODA) and their interactions with financial development and institutional quality. The key findings are as follows. Resource rents have a positive impact on growth and this effect is enhanced by better institutional quality. The interaction between resource rent and financial development is negative, indicating diminishing returns. The impacts of remittances and ODA on growth are not significant on their own, but show complex interactions with financial development and institutional quality. Financial development has a marginally positive impact on growth, while better institutional quality

Table 5

Fixed Effects Regression

Variable	Coefficient	Prob.	Std. Error
C	2.0514*	(0.0000)	0.2409
RERENT	0.0076*	(0.0000)	0.0015
FD	0.2070*	(0.0204)	0.0889
RERENT*FD	−0.0146*	(0.0000)	0.0031
INST	−0.0312	(0.5054)	0.0468
RERENT*INST	0.0032**	(0.0528)	0.0016
RERENT*FD*INST	0.0005	(0.9006)	0.0047
FD*INST	0.0240	(0.8265)	0.1095
ln(GDPPC(−1))	0.7680*	(0.0000)	0.0258
TRADE	0.0004*	(0.0205)	0.0002
GCF	0.0001	(0.7790)	0.0006
GGFC	−0.0033*	(0.0033)	0.0011
INF	−0.0008*	(0.0120)	0.0003
R-squared	0.9971		

Source: Authors' Estimation.

Note: * denotes statistical significance at a 5% level; ** denotes statistical significance at a 1% level.

enhances the impact of resource rents and mitigates the negative impact of ODA.

The four models collectively show that remittance and foreign aid do not have a significant effect on economic growth in the MENA region, while institutional quality alone does not show a significant impact on growth; its interaction with natural resource rents has a positive effect. These findings underscore the importance of considering the interplay between natural resources, financial development, and institutional quality in driving economic growth.

Various scenarios were estimated on the basis of the estimate described in *Table 5*. In the first scenario (see *Table 6*), where there is high financial development and high institutional quality, a 1 percent increase in natural resources as a percentage of GDP leads to an approximately 0.23% increase in the economic growth in this region. This scenario highlights the synergy between well-developed financial systems and strong institutions in enhancing the positive impact of natural resources on growth. In the second scenario where there is low financial development and low institutional quality, a one percent increase in natural resources leads to a 0.21% decrease in economic growth, which strongly supports the natural resource curse hypothesis and the financial resource curse. suggesting that without robust financial systems and institutions, natural resources can negatively impact growth.

In the next scenario, where there is high financial development but the institutions are not developed, a one percent increase in natural resources decreases economic growth by 0.17%. This indicates that even with developed financial systems, poor institutional

Table 6

Levels of Financial Development and Institutional Quality in Each Scenario

Scenario	Financial Development Level	Institutional Quality Level
High Financial Development, High Institutional Quality	0.4649	0.4279
Low Financial Development, Low Institutional Quality	0.2057	–0.7449
High Financial Development, Low Institutional Quality	0.4649	–0.7449
Low Financial Development, High Institutional Quality	0.2056	0.4279

Source: Author Estimation.

Table 7

Robustness Check: Excluding Different Control Variables

Variable	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	2.0181*	(0.0000)	1.9006*	(0.0000)	1.8907*	(0.0000)	1.9928*	(0.0000)
RERENT	0.0074*	(0.0000)	0.0079*	(0.0000)	0.0061*	(0.0000)	0.0086*	(0.0000)
FD	0.2166*	(0.0160)	0.1685**	(0.0587)	0.2087	(0.0158)	0.2598*	(0.0028)
RERENT*FD	–0.0151*	(0.0000)	–0.0131*	(0.0000)	–0.0127*	(0.0000)	–0.0159*	(0.0000)
INST	–0.0126	(0.7868)	–0.0230	(0.6261)	0.0923*	(0.0094)	–0.0412	(0.3801)
RERENT*INST	0.0029**	(0.0800)	0.0013	(0.4117)	0.0045*	(0.0040)	0.0033*	(0.0479)
FD*INST	0.0031	(0.9773)	0.0268	(0.8088)	–0.1776**	(0.0680)	0.0911	(0.3921)
RERENT*FD*INST	0.0005	(0.9087)	0.0051	(0.2633)	0.0036	(0.4219)	0.0005	(0.9119)
LOG(GDPPC(–1))	0.7699*	(0.0000)	0.7779*	(0.0000)	0.7883*	(0.0000)	0.7750*	(0.0000)
TRADE	0.0005*	(0.0210)	0.0004**	(0.0684)	0.0007*	(0.0006)		
GCF	0.0004	(0.5546)	0.0004	(0.5927)			0.0003	(0.6245)
GGFC	–0.0027*	(0.0138)			–0.0047*	0.0000	–0.0029*	(0.0101)
Inf			–0.0006**	0.0544			–0.0009	(0.0123)
R-Square	0.9971		0.9971		0.9975		0.9971	

Source: Authors' Estimation.

