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The Impact of Fiscal Decentralization on SME activity in Kazakhstan: Regional Level Analysis

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Abstract

This paper examines the impact of Kazakhstan's 2020 corporate income tax (CIT) reform, which reassigned SME-related CIT revenues to regional budgets, on SME performance over the period 2017–2023. Using oblast-level panel data and fixed-effects models, the analysis finds that the reform was associated with selective but economically meaningful improvements in SME outcomes, particularly in employment and output. Short-term effects are most evident among small enterprises and agricultural SMEs, while medium-term results point to sustained output expansion among individual entrepreneurs and medium-sized firms In contrast, the effects on SME registration and gross value added vary by firm type and over time. Overall, the findings suggest that fiscal decentralization strengthened local incentives to support SME expansion primarily through intensive-margin growth, rather than broad-based firm entry or persistent productivity gains. The results highlight the role of subnational fiscal incentives in shaping regional business activity and underscore the importance of complementary policies to translate fiscal decentralization into sustained and inclusive economic development.

Keywords: fiscal decentralization, SME development, regional budgets, corporate income tax reform, local government.

Introduction

Fiscal decentralization—delegation of budgetary autonomy from central government to regional subnational institutions—is theoretically built upon the premise of improved allocative efficiency, enhanced government structure and local accountability and responsiveness (Oates, 1972). Many studies have found that fiscal decentralization promotes responsiveness and accountability of local government by enabling them to customize public goods and services to the local needs (Garello 2003; Faguet, 2004; Bahl and Linn, 2014). Furthermore, decentralization can improve local revenue performance, since local governments will have more autonomy to better establish tax policies and enforcement tactics since local governments gain greater discretion over fiscal management and enforcement, potentially improving revenue performance and accountability (Din et al., 2022).

However, despite these strong theoretical justifications, the literature on the impact of fiscal decentralization on economic development is inconclusive (Martinez-Vazquez & McNab, 2003). This can be partly explained by the complexity of studying fiscal decentralization, as it intersects with political, economic, social and legal factors creating contextual peculiarities of each country, which in turn result in contradicting outcomes (Garello 2003; Martinez-Vazquez and McNab, 2003). Especially, there is a noticeable lack of empirical studies addressing the impact of fiscal decentralization within the context of transitional economies like Kazakhstan (Amagoh, 2022). This gap is particularly significant, as SMEs play an important role in Kazakhstan's economic growth by generating employment and fostering a more diversified economic structure, while also relying heavily on local government support and regulation (OECD, 2018; Bureau of National Statistics, 2025).

Kazakhstan, as a post-Soviet country, has inherited a highly centralized institutional system (Amagoh, 2022). The central government traditionally retained authority over major tax revenues and the allocation of public goods (World Bank, 2023). The first attempts of decentralization was adopted by the law "On Local Representative and Executive Bodies of the Republic of Kazakhstan" (1993), which created regional, city and district maslikhats (councils) elected by respective local population. Another important move for fiscal decentralization was implementation of Budget Code of the Republic of Kazakhstan (2008) and the "Law on Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan on the Issues of Delimitation of Powers between Levels of Government" (2006).

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This Code established a formal structure of intergovernmental fiscal relations and a multi-tier budget system: Republican budget, regional budget (oblast, cities of republican significance, capital city), district budget (includes cities of regional significance). According to this Code, regional budgets are a centralized financial resource served for the local government bodies at the regional level, and finally approved by the maslikhat. Similarly, the district budget is allocated for the functions and mandates of local bodies at the district level. Later, the fourth-level budget was later introduced in Law on the Development of Local Government (2018) and is applied to the smallest administrative units, such as rural areas and villages.

The 2020 amendment to Kazakhstan's Budget Code (Law No. 382-VI ZRK, Dec 10 2019) restructured the allocation of CIT from SMEs. Under the reform, CIT revenues from SMEs were directed straight to regional budgets, while taxes from large enterprises and the oil sector remained centralized. This change enhanced local governments' fiscal autonomy, allowing them to use SME-related CIT revenues to finance regional development, public services, and infrastructure projects. The reform also introduced flexibility for differentiating how revenues are distributed across oblast (region), raion (district), and okrug (subdistrict) levels. Therefore, this paper aims at empirically analyzing the impact of fiscal decentralization to the measurable SME activities using regional level analysis.

According to the World Bank data (2023), corporate income tax (CIT) has been a large contributor to the national revenue, reaching up to 30 % of total tax revenue within 2005 to 2021. At the same time, the World Bank (2023) highlighted a clear fiscal mismatch between revenue centralization and expenditure responsibilities at the subnational level, where regional governments remain responsible for economic development and service provision despite limited control over major revenue sources. Therefore, the latest reform on shifting CIT revenue from republican budget to regional budget is considered to be a significant movement towards fiscal decentralization. Because regional governments will be responsible both on how they generate revenue as well as how to spend these funds, consequently, regions are believed to be encouraged to better and actively promote entrepreneurship activities.

International practice also highlights the importance of sharing national tax revenue to regional subnational bodies so that they can effectively match expenditures and revenue sources taking into account geographical, social, demographic and economic differences (World Bank, 2023). Regarding the rate of CIT, it has also experienced fluctuations due to different political and economic reforms. The highest CIT rate was reaching almost around 30 % in 2006, which was later significantly decreased to 20 % in 2009 (Tax Committee of the Ministry of Finance, 2025). Currently, the tax rate remains at 20 % (Baker McKenzie, 2025).

This study contributes to the existing literature on fiscal decentralization by focusing on a policy area that has received relatively limited empirical attention: the relationship between revenue decentralization and SME activity in a transition economy. Using Kazakhstan's 2020 reform that reassigned SME-related corporate income tax revenues to regional budgets, the paper provides empirical evidence on how SME registration, employment, output, and gross value added evolved before and after the reform. The analysis relies on regional panel data and distinguishes between short- and medium-term effects across different types of SMEs, including small enterprises, individual entrepreneurs, and agricultural firms. Overall, the findings offer context-specific insights into how fiscal decentralization shapes SME activity in Kazakhstan and may be relevant for understanding similar dynamics in other transition economies.

Literature review

The main theoretical framework of fiscal decentralization is built upon Oates (1972) work Decentralization Theorem, which highlights its positive impact on the effectiveness of regional governments meeting the needs of local residents (Oates, 1972; Tiebout, 1956). Consequently, as the facilitator of economic development through effective utilization of public goods, decentralisation can lead to the creation of a favourable environment for businesses (Enikolopov and Zhuravskaya, 2007; Hanif et al., 2020).

