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Article

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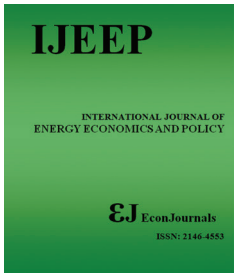

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The Factors that Drives the Cost Management Efficiency of Oil and Gas companies in Emerging Markets: The Case of Eurasian Economic Union

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ABSTRACT

The main aim of this empirical work is to investigate cost management efficiency determinants of oil and gas companies in Eurasian Economic Union. The data was carefully gathered with updated financial data of 24,813 firm-year observations for the following period 2012-2020. Two main models were developed: with social responsibility and without social responsibility. In order to conduct panel data regression analysis, we employ two-step system GMM. The Durbin, Wu-Hausman test was used to find endogeneity, before we use the system GMM. Findings reveal that capital structure, taxes, and the oil demand crisis of 2014-2015 to be the most dominant determinants of cost management efficiency in the studied sample of oil and gas companies. Results suggest that increased taxes boost the cost management efficiency of oil and gas firms. Findings of the present study offer many insights and policy implications to help investors, managers, and policy makers. The contribution to the literature is twofold.

Keywords: Eurasian Economic Union, GDPG, Cost Management Efficiency, ESG
JEL Classifications: F3, F43, Q00, Q21

1. INTRODUCTION

While the world seeks to recover from a global economic downturn, governments are looking for the best ways to enhance economic performance and generate employment in order to improve people's well-being. Global energy pricing and demand have remained resilient during the crisis, prompting policymakers in energy-producing nations to view the energy industry as an important driver of economic development (Jarboui et al., 2022). In producing nations, the energy industry accounts for a sizable portion of GDP. The energy industry, in addition, has a substantial influence on the overall economy. Furthermore, energy is critical to practically every area of the economy. As a result, stable and reasonable energy costs stimulate and sustain economic growth.

Because of the importance of oil and gas in the global energy mix, the petroleum sector is critical today. To acquire a competitive advantage, the industry is technologically oriented and demands ongoing update and progress. The sector is plagued by massive capital expenditure and risk across the value chain, from discovery through product refinement and marketing. These factors have contributed to the gap in knowledge of the determinants of oil and gas firms cost management efficiency and profitability (Ike and Lee, 2014).

The oil and gas industry faced multiple crises that threatened even the most stable of organizations. Increased supply and decreasing demand growth derailed an extended period of high prices and the industry is facing what appears to be an extended period of low oil price (Ernst and Young, 2015). The fact that returns have

decreased despite high pricing adds to the difficulty of the situation. The efficiency (measured as the barrel of oil equivalent per day, per capital dollar) and asset dependability of upstream operators have steadily decreased over the previous 5 years, while finding and lifting expenses have gone up.

The oil and gas industry environment is marked by unanticipated events like as price drops, production cost increases, new laws, and increased demands from varied stakeholders (Tasmin et al., 2020). As a result, it has become critical for businesses to re-strategize their operations in order to fulfill the requirements of their stakeholders at all times. Cost management is an important component of business excellence since it aids in the development of critical operational performance measures (Shehadeh et al., 2016). The oil and gas sectors in both Kazakhstan and Russia need an efficient cost management to compete worldwide, as well as to get out of the depression caused by the countries ongoing fluctuation in energy prices and increase in production costs. Thus, a comprehensive examination on the major influencers of cost management and profitability of oil and gas firms needs to be done.

