

BOX 3.5 Productivity and investment growth during reforms

Wide-ranging governance and business climate reforms have been associated with higher potential growth through an increase in TFP growth and investment growth over the subsequent two to four years.

In many emerging market and developing economies (EMDEs), enterprises claim that a wide range of institutional problems constitute significant obstacles to doing business. Recent World Bank enterprise surveys for more than 10 percent of EMDEs rank law and order, customs and trade regulation, and tax administration among the top three non-financial obstacles to doing business.¹ Weak governance, often manifested in corruption and large informal sectors, was also a common complaint.

By removing obstacles to firms' operations, governance and business climate reforms can raise potential growth through their impact on productivity and investment growth.² This box addresses the following questions.

- How do weak governance and business climates affect growth?
- How has TFP and investment growth evolved during major reform episodes?

How do weak governance and business climates affect growth?

Institutional quality. Improved institutional quality clarifies and protects property rights, facilitates contracts between non-related parties and, therefore, promotes a more efficient allocation of resources (Acemoglu and Johnson 2005). Institutional quality is associated with higher and more stable long-term growth. In particular, less corruption typically accompanied higher growth and investment, although such dividends have depended on country circumstances (Hodge et al. 2011; de Vaal and Ebben 2011; Shleifer and Vishny 1998). Greater political stability encourages stronger growth, investment, and lower levels of government spending (Aisen and Veiga 2013). Aspects of the rule of law, such as the provision of security and the protection of property rights, are correlated with higher growth or lower growth volatility (Haggard and Tiede 2011; Acemoglu, Johnson, and Robinson 2001; World Development Report 2017).

Note: This box was prepared by Sinem Kilic Celik.

¹ This ranking excludes the two financial obstacles, access to finance and tax rates.

² Reform payoffs may take some time to materialize and their growth dividend will depend on the country's stage of development and the technology level of the country (Dabla-Norris 2016).

Business climate. Poor business climates encourage anticompetitive practices, curtail innovation and hold back an efficient allocation of factors of production (Bourles et al. 2013; Buccirossi et al. 2013; Aghion and Schankermann 2004). While they be intended to provide social protection, stringent labor regulations often encourage informal employment and constrain firm size (Bruhn 2011; La Porta and Shleifer 2014; Loayza, Oviedo, and Servén 2005; Loayza and Servén 2010). Weak business environments dampen the crowding-in effects on domestic investment that would otherwise accrue from public and foreign direct investment (Kose et al. 2017). Burdensome business regulations amplify the adverse effect of corruption on firms' labor productivity (Amin and Ulku forthcoming). Trade restrictions are associated with lower firm productivity, especially when accompanied by heavy domestic industrial regulation (Topalova and Khandelwal 2011). Conversely, reforms that implement major improvements in business environments are associated with increased output growth (Divanbeigi and Ramalho 2015; Kirkpatrick 2014).

How has TFP and investment growth evolved during major reform episodes?

To illustrate the linkages between major governance and business climate reform efforts and TFP (or investment) growth, an event study and a local projections model are employed.³ Two sets of events are defined, based on two different datasets of structural indicators. Major reform spurts and setbacks are either defined as those that lift or reduce at least one of four *Worldwide Governance Indicators* (government effectiveness, control of corruption, rule of law, and regulatory quality) by at least 2 standard errors over two years as in Didier et al. (2015).⁴ Alternatively, major reform spurts and setbacks are defined as those that lift or reduce the "distance to the frontier"⁵ for at least one of the ten *Doing Business* indicators by at

³ This box analyzes potential TFP growth to assess the long-term effect of structural reforms. Hence, TFP growth refers to potential TFP growth throughout the box.

⁴ This yields 247 events in 136 EMDEs and 38 advanced economies during 1996-2015.