The literature emphasizes the link between fiscal decentralization and entrepreneurial activities, stemming from having more discretion over spending and taxes and active involvement of local government officials in promoting regional economic activity. This is especially applicable for SMEs, which in turn are extensively affected by the regulatory and fiscal settings (Akai and Sakata, 2002). Study on federal developing countries further supports highlighting positive effects of fiscal decentralization on firm entry and SME performance (Hanif et al., 2020). Empirical studies in Latin America (Smith, 2010), Zambia (Likando et al., 2023) and Russia (Bukharsky, 2020) found that higher fiscal decentralization led to the "pro-SME" outlook providing financial support, trainings, and simpler tax regulations to support firm creation and growth. In addition to that, Escaleras and Chiang (2017) claim that fiscal decentralization creates a business-friendly climate especially in

developing countries. One explanation for this can be that subnational governments with more autonomy can easily identify and address the challenges SMEs face.

However, the effectiveness of fiscal decentralization depends critically on institutional design and governance quality. Evidence from developing countries suggests that weak accountability mechanisms may lead to opportunistic behavior and misuse of fiscal autonomy at the local level (Din et al., 2022). In this context, successful fiscal decentralization is strongly influenced by institutional design, especially in highly centralized governments. Poor institutional design lead to the two major problems: vertical fiscal imbalance—when subnational government have expenditure responsibility, but does not have autonomy over local revenue—and soft budget constraints, reliance on intergovernmental transfers (Rodríguez-Pose and Vidal-Bover, 2024; Weingast, 2009).

Therefore, delegating local revenue autonomy is crucial for effective fiscal decentralization and strengthening local accountability (Rodden, 2003; Asatryan et al., 2015). Government officials who are responsible for the expenditure and the revenue generation independently, are motivated to promote SMEs, and hence enlarge the tax base (Jia et al., 2023). In this sense, revenue decentralization has more impact on effective expenditure and higher accountability compared to only expenditure decentralization (Canavire-Bacarreza et al., 2020).

This is further supported by Bukharsky and Lavrov's (2020) findings, which indicate that in Russian cities with low tax autonomy, fiscal decentralization did not facilitate the development of SMEs. Similarly, in some cases fiscal decentralization can have adverse effects on SMEs. For example, according to Song et al. (2022) in China fiscal decentralization impeded planned reallocation of industry, although there was a positive impact on SME innovation. Sometimes, increased fiscal decentralization can worsen regional inequality (Martinez-Vazquez et al. 2017) or positive effects can sometimes be the compensation of poor institutional structure (Escaleras and Chiang, 2017).

Overall, studies on fiscal decentralization and SME development have divergent outcomes, posing different challenges and nuances. In this sense, Kazakhstan's case is a good example to evaluate the causal relationship between fiscal decentralization and SME growth in light of the recent CIT reform.

Data and Methodology

Data description

We constructed a panel dataset at oblast (region) level from 2017 through 2023 on SME and other related indicators from publicly available sources posted by the Bureau of National Statistics of Kazakhstan. In particular, to measure SME activity, we use data on the number of SMEs registered, number of people employed by SMEs, SME output (in millions KZT) and SME Gross Value Added (in millions KZT). For each indicator, we have data by type of SME, particularly small (an average annual number of employees not more than 100, and average annual revenue of no more than 300,000 times the monthly calculation index), medium (between 100 and 250 employees), individual entrepreneurs and agricultural SMEs.

Based on the methodology of the Bureau of National Statistics, the variables for SME output and Gross Value Added (GVA) are essential metrics for evaluating the sector's contribution to the national economy. SME Output represents the total volume of goods produced, work performed, and services rendered by resident SME entities—including legal entities, individual entrepreneurs, and farm enterprises—valued at current prices. Gross Value Added (GVA) serves as the balancing item in the production account and is defined as the difference between total output and the costs of intermediate consumption. While the output figure reflects the total scale of business activity, GVA represents the actual economic value created by the SME sector after accounting for production expenses. Definitions and measurement of SME indicators follow the official statistical methodology of the Bureau of National Statistics of the Republic of Kazakhstan (Bureau of National Statistics, 2017).

We also constructed data related to indicators that determine SME activity, in particular Gross Regional Product per capita, population density, unemployment rate and urbanization rate. For example, a study on European firm-level panel data found a strong positive correlation between regional income level and SME performance (Doucet, Requejo, & Suárez-González, 2024). These indicators are also widely used in regional SME analyses and are identified as important contextual determinants of SME patterns across European regions (ESPON, 2017). Similarly, findings from Russia (EIB, 2020) and Kazakhstan (OECD, 2018) confirms that in regions with high GRP, SMEs tend to have higher revenue (EIB, 2020). Furthermore, high unemployment rate can create challenges for small firm expansion (O'Leary, 2022), although there is a possibility to attract more workers at a lower cost (Gupta, 2024).

Summary statistics of our main variables are presented in Table 1. The summary statistics show substantial variation in SME activity across regions. On average, there are about 102,000 registered SMEs, with the majority consisting of individual entrepreneurs (around 65,000) and small enterprises (about 23,900), while medium firms are relatively few (a mean of 172). SME employment averages 213,000 workers, heavily concentrated in small and individual enterprises, suggesting that Kazakhstan's SME sector is dominated by micro- and small-scale operations. SME output averages about 2.4 trillion KZT, with small enterprises generating the largest share, followed by individual entrepreneurs and medium firms. Similarly, gross value added (GVA) averages 1.9 trillion KZT, again with small firms as the main contributors, reflecting their dominance in overall SME economic activity.

Table 1. Summary statistics

Variable	Mean	Std. Dev.	Minimum	Maximum
SME # of Registered	102066	68628	34251	381950
Small	23904	29690	7278	137587
Medium	172	189	44	970
Indiv. Entrepr.	65151	39069	21653	240312
Agriculture	12839	17595	124	81527
SME Employment	213204	154563	85610	969528
Small	89922	99158	26592	573525
Medium	21564	14481	6558	79153
Indiv. Entrepr.	84643	46350	37308	313242
Agriculture	17075	21236	117	93107
SME Output (mlns)	2402525	3039528	325868	20000000
Small	1672652	2412349	195730	15400000
Medium	435941	504967	59816	3151960
Indiv. Entrepr.	181693	189256	31329	1453940
Agriculture	112239	111959	0	448931
SME Gross Value Added (mlns)	1903310	2485072	244876	16800000
Small	1596097	2120955	201365	14500000
Medium	307213	368472	43511	2307699
GRP Per Capita (thousand KZT)	4201	3086	819	19974
Population Density (per sq. m.)	319,7	762,4	2,8	3169,9
Unemployment Rate (%)	48,3 %	1,8 %	0,410	0,530
Urbanization Rate (%)	61,3 %	23,4 %	0,130	1,000

Regional economic and demographic indicators also exhibit wide disparities. Gross regional product (GRP) per capita averages about 4.2 million KZT, with a range from under 1 million to nearly 20 million, indicating significant regional inequality. Population density varies sharply—from sparsely populated areas (as low as 2.8 people per square meter) to densely populated ones exceeding 3,000. The unemployment rate averages 4.8 %, showing moderate variation across regions, while urbanization rates average around 61 %, ranging from 13 % to full urbanization in cities like Almaty, Astana and Shymkent with a status of a city of regional significance. These figures highlight considerable heterogeneity in economic structure and spatial development across Kazakhstan's regions, which may influence SME performance and local fiscal capacity.