The sample to investigate the determinants of cost management and profitability of oil and gas firms was chosen due to the production and reliance characteristics of both countries, Kazakhstan and Russia. Russia is a significant player on the world energy scene. It competes with Saudi Arabia and the United States for the top rank among the top three oil producers in the world. Oil and gas profits, which accounted for 45% of Russia's federal budget in 2021, are a major source of income for the country. The production of Russian oil and condensate in 2021 was 10.5 million barrels per day (bpd), or 14% of the global supply. Although Russia has infrastructure for producing oil and gas all throughout the nation, the majority of its resources are centered in western and eastern Siberia. A rough estimate of 4.7 million bpd of crude oil was exported by Russia in 2021. In addition, Russia has the largest gas reserves and is the second producer of natural gas in the world, after the United States. Russia is the biggest gas exporter in the world. The nation generated 762 bcm of natural gas in 2021 and exported 210 bcm of it through pipeline (IEA, 2022).

Kazakhstan's confirmed crude oil reserves stood at 30 billion barrels, making it the 12th-largest in the world and the second-largest in Eurasia, only behind Russia. Kazakhstan's three major refineries are producing more at a rapid rate. The hydrocarbons industry, which has attracted over 60% of the nation's foreign direct investment since 1991 and accounts for about 53% of its export earnings, is still a major priority for the government of Kazakhstan and international investors. Additionally, Kazakhstan has a considerable potential for natural gas. It has 3 trillion cubic meters of proven gas reserves and 5 trillion cubic meters of projected reserves. Production of natural gas is used to fuel local consumption, exports, and well re-injection (Privacy Shield, 2022).

The previous literature lacks studies that investigate the main determinants of cost management and profitability of oil and gas firms. Therefore, to bridge the gap in the literature, and to offer valuable insights on the potential influencers of both variables in oil and gas companies, this research investigates the possible drivers of cost management and profitability under three main categories, namely; firm specific variables, macroeconomic variables, and social and governmental responsibility variables, in the case of oil and gas companies in Kazakhstan and Russia. To our knowledge, this is the first attempt to examine these factors assiduously in the sample chosen. In addition, to eliminate and control for any unobserved endogeneity and heterogeneity problems, we employed the two-step system Generalized Methods of Moments (GMM) to uncover the potential relationships present.

2. LITERATURE REVIEW

To best of our knowledge, there is no empirical research conducted on determinants of cost management efficiency in oil and gas industry, in the case of Eurasian Economic Union. Most of the studies are empirically researched in the banking industry, hotel industry and others. Most of the studies employed data envelopment analysis (DEA) and Stochastic Frontier Approach (SFA) methods in determining the cost efficiency. Instead of estimating cost management efficiency determinants of firms based on DEA and SFA; this scientific work departs from practice of many previous empirical works by employing two-step System GMM. Majority of the empirical works conducted on measuring cost efficiency and productivity of the banking sector, but very limited studies used conducted research with explanatory variables. For example, Sufian (2009) empirically investigated the determinants of banking cost efficiency by used the following explanatory variables: bank size, profitability and ownership.

For example, Ab-Rahim et al. (2012) empirically investigated cost efficiency determinants by employing DEA method in Malaysian banking sector. They found that government ownership, population density, demand density and market concentration have positive significant impact on cost efficiency, however during the year of the merger that takes place, macroeconomic condition, capitalization, credit risk, asset quality and management quality are inversely related with cost efficiency. In addition to, Tecles and Tabak (2015) examine the determinants of cost efficiency of the banking industry in Brazil. The data covered the over post-privatization period of 2000-2007. The used Bayesian SFA method and panel data analysis to estimate cost efficiency and its determinants. They found that the large banks face highest cost and efficiency in profitability. In order to achieve good performance, foreign banks established new affiliates and acquired undervalued local banks. The rest of the non-private banks have shown improvements in cost efficiency with relatively lower efficiency in profitability. Finally, we observe a positive impact of capitalization on efficiency. Repkova (2014) empirically studied the drivers of cost efficiency of the banking industry in Czech Republic within the period of 2001-2012. She conducted panel data analysis to research the determinants of cost efficiency. Results showed that market capitalization, liquidity and riskiness of the portfolio have exerted positive impact on cost efficiency of Banks in Czech Republic. However, financial performance (ROA), cost of capital and economic growth (GDP) influenced

negatively cost efficiency of banks, and it was statistically significant. On the other hand, remaining independent variables were not statistical validated. Furthermore, Alsaleh and Abdul-Rahim (2018) empirically investigated the influence of the drivers of cost efficiency in the bioenergy field. The data coverage was from 2000 to 2013 in the EU28 region. They have employed fixed and random effects models to conduct panel regression analysis on the determinants of cost efficiency in the bioenergy industry. Their results suggested that capital cost, labor cost, GDP, inflation and interest rate exerted influence on the cost efficiency.

