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Highlights

- Decentralization, an additional channel linking entrepreneurial activity with growth.
- Country panel data are used to estimate the business environment.
- Fiscal decentralization is found to positively affect the ease of starting a business.
- The marginal effect of decentralization is strongest among developing countries.

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Fiscal decentralization and institutional quality on the business environment

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ABSTRACT

Using country panel data from 2004 to 2012, we empirically analyze the effect of fiscal decentralization on the likelihood of business-friendly environments. Our results show that fiscal decentralization improves the business environment and the effect is strongest among lower-income countries.

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1. Introduction

The importance of entrepreneurial activity on economic growth has been well studied.¹ Moreover, it has been established that several key factors affect entrepreneurial activity, including political stability, quality of institutions, and policies supporting a more business-friendly environment.² Although these relationships are important to understanding the role of entrepreneurial activity on growth, another channel to be explored exists that explains how fiscal decentralization impacts the business environment that spurs entrepreneurial activity.

This paper uses country panel data to address the channels by which fiscal decentralization affects the business environment via improvements in the regulatory process of starting a business, after controlling for the level of economic development. We build on the influential work by Djankov et al (2002) who found entry regulation to be detrimental to a pro-business environment. We measure the business environment using indicators from the World Bank Doing Business database. Of particular interest to this study is the subset of indicators relevant to starting a business, including the number of days and procedures along with the cost and minimum capital (as a % of income per capita) to formally start and operate a business. In 2016, New Zealand exhibited the best business environment, requiring just 0.5 days and one procedure, and nearly zero cost and no minimum capital. India, on the other hand, required 29 days, 12.9 procedures, and 13.5% of per capita income in costs, ranking 155th out of 190 economies.³

In this paper, we aim to study how decentralization, measured as resource allocation occurring at sub-federal levels, can drive incentives by local governments to promote a more efficient regulatory process such as the costs and procedures to start a business. Previous studies

¹ See Djankov et al 2006 and Naude 2010.

² See Dutta et al, 2013, Aidis et al 2012, Dreher and Gassebner 2013, and Sobel et al 2013.

³ Details on the Doing Business indicators along with all data can be found at www.doingbusiness.org.

suggest that greater decentralization results in government policies and tax structures that are less distortionary to economic activity (Tiebout, 1956) along with improved government quality as a result of greater competition for resources (Kyriacou and Roca-Sagales, 2011). Yakovlev and Zhuravskaya (2013) found that business reforms in Russia are more effective when local governance institutions are stronger; specifically, large countries can encourage greater competition among local governments, leading to improvements in firm performance and small business employment. It therefore follows that more decentralized governments will implement business regulation reforms that reduce the time, cost, and complexity of the regulatory processes to start a business. These reforms include the simplification of the registration procedures for a new business, reduction or removal of minimum capital required to start a business, and the removal or simplification of post-registration procedures (e.g., tax registration, licensing) and the creation of a ‘one-stop shop’ for combining procedures to start a business. Linking the effect of fiscal decentralization to the business environment is therefore critical to estimating the marginal effect of government policies aimed at promoting entrepreneurial activity.

2. Data and Method

To empirically test for a linkage between fiscal decentralization and a country’s business environment, we analyze data on 78 countries for the period 2004-2012 and estimate the following model:

$$Business_{it} = \alpha_i + \beta_1 Decentralization_{i,t-1} + \beta_2 (\log)GDP_{i,t-1} + \beta_3 Quality_{it} + \gamma_i + \varepsilon_{it} \quad (1)$$

where *Business* measures the business environment, *Decentralization* is fiscal decentralization, *GDP* is GDP per capita, and *Quality* measures government quality. We use country fixed effects,

γ_i , to capture any unobserved country heterogeneity that is relatively fixed over time such as cultural characteristics and standard errors, ε_{it} , are clustered at the country level.

Our dependent variable, *business*, is the *distance to the frontier for starting a business* from the World Bank's Doing Business database. This variable provides a score based on four components related to the ease of starting a business, including time, procedures, cost, and minimum capital. This indicator is an index (instead of a ranking) allowing one to compare each country's score to the "frontier" (i.e., the country with the best business environment for starting a business), which can change over time as conditions change and countries enter and exit the database.