Empirical methodology

We estimate the association between the 2020 CIT allocation reform and regional SME activity using panel regressions at the oblast–year level. Let Y_{it} denote one of four outcomes for oblast i in year t: number of registered SMEs ($SMEReg$), SME employment ($SMEEmp$), SME output in million KZT ($SMEOut_{mln}$), and SME gross value added in million KZT ($SMEGVA_{mln}$). Our baseline specification is

$$Y_{it} = \alpha + \beta\, PostReform_t + \gamma_1 GRPpc_{it} + \gamma_2 PopDensity_{it} + \gamma_3 UnempRate_{it} + \gamma_4 UrbanRate_{it} + \mu_i + \varepsilon_{it}, \quad (1)$$

where $PostReform_t = 1$ in 2020–2023 and 0 in 2017–2019; μ_i are oblast fixed effects; and ε_{it} is an idiosyncratic error term. Standard errors are clustered at the oblast level to allow arbitrary serial correlation and heteroskedasticity within oblasts. The vector of controls includes gross regional product per capita ($GRPpc_{it}$), population density ($PopDensity_{it}$), unemployment rate ($UnempRate_{it}$), and urbanization rate ($UrbanRate_{it}$). The coefficient β captures the average post-reform level change in the outcome relative to 2017–2019, conditional on controls and time-invariant oblast characteristics. Variance inflation factors (VIFs)

computed for the time-varying regressors indicate low collinearity, with all VIF values well below conventional thresholds.[1]

Fixed-effects (FE) panel models are well suited for evaluating policy reforms when unobserved heterogeneity across regions is likely to be correlated with both policy exposure and outcomes. In our context, oblasts differ persistently in institutional quality, industrial structure, geographic characteristics, historical entrepreneurial culture, and administrative capacity—factors that jointly influence SME performance and are unlikely to be fully captured by observable covariates. The inclusion of oblast fixed effects absorbs these time-invariant characteristics, ensuring that identification relies on within-oblast variation over time rather than cross-sectional differences. Consequently, the estimated reform coefficient reflects deviations from an oblast's own pre-reform trajectory, conditional on observable time-varying controls.

Given the nationwide nature of the 2020 CIT allocation reform, causal interpretation relies on the assumption that, absent the reform, SME outcomes would have followed similar within-region trends as observed in the pre-reform period. This identifying assumption is assessed empirically through pre-trend diagnostics and robustness checks incorporating region-specific time trends and alternative post-reform windows. While the absence of an untreated control group precludes a difference-in-differences design, the FE framework remains appropriate for isolating policy-induced changes relative to historical regional baselines, a strategy commonly adopted in evaluations of national fiscal reforms.

To distinguish short- and medium-run effects, we estimate the equation 1 with variants of $PostReform_t$ indicators. Particularly, where $PostReformShort_t = 1$ for 2020–2021 and 0 for 2017–2019, and $PostReformMedium_t = 1$ for 2022–2023 and 0 for 2017–2019. The base period is therefore 2017–2019.

We include oblast fixed effects μ_i to absorb time-invariant differences across regions (e.g., business climate, geography, long-run industrial structure).

We do not include year fixed effects because the reform indicator is national and perfectly collinear with a full set of year dummies; including them would mechanically difference out $PostReform_t$, $PostReformShort_t$, and $PostReformMedium_t$. Clustering at the oblast level addresses within-oblast serial correlation in shocks to SME activity. We assess the validity of the identifying assumption using an event-study framework with 2019 as the reference year. Joint tests of pre-reform coefficients for 2017 and 2018 fail to reject the null of zero effects across all SME outcomes, including total registered, gross value added, output, and employment (p-values range from 0.31 to 0.80). This indicates no evidence of differential pre-trends across oblasts prior to the 2020 reform and supports the fixed-effects specification as an appropriate baseline.

Results

First we present a descriptive analysis of SME activity before and after the CIT decentralization reform, then we present our main empirical analysis results.

Descriptive analysis

Figure 1 shows large variation in regional fiscal capacity and dependence on central transfers across Kazakhstan. Richer and more urbanized areas—such as Almaty city, Astana city, and Atyrau oblast—generate the highest total revenues (above 1 trillion KZT) and exhibit minimal transfer dependence (below 10 %). In contrast, poorer and more rural oblasts—including Turkistan, Zhambyl, and Kyzylorda—display high reliance on intergovernmental transfers, exceeding 70–80 %. This pattern reflects the persistence of regional inequality in revenue-raising capacity and underscores the rationale for fiscal decentralization reforms such as the 2020 CIT allocation change.

[1] When oblast fixed effects are included, VIF statistics mechanically increase because fixed effects are highly correlated with slow-moving regional characteristics such as urbanization and population density. This behavior is well known in fixed-effects models and does not indicate estimation problems, as fixed effects are nuisance parameters that absorb time-invariant heterogeneity.