First of all, firm specific explanatory variables are: Profitability/cost management efficiency, liquidity, capital structure, logarithm of total assets, logarithm of tax. Return on equity (ROE) is expected to have positive impact on cost management efficiency of firms (Sufian, 2009). Cost management efficiency (CI) is measured as cost over income, and expected to negatively influence profitability (Kanapiyanova et al., 2022). Capital structure (CAPSTR) is total debt over total assets that expected to have positive impact on CI, and negative on ROE. Furthermore, Logarithm of total assets (LTA) is proxied as size of firms (Grigorian and Manole, 2002; Faizulayev et al., 2021). Size is expected to have positive impact on cost management efficiency, as it allows to capture some advantages from its size (Sufian, 2009). In addition to, economy or diseconomy of scales paradigm can be tested to see whether size improves the efficiency or vice versa (Krugman, 1980).

On the other hand, it is important to discuses macroeconomic variables: logarithm of oil price from Brent Oil Prices (OilPrice), gross domestic product growth (GDPG), time dummies for the period of 2014-2015 (_IYears_2014, _IYears_2015), and ESG factors (unemployment [Unempl], government effectiveness[GE], energy intensity [ENERINTENS]).

Table 1 provides detailed description of the variables that are used in this empirical research.

3. DATA AND METHODOLOGY

The main purpose of this study was to conduct empirical research on determinants of cost efficiency management of Eurasian Economic Union oil and gas companies from 2012 to 2020 (Orbis Database). All available financial data of active companies were carefully gathered. A total of 24,813 firm-year observations were collected. It covers a wide range of oil and gas companies that have been studied in research to date. The following firm-specific variables and macroeconomic variable were selected: profitability/cost management efficiency, liquidity, capital structure, logarithm of total assets, logarithm of tax, and logarithm of oil price from Brent Oil Prices (OilPrice), gross domestic product growth (GDPG), time dummies for the period of 2014-2015 (_IYears_2014, _IYears_2015), and ESG factors (unemployment [Unempl], government effectiveness [GE], energy intensity [ENERINTENS]).

We have developed main two models: With social responsibility and without social responsibility. Likewise, the first model states that how cost management efficiency will be explained by explanatory variables if ESG factors considered or vice versa. In order to conduct panel data regression analysis, we employ two-step system GMM. The Durbin, Wu-Hausman test was used to find endogeneity, before we use the system GMM. In each model, we have used at least 6 instrumental variables including time dummy variables to account for endogeneity problem.

In order to estimate endogeneity issues in oil and gas industry, dynamic panel data estimation is utilized following equation (1) below]

Table 1: Definitions, notations and expected impacts of dependent variables from equation 2 on profits of banks