Our key explanatory variable is fiscal decentralization (lagged one year), defined as the share of sub-federal government spending to total spending, provided by the IMF's Government Finance Statistics. We use three measures from the World Bank's Worldwide Governance Indicators to control for government quality: *government effectiveness*, *regulatory quality*, and *corruption*, each ranging from -2.5 to +2.5 (with higher scores indicating better outcomes). Because of high correlation between *government effectiveness*, *regulatory quality*, and *corruption*, we use separate regressions to capture the effects of each variable. We control for economic development by using GDP per capita (lagged one year) under the assumption that higher income countries are associated with better business environments attractive to investment.

3. Results

Columns (1) to (3) of Table 1 present the OLS results with country fixed effects using *business* as the dependent variable. In all regressions, the effect of decentralization on the business environment is significantly positive after controlling for institutional quality. Our

results confirm earlier findings that government quality can influence a more business-friendly environment; furthermore, the model shows that fiscal decentralization is an additional channel that enhances that environment. In fact, the marginal effect of fiscal decentralization is stronger than any of the institutional quality measures, suggesting that Tiebout's theory of local government provision enhancing growth can at least partially be attributed through the improvements in the business environment it creates.

Table 1
Business environment regressions

Independent Var.	Fixed Effects			Quantile Regressions		
	(1) Business	(2) Business	(3) Business	(4) Business	(5) Business	(6) Business
Decentralization _(t-1)	0.41 ^{***} (0.14)	0.317 ^{**} (0.16)	0.441 ^{***} (0.17)	0.12 ^{***} (0.05)	0.12 ^{***} (0.05)	0.13 ^{***} (0.05)
(log)GDP per capita _(t-1)	47.00 ^{***} (8.36)	45.40 ^{***} (7.64)	48.41 ^{***} (4.02)	2.05 [*] (1.06)	3.82 ^{***} (0.99)	4.29 ^{***} (0.95)
Gov. effectiveness	6.39 [*] (3.81)	---	---	4.43 ^{***} (1.46)	---	---
Regulatory Quality	---	7.24 [*] (4.25)	---	---	1.37 (1.44)	---
Corruption	---	---	4.69 [*] (2.73)	---	---	0.49 (1.17)
Constant	-382.10 ^{***} (76.19)	-360.81 ^{***} (69.20)	-395.88 ^{***} (37.60)	51.60 ^{***} (10.28)	37.65 ^{***} (10.00)	33.13 ^{***} (9.68)
Obs	438	438	438	438	438	438
R ²	0.2827	0.2816	0.2777	0.1603	0.1535	0.1516

Standard errors in parentheses (clustered at country-level for columns 1 to 3 and standard errors for columns 4 to 6).

*Significant at the 10% level

** Significant at the 5% level

*** Significant at the 1% level

Moreover, our findings suggest that the level of development, measured by real GDP per capita, also influences the business environment, since high-income countries already have an

advantage in capital infrastructure as well as institutional advantages. However, we investigate the effect of decentralization further by dividing the data into three subsamples: low-income, middle-income, and high-income. Comparing the regression estimates among the sub-samples in Table 2, the effect of decentralization is significant in all three subsamples, but is strongest among low-income countries, suggesting that decentralization faces diminishing returns once a level of development is achieved.

Table 2
Business environment estimates (OLS) by income level

Independent Variable	Low-Income Business	Middle-Income Business	High-Income Business
Decentralization _(t-1)	0.50 ^{***} (0.11)	0.29 ^{***} (0.07)	0.08 ^{**} (0.03)
(log)GDP per capita _(t-1)	1.03 (2.22)	3.66 (2.49)	2.36 (1.81)
Government effectiveness	10.26 ^{***} (2.80)	3.72 (2.29)	10.11 ^{***} (1.27)
Constant	22.42 (19.90)	26.25 (22.72)	90.94 ^{***} (18.62)
Obs	149	142	147
R ²	0.2006	0.1231	0.3244

Robust standard errors in parentheses.