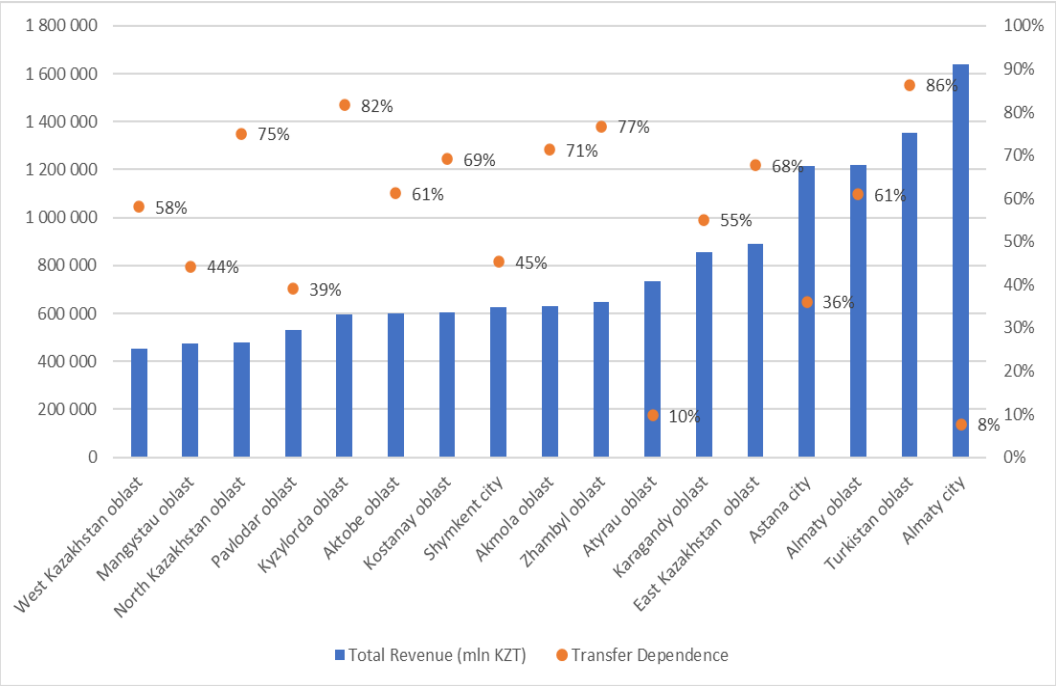

Figure 1. Total revenue and transfer dependency by oblast, 2023

Figure 2 shows CIT collections from SMEs rose markedly following the 2020 Budget Code amendment that assigned these revenues directly to regional budgets. Prior to the reform, annual SME CIT revenue increased gradually from 21 billion KZT (2017) to 28 billion KZT (2019). After the reform, revenue growth accelerated sharply reaching 43 billion KZT in 2021, 61 billion KZT in 2022, and 68 billion KZT in 2023. The post-2020 expansion indicates stronger compliance and regional collection incentives once local governments gained authority over SME-related CIT proceeds.

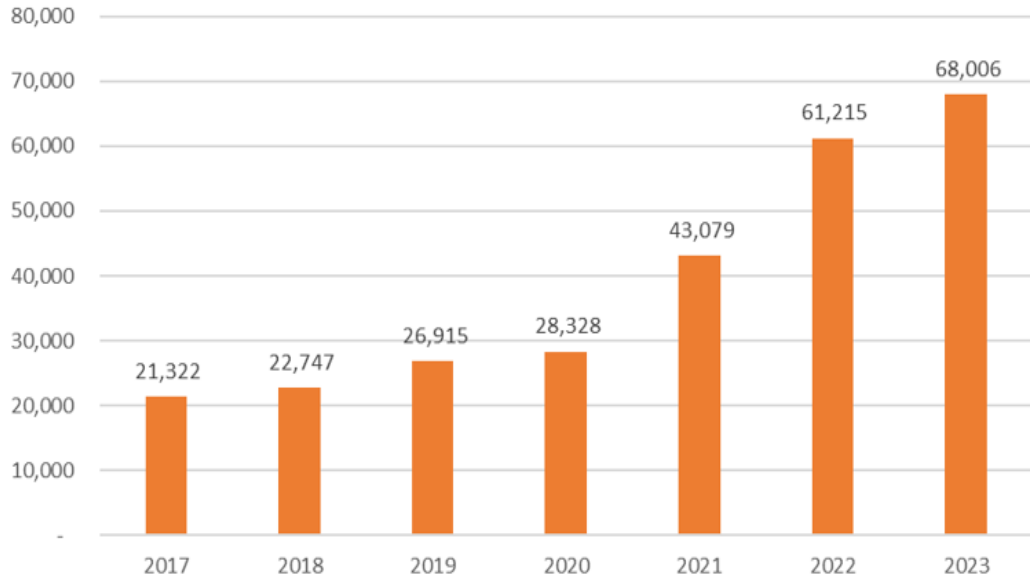

Figure 2. CIT SME Tax revenue by year

As for SME activity indicators, Figure 3 shows the number of registered SMEs remained relatively stable before 2020 but expanded steadily thereafter. Between 2017 and 2019, SME registrations hovered around 90–95,000; following the reform, the total rose to over 120,000 by 2023. Individual entrepreneurs constitute the largest segment, while small enterprises represent the main formal business group. The noticeable post-2020 increase suggests improved business formalization and local-level policy attention to SME development, coinciding with the reform's decentralization of SME CIT revenue.

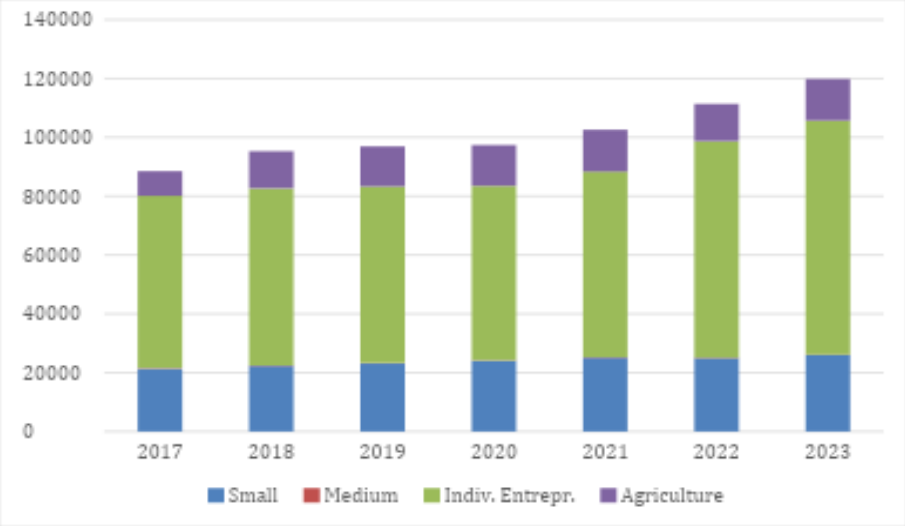

Figure 3. Number of Registered SMEs by type and year

SME employment exhibits a similar pattern in Figure 4. Before 2020, total SME jobs were relatively constant at 180–200,000; after the reform, employment rose steadily to nearly 250,000 by 2023. Most new jobs emerged in small enterprises and individual entrepreneur segments, indicating that the decentralization of SME tax revenue may have indirectly stimulated local employment growth through targeted regional support programs.