Variable	Measure	Notation	Impact
Dependent variables=>			
Profitability	Net income to total equity	ROE	
Cost management	Operating expenses over operating income	CI	
Independent variables=>			
Firm specific:			
One lag of dependent variables	Cost management/Profitability ratio is lagged by one	L1.CI & L1. ROE	±
Liquidity	Current assets over current liabilities	liquidity	±
Capital structure	Total debt over total assets	CAPSTR	±
Cost management efficiency/profitability	Cost to Income ratio/Total equity to total assets	CI/ROE	±
Firm size	Logarithm of total assets of banks	LTA	±
Tax	Logarithm of paid taxes	LTAX	±
Employees	Change in number of employees	CHANGEEMPL	±
Macroeconomic variables:			
GDP growth	Gross domestic product growth	GDPG	±
Oil price	Logarithm of oil price	OIL	±
Time dummy variable	Time effects (drop in demand for oil) are coded as 1, otherwise 0	2014 and 2015	±
Social and governmental responsibility:			
Energy intensity	Measure of energy inefficiency, units of energy per unit of GDP	ENERINTENS	±
Government Effectiveness	Voice and accountability; political stability and absence of violence/terrorism; government effectiveness; regulatory quality; rule of law; control of corruption	Government Effectiveness	±
Unemployment	Total number of unemployed over labor force as %	Unemployment	±

$$\prod t = \alpha + \delta \Pi_{t-1} \sum_{j=1}^{j} \beta_l X_t^l + \sum_{m=1}^{m} \beta_m Y_t^m + \sum_{p=1}^{p} \beta_p Z_t^p + \varepsilon_t \quad (1)$$

Where δ represents the coefficient of the lagged value of the dependent variable and measures the speed of adjustment towards equilibrium and the persistency of the dependent variable over time, Π_{t-1} is the one-period lagged of the dependent variable.

4. EMPIRICAL FINDINGS

To investigate the determinants of cost management efficiency and profitability of both oil and gas companies, the characteristics of the variables are examined. Descriptive statistics are reported in (Table 2) below. Findings reveal that the mean of ROE is 0.13 with a minimum value of −9.8 and a maximum value of 9.94. Also, cost management variable CI shows high variability between firms with a high standard deviation value of 77.93. Liquidity, leverage, and size have the average values of 3.29, 0.22, and 2.78, respectively. Social and governmental responsibility variables unemployment, government efficiency, and energy intensity, have lower variations than other variables, with standard deviations of 0.35, 0.18, and 0.32, correspondingly.

Further, to check the initial relationships between the variables, and to examine multicollinearity degree between independent variables, correlation analysis was carried out, and the findings of the analysis are presented in (Table 3) below. Correlation analysis reveals that both liquidity and size are the most influential variables affecting the profitability of oil and gas firms. While size and the dummy variable of 2014 demand crisis are the main determinants of cost management of firms. All variables' correlation coefficients are lower than the threshold 0.8 reflecting no multicollinearity issues (Alabi et al., 2020), but for the correlation between tax and size amounting to 0.891, which is considered high. Therefore, because of multicollinearity issues, standard fixed and random effects estimators cannot be utilized. As a result, using the generalized method of moments (GMM) approach in empirical research is widespread practice to avoid multicollinearity issues and generating robust results (Kripfganz and Schwarz, 2019).

Table 2: Descriptive statistics

Variable	Obs	Mean	SD	Min	Max
ROE	24.813.00	0.13	0.69	−9.80	9.94
CI	9.183.00	2.31	77.93	−0.12	5.980.86
liquidity	14.547.00	3.29	8.73	0.00	99.83
CAPSTR	24.813.00	0.22	0.39	−1.00	1.00
LTA	16.434.00	2.78	1.81	−1.87	8.04
LTAX	8.087.00	1.45	1.65	−1.87	6.52
Unempl	24.813.00	5.25	0.35	4.50	5.59
GE	24.813.00	−0.13	0.18	−0.53	0.16
ENERINTENS	22.056.00	7.94	0.32	5.38	8.45
OilPrice	24.813.00	1.83	0.15	1.63	2.04
GDPG	24.813.00	1.00	2.15	−2.95	6.00
_IYears_2015	24.813.00	0.11	0.31	0.00	1.00
_IYears_2014	24.813.00	0.11	0.31	0.00	1.00

***Definition of the variables are available in Table 1

(Table 4) displays the results for Generalized Method of Moments (GMM) estimators for the sample of the study which accounts for oil and gas companies within Kazakhstan and Russia, for model types (A), (B), (C), and (D). Model (A) is focused on investigating the determinants of cost management, reflected by operating expenses over operating income (CI). Where model (B) aims to analyze the factors affecting firms' profitability, reflected by net income to total equity (ROE). Models (C) and (D) are robustness models similar to models A and B, with the difference being the exclusion of social and government responsibility indicators to reflect the validity of the results.