*Significant at the 10% level

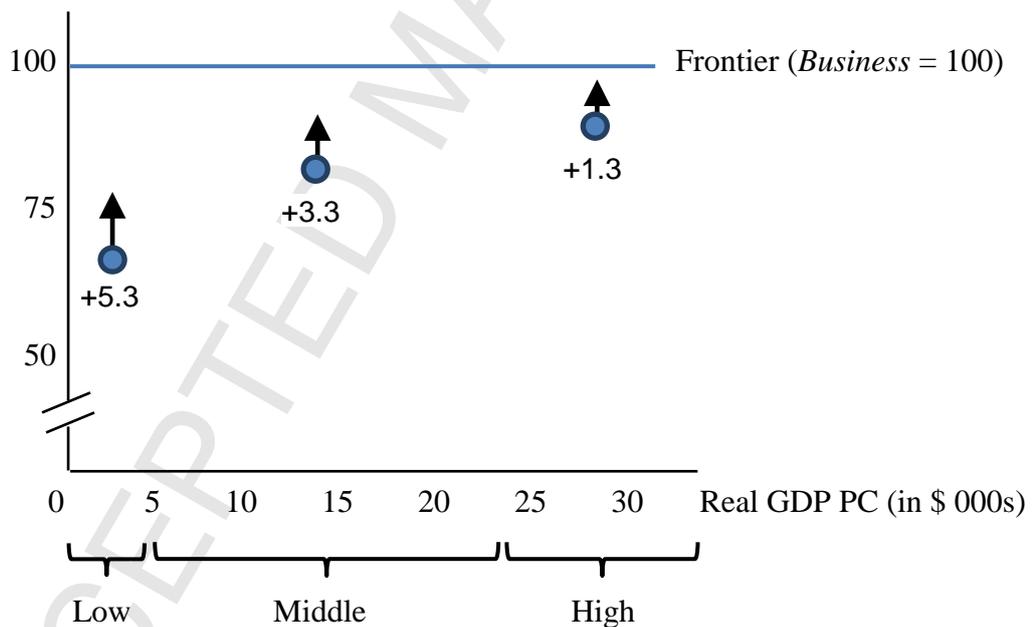
** Significant at the 5% level

*** Significant at the 1% level

To a large degree, our findings conditional on the existing level of development are intuitive given that the *business* variable is a relative measure to the frontier (or “best” country). Figure 1 presents the relative marginal effects of our key decentralization variable by level of development by plotting the average values of GDP per capita and *business* within each group. The low-income group, with an average value of *business* of 70.94, offers more opportunities for business environment enhancement than high-income countries. Specifically, among low-income countries, a one-standard deviation increase in fiscal decentralization results in an increase in

business of 5.3, compared to an increase of only 1.3 among high-income countries. For example, India, a member of the low-income group, enacted a series of business regulation reforms between 2004 and 2010 that significantly improved the ease of starting a business, and hence experienced a larger increase in its *business* score than a comparable high-income country enacting reforms of its own. Regardless of the manner in which the sample is divided, we find the effect of fiscal decentralization among low-income economies is strongest and always significant.

Figure 1
Marginal effect of decentralization on distance to frontier (*Business*)



Note: Mean values for *Business* = 70.94 (low-income), 80.74 (middle-income), 87.97 (high-income).

To further confirm our findings on the effects of fiscal decentralization, we conduct several robustness checks. First, to ensure that our results are not driven by outliers, we perform quantile regressions and the results are presented in Table 1, columns (4) to (6). Second, to

account for potential longer response times to changes in our key variable, we test the *decentralization* variable with longer lags and find that our results (available in the online appendix) do not change when lagged up to three years. Third, in lieu of *business* as the dependent variable, we use the individual components of the frontier: time to start a business, number of procedures, costs, and minimum capital requirements. Our findings (available in the online appendix) reinforce our overall findings from Tables 1 and 2 that decentralization and government quality play an important role in promoting a friendly business environment.

4. Conclusion

The importance of entrepreneurial activity on economic growth has been well studied, with the business environment playing a key role. In this paper, we analyzed an additional channel linking the business environment with entrepreneurial activity by estimating how decentralization serves as an important driver toward improving the regulatory processes to starting a business. Our findings confirm that while institutions matter, greater fiscal decentralization further enhances the business environment. This effect is especially strong among low-income countries. These results are encouraging to developing countries aiming to construct a path toward greater prosperity.

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