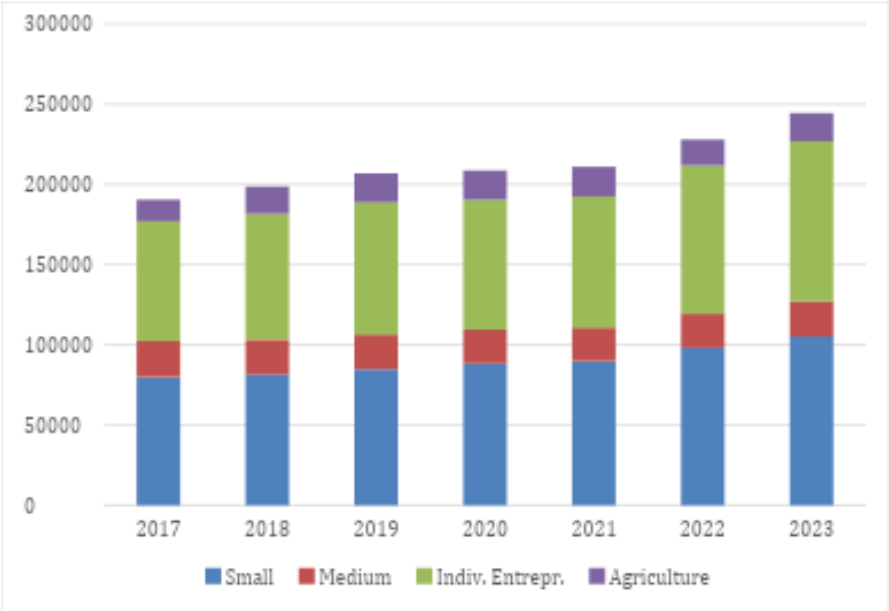

Figure 4. SME Employment by type and year

SME output expanded significantly over the period as shown in Figure 5. Output increased from roughly 1.4 trillion KZT in 2017 to 2.8 trillion KZT in 2020, and more than doubled to over 4 trillion KZT by 2023. The post-reform surge was driven largely by small enterprises, while medium firms and individual entrepreneurs also contributed. The acceleration after 2020 is consistent with improved SME productivity and access to local development initiatives financed by CIT revenues retained at the regional level.

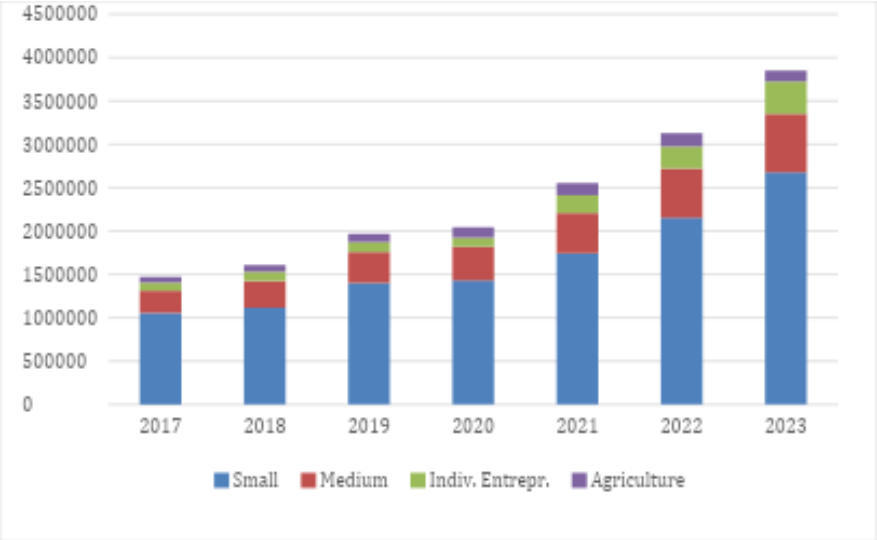

Figure 5. SME Output by type and year

As shown in Figure 6, SME gross value added (GVA) followed a similar growth trajectory, more than doubling from about 1.1 trillion KZT in 2017 to nearly 3 trillion KZT in 2023. Both small and medium enterprises experienced notable gains after 2020, reflecting rising efficiency and profitability within the sector. The timing of the increase aligns with the post-reform period, suggesting that allowing regions to retain SME CIT revenue may have enhanced local business environments and encouraged reinvestment.

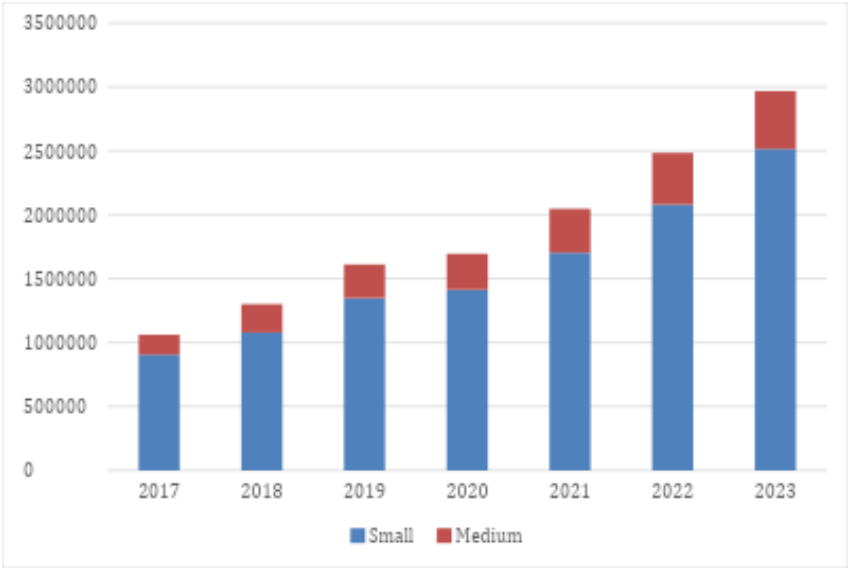

Figure 6. SME Gross Value Added by type and year

Overall, the descriptive analysis highlights a clear upward trajectory in SME activity and regional fiscal performance following the 2020 corporate income tax (CIT) reform. Prior to the reform (2017–2019), both SME indicators and SME CIT collections showed only modest growth, reflecting limited local fiscal incentives. After 2020, when SME CIT revenues were reassigned directly to regional budgets, SME tax collections and economic outcomes accelerated markedly.

Figures 2 through 6 collectively show substantial post-reform increases in SME registration, employment, output, and gross value added, with the strongest gains in small enterprises and individual entrepreneurs. At the same time, Figure 1 reveals wide disparities in revenue capacity and transfer dependence across oblasts—urban and resource-rich regions such as Almaty and Astana cities remain largely self-financed, while southern and western oblasts continue to rely heavily on central transfers. Taken together, the descriptive patterns suggest that the CIT decentralization reform may have strengthened local government incentives, enhanced SME dynamism, and contributed to more regionally grounded economic development after 2020.

Empirical analysis

Next, we present the results of our empirical analysis. We start with a more generic fixed effect estimation of the CIT reform on SME indicators while controlling for GRP per capita, population density, unemployment rate and urbanization rate.