Note: * denotes statistical significance at a 5% level; ** denotes statistical significance at a 1% level.

quality can negate the positive effects of natural resources.

In the last scenario with high institutional quality but low financial development, a one percent increase in resource rent stimulates economic growth by 0.60%. This highlights the importance of strong institutions in leveraging natural resources for economic growth, even when financial development is low.

Table 7 shows the results of a robustness check of fixed effects regression on four models that exclude control variables: gross capital formation, trade openness, government expense, and inflation. Although significance is reduced, all the models confirm the results of the original model by showing similar results.

The robustness check confirms the findings of the original model, indicating that the results are not driven by any specific control variable. The key relationships between natural resource rents, financial development, institutional quality, and economic growth remain consistent across different model specifications. This strengthens the validity of the conclusions drawn from the original fixed-effects regression analysis.

The findings of this study highlight the intricate relationships between natural resources, financial development, institutional quality, and economic growth in the MENA region. The positive impact of natural resource rents on growth is clear, but this effect is significantly influenced by the quality of financial systems and institutions. Financial development alone promotes growth, but when combined with resource rents, the benefits show diminishing returns, suggesting complexities and potential inefficiencies. Strong institutional quality enhances the positive impact of natural resources and mitigates the negative effects of foreign aid. Trade

openness and higher GDP per capita consistently drive growth, while excessive government consumption and high inflation hinder it. The scenarios further illustrate that well-developed financial systems and robust institutions are crucial for maximizing the benefits of natural resources and avoiding the pitfalls of the resource curse. These results underscore the need for comprehensive policy strategies that improve governance and financial infrastructure to support sustainable economic growth in the region.

CONCLUSION AND POLICY IMPLICATIONS

The rent of natural resources is the main driver of economic growth in the MENA region, especially when there is high institutional quality and financial development. This finding is consistent with several other studies that have examined the role of natural resource rents in economic growth.

The contrasting finding in the study on the insignificant impact of remittances on economic growth in the MENA region might be attributed to region-specific factors, such as the allocation of remittances to consumption rather than productive investments or the presence of institutional barriers that hinder the effective channeling of remittances into growth-promoting activities.

This study finds that foreign aid does not significantly impact economic growth in the MENA region. This result is consistent with some existing literature that questions the effectiveness of foreign aid in promoting economic growth, particularly in the absence of complementary policies and institutional reforms.

This paper provides valuable information on the dynamics of natural resource rents, remittances, and foreign aid, and their interactions with financial development and institutional quality in the MENA region. It is essential to consider the context-specific factors and complementary policies that can enhance or hinder the effectiveness of these rent streams in promoting economic growth.

The results revealed that the rent of natural resources is the only rent that has a significant impact on economic growth in this region. So, the policymakers should pay more attention to channeling these windfall revenues for investment. In addition, the priority in this region should be improving the institutional quality. The results show that this factor is the causal factor that leads to financial development.

1. Enhancing Institutional Quality: Policymakers should prioritize efforts to improve institutional quality, including governance structures, regulatory frameworks, and the rule of law. Strengthening institutions can help mitigate the adverse effects of resource dependency and promote sustainable economic growth.

2. Diversification of the Economy: To reduce vulnerability to fluctuations in the prices of natural resources and mitigate the curse of resources, policymakers must focus on diversifying the economy. This can be achieved by promoting investment in non-resource sectors, fostering innovation and entrepreneurship, and encouraging the development of human capital.

3. Promoting Financial Development: policies aimed at improving financial development can help unlock the potential of natural resource wealth to stimulate economic growth. This includes measures to improve access to finance, develop capital markets, and strengthen financial institutions. However, it is essential to ensure that financial development is accompanied by effective regulatory frameworks to prevent financial instability and promote sustainable growth.

4. Sustainable Resource Management: Governments should adopt policies to ensure sustainable management of natural resources, including transparent revenue management, environmental protection measures, and an equitable distribution of resource wealth. This can help maximize the long-term benefits of resource extraction while minimizing negative social and environmental impacts.

5. International Cooperation: Given the global nature of resource markets, international cooperation and coordination are essential to address challenges related to natural resource management and to promote sustainable development. Collaboration between resource-rich and resource-poor countries, as well as multilateral institutions, can help foster best practices, knowledge sharing, and capacity building.

By implementing these policy recommendations, policymakers can harness the potential of natural resources to drive economic growth, promote sustainable development, and improve the well-being of their citizens.

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