Findings of models (A) and (C) confirm the persistence of cost management, with a positive significant relationship between the dynamic term L.CI (the lagged value of the dependent variable cost management) and the dependent variable. This is expected, as a poor cost management strategy can deteriorate cost management over the time period. The coefficient amounts to 0.3241 in model (C) without social responsibility variables and to 0.3276 in model (A) with social responsibility variables present. This indicates that previous period cost management increase by 1% would increase this period's cost management by 0.3276%.

In the case of firm specific variables, we find capital structure to exhibit a positive significant relationship with cost management, indicated by both models (A) and (C). Suggesting that an increase in capital structure will raise cost management for all oil and gas firms located within Kazakhstan and Russia. This finding is in line with our expectations, as the higher capital structure ratio, the

Table 3: Correlation matrix

Variables		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
ROE	(1)	1.000												
CI	(2)	−0.016	1.000											
liquidity	(3)	−0.079	−0.005	1.000										
CAPSTR	(4)	−0.114	−0.007	0.318	1.000									
LTA	(5)	−0.111	0.022	−0.017	0.248	1.000								
LTAX	(6)	−0.010	0.013	−0.012	0.360	0.891	1.000							
Unempl	(7)	0.050	0.006	−0.033	0.023	−0.017	0.005	1.000						
GE	(8)	−0.016	−0.015	0.020	−0.074	−0.091	−0.124	−0.792	1.000					
ENERINTENS	(9)	0.036	0.002	0.003	−0.007	−0.144	−0.160	−0.016	−0.072	1.000				
OilPrice	(10)	−0.026	0.030	0.000	0.069	0.114	0.138	−0.115	−0.402	0.071	1.000			
GDPG	(11)	−0.041	0.005	0.029	0.067	0.154	0.179	−0.496	−0.011	0.130	0.525	1.000		
_IYears_2015	(12)	0.008	−0.007	−0.011	−0.017	−0.052	−0.059	0.375	−0.112	−0.236	−0.325	−0.718	1.000	
_IYears_2014	(13)	0.020	0.035	−0.015	−0.007	−0.001	0.008	−0.105	0.119	−0.206	0.410	−0.098	−0.148	1.000

***Definition of the variables are available in Table 1

Table 4: Two step system GMM, Cost Management and Financial Performance determinants of oil and gas firms during the period of 2012-2020

Variables	With social responsibility				Without social responsibility			
	Cost management (A)		Financial performance (B)		Cost management (C)		Financial performance (D)	
	CI (Coef.)	P-values	ROE (Coef.)	P-values	CI (Coef.)	P-values	ROE (Coef.)	P-values
Past realization effect								
L.CI	***0,3276	0.000	-------	-------	***0.3241	0.0000	-------	-------
L.ROE	-------	-----	0.0845	0.423	-------	-------	*0.1169	0.0640
Firm specific variables								
liquidity	0.0039	0.410	0.0144	0.537	−0.0029	0.3080	0.4011006	0.745
ROE/CI	−0.0168	0.667	−0.4627	0.561	0.0206	0.5690	0.0188447	0.319
CAPSTR	**0.0581	0.064	−0.1013	0.727	**0.1055	0.0260	−0.3275111	0.239
LTA	0.0372	0.101	***−0.6427	0.000	*0.0377	0.0930	***−0.581	0.001
LTAX	***−0.0603	0.007	***0.6056	0.000	**−0.0629	0.0130	***0.5938	0.003
Macroeconomic variables								
OilPrice	**0.3797	0.019	2.6665	0.178	−0.0025699	0.977	*1.023	0.077
GDPG	**−0.0177	0.078	**−0.1921	0.027	0.0015972	0.699	**−0.0550	0.035
_IYears_2015	**−0.1031	0.013	*−0.7432	0.055	−0.034017	0.372	**−0.2920	0.026
_IYears_2014	**−0.1203	0.017	−0.7643	0.164	−0.0394214	0.315	*−0.2929	0.072
Social and government responsibility								
Unempl	0.0614	0.202	1.5109	0.234				
GE	0.0736	0.608	4.3501	0.198				
ENERINTENS	**−0.0204	0.067	−0.2643	0.113				
_cons	**−0.7233	0.045	−8.2251	0.298	0.0477149	0.729	−0.4800924	0.603
Mean VIF		4.22		4.33		2.22		2.21
AR (1)		0.317		0.204		0.322		0.235
AR (2)		0.397		0.923		0.473		0.424
Wald Chi^2 prob value		0.000		0.000		0.000		0.000
Hansen test		0.287		0.245		0.350		0.415