The fixed-effects estimates in Table 2 indicate a positive and statistically significant association between the 2020 CIT reform and key dimensions of SME activity, particularly employment and output. Following the reform, SME employment increased by approximately 349,000 workers on average, while SME output rose by about 414 billion KZT, both statistically significant at conventional levels. In contrast, the estimated effect on the number of registered SMEs is positive but not statistically significant, and the coefficient on SME gross value added is also imprecisely estimated. Taken together, these results suggest that the decentralization of SME-related CIT revenues was associated primarily with intensive-margin adjustments—expansion of activity and scale among existing firms—rather than a statistically discernible increase in firm entry or aggregate value added over the sample period. The findings are consistent with the interpretation that enhanced local fiscal incentives strengthened subnational governments' motivation to support SME expansion, particularly through employment growth and higher production levels after 2020.

Table 2. The impact of the reform on SME indicators

	(1)	(2)	(3)	(4)
VARIABLES	SME # of Registered	SME Employment	SME Output	SME Gross Value Added
Post Reform	2,822	348,670**	414,377**	3,703
	(2,395)	(149,208)	(168,199)	(4,823)
Gross Regional Product Per Capita	-1.432	1.066	-16.15	-2.394
	(1.088)	(52.98)	(78.39)	(2.036)
Population Density	207.7***	13,109***	16,399***	484.3***
	(16.50)	(1,792)	(1,463)	(54.81)
Unemployment Rate	96,856	-2.027e+07*	-2.387e+07*	-170,175
	(193,748)	(1.098e+07)	(1.157e+07)	(463,339)
Urbanization Rate	16,125	7.888e+06**	1.196e+07***	-5,394
	(115,368)	(2.867e+06)	(3.616e+06)	(208,207)
Constant	-16,613	2.452e+06	1.179e+06	151,709
	(91,092)	(5.809e+06)	(6.206e+06)	(214,343)
Observations	113	113	113	113
R-squared	0.437	0.843	0.851	0.664
Number of oblasts	17	17	17	17
Within R-squared	0.437	0.843	0.851	0.664
Notes: Robust standard errors clustered at oblast level are in parentheses. Stars indicate statistical significance (*** p<0.01, ** p<0.05, * p<0.1)				

The estimated coefficients on the control variables are broadly consistent with insights from the regional development literature. Population density exhibits a strong and statistically significant positive association with all SME outcomes, underscoring the importance of agglomeration effects, market access, and scale economies for SME development. Urbanization is positively and significantly associated with SME employment and output, suggesting that more urbanized regions provide a more conducive environment for SME expansion through better infrastructure, labor markets, and business services. By contrast, higher unemployment rates are associated with weaker SME performance in employment and output, reflecting subdued labor demand and weaker regional economic conditions. Gross regional product per capita does not exhibit a statistically significant association with SME registration or employment once oblast fixed effects are included, indicating that much of the cross-regional income variation is absorbed by time-invariant regional characteristics. Overall, the control estimates confirm that SME activity is more pronounced in denser and more urbanized regions, while the post-reform coefficients highlight the role of fiscal decentralization in reinforcing these structural advantages rather than reshaping regional fundamentals in the short run.

For our main specification, we estimate both short- and medium-term impact of the reform. We discuss the results for each of SME activity indicators separately in Table 3 through 6.

The short-term results in Table 3 show a selective but positive response of SME registration to the 2020 CIT reform, concentrated primarily among small enterprises and agricultural SMEs. In the immediate post-reform period (2020-2021), the number of small enterprises increased by about 885 on average, a statistically

significant effect, while agricultural SMEs rose by approximately 2,800, also statistically significant. The estimated increase in individual entrepreneurs is positive but not statistically significant, and medium-sized enterprises show no discernible short-term response. These patterns suggest that the decentralization of SME CIT revenues translated relatively quickly into higher registration among firm categories that are more sensitive to local administrative incentives and support mechanisms, while larger SMEs exhibited little immediate adjustment. Overall, the short-term evidence points to an early but uneven expansion in SME registration following the initial implementation of the reform.

Table 3. The impact of the reform on SMEs registered in short and medium term

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Small	Medium	Entrepr.	Agric.	Small	Medium	Entrepr.	Agric.
Post Reform (short)	884.7**	-6.626	436.9	2,807**				
	(363.5)	(6.391)	(1,347)	(1,212)				
Post Reform (medium)					1,654	20.83*	9,554*	-2,290
					(1,147)	(9.917)	(4,829)	(5,203)
GRP per capita	0.313	0.00468	-0.0651	0.130	-0.165	-0.00116	-1.407	-0.149
	(0.214)	(0.00294)	(0.479)	(0.330)	(0.142)	(0.00143)	(0.874)	(0.237)
Population Density	48.91***	-0.262***	49.26***	-11.97*	50.86***	-0.123***	136.2***	8.385
	(10.44)	(0.0852)	(15.40)	(6.760)	(8.306)	(0.0289)	(13.79)	(11.27)
Unemployment Rate	-13,129	662.9	-47,247	-117,496*	48,235	603.4**	115,313	-40,115
	(17,845)	(468.9)	(75,285)	(64,898)	(29,430)	(242.7)	(124,825)	(51,767)
Urbanization Rate	-10,231	-385.5*	44,767	196,671	-25,038	-358.3	-87,782	-14,822
	(25,068)	(216.0)	(133,644)	(148,093)	(25,966)	(227.3)	(79,451)	(91,810)
Oblast FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	19,093	151.5	40,655	-48,803	-332.7	137.4	23,627	39,639
	(17,468)	(245.0)	(79,531)	(72,188)	(19,818)	(142.3)	(61,719)	(53,092)
Observations	79	79	79	79	81	81	81	81
R-squared	0.833	0.352	0.155	0.083	0.878	0.360	0.715	0.027
# of oblasts	16	16	16	16	17	17	17	17
Within R-sq	0.833	0.352	0.155	0.0829	0.878	0.360	0.715	0.0266
Notes: Robust standard errors clustered at oblast level are in parentheses. Stars indicate statistical significance (*** p<0.01, ** p<0.05, * p<0.1)								

The medium-term estimates (2022-2023) indicate that the reform's effects became more pronounced for selected SME categories, particularly individual entrepreneurs. Over this period, the number of registered individual entrepreneurs increased by approximately 9,554, a statistically significant effect, pointing to a delayed but substantial expansion in micro-entrepreneurial activity. Medium-sized enterprises also begin to show a small but statistically significant increase of about 21 units, suggesting a gradual response as regional fiscal and administrative practices adjusted to the new revenue incentives. In contrast, the estimated effect for small enterprises, while positive, is not statistically significant in the medium term, and agricultural SMEs do not exhibit a robust medium-term response, possibly reflecting persistent structural constraints in rural business formation. Taken together, the medium-term findings suggest that the CIT reform's impact on SME registration shifted over time toward individual entrepreneurs and, to a lesser extent, medium-sized firms, consistent with a gradual reallocation of local policy attention and support following fiscal decentralization.