VIF refers to variance inflation factor, ***Denotes significance levels at 0.01 level of rejection of Null Hypothesis, **Denotes significance levels at 0.05 level of rejection of Null Hypothesis, *Denotes significance levels at 0.1 level of rejection of Null Hypothesis, Arellano-Bond test for AR (1), Arellano-Bond test for AR (2), Definition of the variables are available in Table 1

more heavily leveraged the firms are. In turn, leverage carries high interest which is a burden on the firms' financial statements. The result is in line with the study of Bintara (2020) who mentioned that higher leverage ratios would hike interest expenses and diminish cost efficiency. In contrast, regarding paid taxes variable, we observe the presence of a negative relationship, in both models with and without social responsibility variables. Implying that greater taxes reduce cost management variable for oil and gas firms in Kazakhstan and Russia. This might be due to oil and gas price boost leading to increased sales, accompanied with a hike in operational income (which does not include taxes) (Ivanov et al., 2020). Liquidity does not display any relation with cost management in our sample, as all coefficients within all models and are found to be insignificant. We find a positive relation amongst size (LTA) and cost management (CI) for model (C). This suggests firms with greater size bring more cost management inefficiencies in the case of Kazakhstan and Russia oil and gas firms (Thi Thanh Tran and Phan, 2020). With bigger size firms possess large operational and overhead costs which diminish operational income, therefore increasing cost management inefficiency.

We also investigated macroeconomic variables in the form of; oil price, economic growth, and the oil price plunge of 2014-2015 represented by dummy variables. They were included into the models as control variables, in order to refrain from committing omitted variable bias. We observe economic growth to express a negative significant relationship with cost management for model (A). Suggesting that a boost in the economic growth mitigate the risk of cost management inefficiency and reduce the ratio between operational cost and operational income. Dissimilarly, we find the relationship amongst oil price and cost management to be mixed. Model (A) exhibits a positive significant relationship while model (C) reveals a negative relationship. Findings show that both crises dummy variables of 2014 and 2015 are negatively related to cost management in the case of oil and gas firms. Implying that during the years 2014-2015, oil and gas firms actually enhanced their cost management. The price drop of oil, Sanctions imposed, and a lengthy stagnation in the volume of energy exports presented a combination of significant difficulties for Russia in 2014. Since the situation was dire, the authorities decided to depreciate the ruble. Due to the fact that the large bulk of the oil and gas firms' expenses are fixed in rubles, it helped Russian energy exporters gain a competitive advantage, decreasing the ratio of their operational expense on operational income (Mitrova, 2019). Findings also suggested a negative significant link between energy intensity and cost management in model (A). Higher energy intensity per unit of GPD reflects the heightened demand required to help the economic growth, which in turn increases operational income and cost management efficiency. However, both government efficiency and unemployment rate were found to be unrelated to cost management efficiency in both models (A) and (C).

As mentioned previously, our study analyzes the determinants of profitability using models (B) and (D). Findings reveal the positive persistence of profitability over the years with a coefficient of 0.1169. Suggesting that an increase of 1% in the profitability of

last period would boost the earnings of this period by 0.1169%. We find a negative significant relationship between firm size and profitability for the sample. As firms grow in size, management of potential risks becomes crucial. Thus, with larger firms the likelihood of the mismanagement of assets increases, resulting in a decline in their profitability (Thi Thanh Tran and Phan, 2020). On the other hand, we observe a positive significant relationship between tax and profitability of oil and gas companies. This result is in line with previous literature (Mohamad et al., 2019; Olatunji and Oluwatoyin, 2019) reporting an increase in taxes paid reflect a hike in profitability. Higher sales and operational income translate to a larger amount of paid taxes. As expected, oil price increase significantly expands profitability of oil and gas firms. Higher oil prices is a result of demand and supply forces and is not related to increased operational or overhead costs (Alekseev et al., 2019). Thus, improved oil price without a climb in expenses would surge profitability of oil and gas companies. On the other hand, the oil price plunge of 2014-2015 which presented a challenge for energy firms negatively affects profitability. The results is in line with previous literature (Grigoli et al., 2019; Fattouh et al., 2016; Lele, 2016).

5. CONCLUSION

This paper investigates the determinants of cost management efficiency and profitability of oil and gas firms in the case of Kazakhstan and Russia. Previous literature has lacked the documentation of the role of external shocks and internal shocks on the cost management efficiency and profitability of oil and gas companies with little to no focus on the Kazakhstan and Russian framework. Thus, we examine the drivers of cost management efficiency and profitability over the 2012-2020 periods. In addition, this study performed the analysis using two different equation variations to ensure robustness of results. Several potential drivers were incorporated in the analysis including firm specific variables, macroeconomic variables, and social and governmental responsibility variables. To avoid the problems of endogeneity and unobserved heterogeneity, and to get unbiased efficient coefficients, we utilized two-step generalized method of moments (GMM).

Findings reveal that capital structure, taxes, and the oil demand crisis of 2014-2015 to be the most dominant determinants of cost management efficiency in the studied sample of oil and gas companies. Results suggest that increased taxes boost the cost management efficiency of oil and gas firms. In addition, due to the Russian government devaluation of the Ruble in 2014 to protect the energy sector, oil and gas firms' cost management efficiency improved. Further, increased energy intensity translates to higher cost management efficiency as it boosts demand for energy and betters operating income. On the other hand, size, taxes paid, oil price, and the oil demand crisis of 2014-2015 were found to be the main drivers of financial profitability in oil and gas companies. Findings show that higher oil prices improve the amount of profit since the increase is mostly motivated by market forces. Moreover, the demand crisis proved to be harmful to the profitability of oil and gas firms as it directly affects the sale of commodities and stagnation in exports.

Findings of the present study offer many insights and policy implications to help investors, managers, and policy makers. Firms' management and research and development departments should consider cost efficiency to alleviate external shocks risks suffered by oil and gas sector. Oil and gas firms' management should focus on capital structure management to reduce the inefficiency of cost management. A well-balanced capital structure level where the benefits outweigh the costs should be sought out. In addition, policy makers should develop different sectors of the economy to decrease reliance on the oil and gas sectors. Both Kazakhstan and Russia has one of the top positions in oil and gas production and exports. However, one of the key causes of economic imbalances is the both economies long-standing and ongoing reliance on oil prices. For instance, when oil prices were high and exports rose, most of the funds from the national economy went to the oil industry. This, together with the national currency's strengthening, reduced the competitiveness of the manufacturing sector and hindered the growth of new economic sectors. Long-term, this delayed the both economies' overall modernization. It would be wise to properly define and carry out the objectives of both Kazakh and Russian funds.

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