The short-term results in Table 4 indicate a selective employment response to the 2020 CIT reform, concentrated primarily among small enterprises. In the immediate post-reform period (2020-2021), employment in small enterprises increased by approximately 4,269 workers on average, a statistically significant effect. In contrast, the estimated employment changes for individual entrepreneurs and agricultural SMEs, while positive in sign, are not statistically significant, and medium-sized enterprises show no measurable short-term employment response. These findings suggest that the initial employment gains following the reform were driven mainly by small firms, which are typically more responsive to localized policy support and administrative facilitation. Overall, the short-term evidence points to an early but narrowly concentrated employment expansion, rather than a broad-based increase across all SME categories.

Table 4. The impact of the reform on SME employment in short and medium term

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Small	Medium	Entrepr.	Agri.	Small	Medium	Entrepr.	Agri.
Post Reform (short)	4,269**	-399.8	2,212	2,219				
	(1,478)	(689.3)	(1,691)	(1,483)				
Post Reform (medium)					2,094	1,171	6,081	-3,164
					(3,893)	(1,060)	(5,796)	(5,932)
GRP Per Capita	1.034	-0.165	0.673	0.204	-0.696	-0.202	-1.253	-0.199
	(0.847)	(0.264)	(0.694)	(0.352)	(0.858)	(0.170)	(1.032)	(0.294)
Population Density	119.2***	-6.079	29.17	-9.217	300.0***	6.851	172.7***	12.28
	(17.20)	(8.249)	(45.89)	(8.076)	(36.20)	(4.409)	(26.83)	(12.79)
Unemployment Rate	-128,322*	-13,802	-138,587	-81,083	-173,951	9,344	65,492	-6,890
	(72,775)	(37,066)	(83,716)	(72,525)	(156,225)	(32,324)	(172,472)	(64,329)
Urbanization Rate	-92,283	-46,961	81,643	207,722	61,327	-36,285*	4,575	-51,210
	(125,773)	(55,174)	(146,808)	(175,670)	(79,216)	(20,358)	(94,448)	(122,374)
Oblast FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	160,592**	59,664	84,129	-69,522	43,864	37,633*	-264.3	49,412
	(63,415)	(41,756)	(98,803)	(86,290)	(83,868)	(19,549)	(79,128)	(73,066)
Observations	79	79	79	79	81	81	81	81
R-squared	0.693	0.085	0.144	0.056	0.911	0.145	0.713	0.051
# of oblasts	16	16	16	16	17	17	17	17
Within R-sq	0.693	0.0846	0.144	0.0557	0.911	0.145	0.713	0.0508
Notes: Robust standard errors clustered at oblast level are in parentheses. Stars indicate statistical significance (*** p<0.01, ** p<0.05, * p<0.1)								

The medium-term estimates (2022-2023) suggest that the employment effects of the reform did not broaden substantially across firm types. Although the coefficients for small enterprises, medium enterprises, and individual entrepreneurs are positive in the medium term, none of these estimates are statistically significant, indicating that employment growth did not persist in a robust or systematic manner beyond the initial post-reform period. Agricultural SMEs also show no significant medium-term employment response. Taken together, these results imply that while the decentralization of SME-related CIT revenues was associated with a short-term employment increase among small enterprises, the reform did not generate sustained or widespread employment growth across SME categories in the medium term. This pattern is consistent with an initial adjustment phase following the reform, after which employment dynamics appear to be driven more by underlying regional economic conditions than by continued fiscal decentralization effects.

The short-term estimates in Tables 5 and 6 indicate that the 2020 CIT reform was associated with immediate but heterogeneous effects on SME output and value creation across firm types. In the initial post-reform period (2020-2021), SME output increased significantly among medium enterprises, by about 54 billion KZT on average, as well as among individual entrepreneurs (approximately 25.6 billion KZT) and agricultural SMEs (around 57.3 billion KZT). By contrast, the estimated short-term effect for small enterprises' output is not statistically significant, suggesting that early production responses were concentrated in specific segments rather than uniformly across the SME sector. These patterns are consistent with the interpretation that the initial decentralization of SME-related CIT revenues facilitated faster expansion among firm types that were able to adjust production relatively quickly.

Table 5. The impact of the reform on SME output in short and medium term

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Small	Medium	Entrepr.	Agri.	Small	Medium	Entrepr.	Agri.
Post Ref. (short)	-1,628	54,196*	25,583**	57,262***				
	(89,581)	(25,969)	(10,040)	(15,129)				
Post Ref. (medium)					360,128	205,769*	117,280***	34,988
					(276,871)	(108,184)	(20,875)	(20,351)
GRP Per Capita	261.9***	43.86***	16.12*	8.991	-20.63	-7.452	-18.44**	4.622
	(39.13)	(9.026)	(8.203)	(10.10)	(60.84)	(7.583)	(7.370)	(3.609)
Population Density	8,550***	1,833***	537.0**	-293.9***	12,628***	2,252***	1,179***	-82.10
	(516.2)	(168.7)	(204.5)	(76.14)	(1,338)	(405.7)	(250.6)	(56.92)
Unempl. Rate	3.2e+06	-1.230e+06	-951,936*	-879,008	-1.3e+07*	-2.9e+06	-2.4e+06***	-88,397
	(4.2e+06)	(1.4e+06)	(511,135)	(511,784)	(6.960e+06)	(2.1e+06)	(804,388)	(550,490)

Urbaniz. Rate	-8.1e+06**	-2.520e+06	581,596	456,154	6.351e+06	-432,287	918,465*	398,730
	(3.5e+06)	(1.6e+06)	(628,980)	(1.4e+06)	(7.200e+06)	(2.3e+06)	(503,560)	(468,515)
Oblast FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	1.013e+06	1.722e+06	-13,389	276,596	256,022	1.3e+06	469,074	-103,622
	(2.8e+06)	(1.4e+06)	(396,421)	(774,603)	(6.023e+06)	(1.8e+06)	(448,553)	(442,341)
Obs.	79	79	79	79	81	81	81	81
R-sq.	0.863	0.748	0.495	0.482	0.874	0.843	0.911	0.311
# of oblasts	16	16	16	16	17	17	17	17
Within R-sq	0.863	0.748	0.495	0.482	0.874	0.843	0.911	0.311
Notes: Robust standard errors clustered at oblast level are in parentheses. Stars indicate statistical significance (*** p<0.01, ** p<0.05, * p<0.1)								

Short-term effects on SME gross value added are more narrowly concentrated. Table 6 shows a statistically significant increase in gross value added for small enterprises, of roughly 137 billion KZT, and a positive and significant effect for medium enterprises of about 46 billion KZT in the immediate post-reform years. These results point to short-run productivity or efficiency gains among established SMEs, rather than broad-based value creation across all firm categories.

Table 6. The impact of the reform on SME Gross Value Added in short and medium term

	(1)	(2)	(3)	(4)
VARIABLES	Small	Medium	Small	Medium
Post Reform (short)	137,108*	46,208**		
	(69,945)	(20,434)		
Post Reform (medium)			351,334	114,356
			(287,390)	(82,531)
GRP Per Capita	227.5***	37.00***	-17.13	-0.311
	(25.89)	(7.922)	(46.36)	(3.496)
Population Density	7,355***	1,536***	11,367***	1,707***
	(613.5)	(148.5)	(1,847)	(349.4)
Unemployment Rate	-3.739e+06	-1.828e+06	-1.523e+07*	-2.322e+06
	(3.998e+06)	(1.193e+06)	(8.251e+06)	(1.684e+06)
Urbanization Rate	-7.778e+06*	-1.865e+06	6.682e+06	98,990
	(4.030e+06)	(1.225e+06)	(6.737e+06)	(1.751e+06)
Oblast FE	1.623e+06	372,412	-1.157e+06	-24,051
Constant	4.587e+06	1.633e+06	1.198e+06	777,154
	(2.986e+06)	(1.042e+06)	(5.765e+06)	(1.337e+06)
Observations	79	79	81	81
R-squared	0.907	0.805	0.871	0.837
# of oblasts	16	16	17	17
Within R-sq	0.907	0.805	0.871	0.837
Notes: Robust standard errors clustered at oblast level are in parentheses. Stars indicate statistical significance (*** p<0.01, ** p<0.05, * p<0.1)				

The medium-term estimates (2022-2023) suggest that the reform's impact on SME output persisted for selected firm types, though not uniformly across the sector. As shown in Table 5, individual entrepreneurs exhibit a large and statistically significant increase in output, with average gains of approximately 117 billion KZT, indicating sustained expansion in micro-entrepreneurial activity. Medium enterprises also show a positive and statistically significant medium-term output effect, on the order of 206 billion KZT, while the estimated increase for small enterprises, although sizable in magnitude, is not statistically significant. Output effects for agricultural SMEs are positive but imprecisely estimated in the medium term.

In contrast, the medium-term results for SME gross value added (Table 6) do not show statistically significant effects for either small or medium enterprises, despite positive point estimates. This suggests that much of the value-added response to the reform may have materialized in the short run, with subsequent output growth driven more by scale expansion than by continued improvements in productivity. Overall, the medium-term evidence indicates that the CIT revenue decentralization was associated with sustained output growth in specific SME segments—particularly individual entrepreneurs and medium-sized firms—while medium-term gains in aggregate value added appear more limited.

Discussion and Conclusion

This paper examined the impact of Kazakhstan's 2020 amendment to the Budget Code—specifically the reallocation of corporate income tax (CIT) revenues from small and medium enterprises (SMEs) to regional budgets—on SME performance across oblasts over the period 2017–2023. The reform represented a meaningful step toward fiscal decentralization by strengthening local governments' fiscal incentives to support private sector activity. Using oblast-level panel data and fixed-effects models, the analysis finds that the reform was associated with selective but economically meaningful improvements in SME performance, particularly along the intensive margin of production and employment.

The results indicate that the reform's effects were heterogeneous across outcomes, firm types, and time horizons. In the short run (2020-2021), SME employment increased significantly among small enterprises, while SME output and gross value added rose notably for selected firm categories, including medium enterprises, individual entrepreneurs, and agricultural SMEs. In the medium term (2022-2023), the evidence points to sustained output expansion among individual entrepreneurs and medium-sized firms, while effects on employment and value added become less precisely estimated. Effects on SME registration are present but uneven, suggesting that the reform primarily stimulated expansion and scaling of existing firms rather than broad-based entry. Taken together, the findings suggest that enhanced subnational fiscal incentives translated more strongly into higher production and activity levels than into persistent gains in firm creation or productivity growth.

These findings contribute to the literature linking fiscal decentralization to local economic performance by highlighting the importance of incentive alignment at the subnational level. Consistent with theoretical arguments and empirical evidence from other contexts (e.g., Oates, 1999; Martínez-Vázquez and McNab, 2003), the Kazakhstan experience suggests that when local governments retain a greater share of business tax revenues, they have stronger incentives to facilitate economic activity within their jurisdictions. The differentiated responses across SME categories are also in line with prior evidence from transition and developing economies (Akai and Sakata, 2002), which shows that smaller and more flexible firms tend to respond more quickly to improvements in local fiscal and administrative environments.

Several limitations warrant consideration. First, the analysis relies on oblast-level data, which may mask important heterogeneity across raions and individual firms. Second, the relatively short post-reform window constrains the ability to assess longer-term structural effects or persistent productivity gains. Third, although the empirical strategy incorporates fixed effects, event-study diagnostics, and robustness checks using alternative time trends and lagged controls, some endogeneity concerns may remain if unobserved local policy initiatives or investment dynamics coincided with the reform. Future research using firm-level data, longer panels, or detailed information on local fiscal spending could provide deeper insights into the mechanisms through which fiscal decentralization affects entrepreneurship, employment, and regional development.

Finally, the reform also coincides with the presence of COVID-19 pandemic that started in 2020 and continued to have a large impact through 2021. Unfortunately, in the absence of reliable panel data on incidence and severity of COVID-19 statistics, we are not properly able to control for it. However, we argue that controlling for oblast level unobserved characteristics probably controlled for some of the impact across regions of Kazakhstan. Moreover, given that we observe largely positive results and assuming that COVID-19 would have had negative impact on SME outcomes, we can argue that what we find is lower-bound of the impact of the reform and the impact would have been even higher in the absence of the pandemic.

Furthermore, it is important to note that the fiscal decentralization landscape in Kazakhstan is still evolving, hence the findings of this study should be interpreted within this context. After the 2020 reform, a number of policy changes have been implemented, alongside ongoing discussions on further fiscal decentralization measures. Amendments to the Budget Code adopted in 2024, followed by the approval of a revised Budget Code in 2025, have aimed to strengthen the institutional foundations of intergovernmental fiscal relations by improving fiscal transparency, clarifying expenditure responsibilities, and expanding the role of subnational budgets (Budget Code of the Republic of Kazakhstan, 2024).

In parallel, official policy discussions in 2024-2025 have increasingly emphasized the need to reduce regional dependence on intergovernmental transfers and to enhance own-source revenue capacity at the oblast and district levels, reflecting persistent concerns about vertical fiscal imbalances in Kazakhstan's fiscal system (World Bank, 2023). While these recent amendments do not alter the empirical scope of this analysis, they underscore that the 2020 CIT reform examined in this paper forms part of a broader and ongoing decentralization process.

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