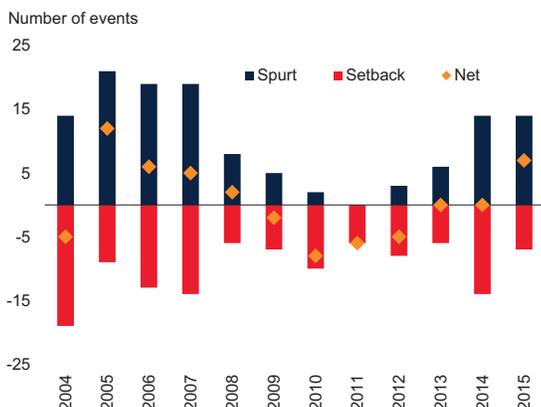
⁵ An economy's distance to frontier is indicated on a scale from 0 to 100, where 0 represents the lowest performance and 100 the frontier, which is constructed from the best performances across all economies and across time.

BOX 3.5 Productivity and investment growth during reforms (continued)

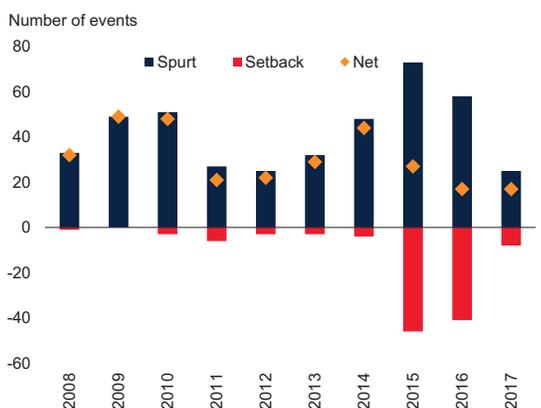
FIGURE 3.5.1 Reform spurts and setbacks

Progress in reforms has been mixed since 2014, with some evidence that the pace of governance reforms has accelerated more than that of business climate reforms.

A. Worldwide Governance Indicators: Number of reform spurts and setbacks



B. Doing Business indicators: Number of reform spurts and setbacks



Source: World Bank.

Note: A detailed methodology is available in Annex 3.5.

A. For *Worldwide Governance Indicators*, reform events are defined as two-standard-error changes in one of four *Worldwide Governance Indicators* for 136 EMDEs and 38 advanced economies during 1996-2015.

B. For *Doing Business* indicators, reform events are defined as two-standard-deviation changes in distance to frontier in one of ten *Doing Business* indicators in 127 EMDEs and 34 advanced economies during the same period during 2002-17.

least two standard deviation over two years.⁶ Details of the methodology are described in Annex 3.5.

Progress in reforms has been mixed since 2014, with some evidence that the pace of *governance* reforms has accelerated more than that of business climate reforms. Over 2014-15 (the last available data), governance reform spurts have become more common while reform setbacks have become less common compared to the immediate post-crisis period (Figure 3.5.1). In 2015, for the first time since the global financial crisis, reform spurts outnumbered reform setbacks. For *business climate* reforms, however, a surge in reform spurts in 2015-16 was largely offset by a surge in reform setbacks. As a result, while reform spurts have continued to outnumber setbacks, the pace of net improvements has not accelerated compared to the immediate post-crisis period (Figure 3.5.1). Around reform episodes, potential TFP and investment growth has tended to be higher than during “normal” years.

- Reform spurts reflected in *Worldwide Governance Indicators* were, on average, associated with about 1 percentage point higher TFP growth globally and somewhat more in EMDEs during the spurt (Figure 3.5.2).⁷ Investment growth was 9 percentage points higher during the average reform spurt and about 2 percentage points lower during the average reform setback.
- When reform spurts reflected in *Doing Business* indicators exceeded reform setbacks, TFP growth typically rose by 0.2 percentage point among EMDEs. During these episodes investment growth in EMDEs was about 1.6 percentage points above that in “normal” years (Figure 3.5.2).

The local projections model suggests that the effects of governance reform spurts and setbacks build over time.

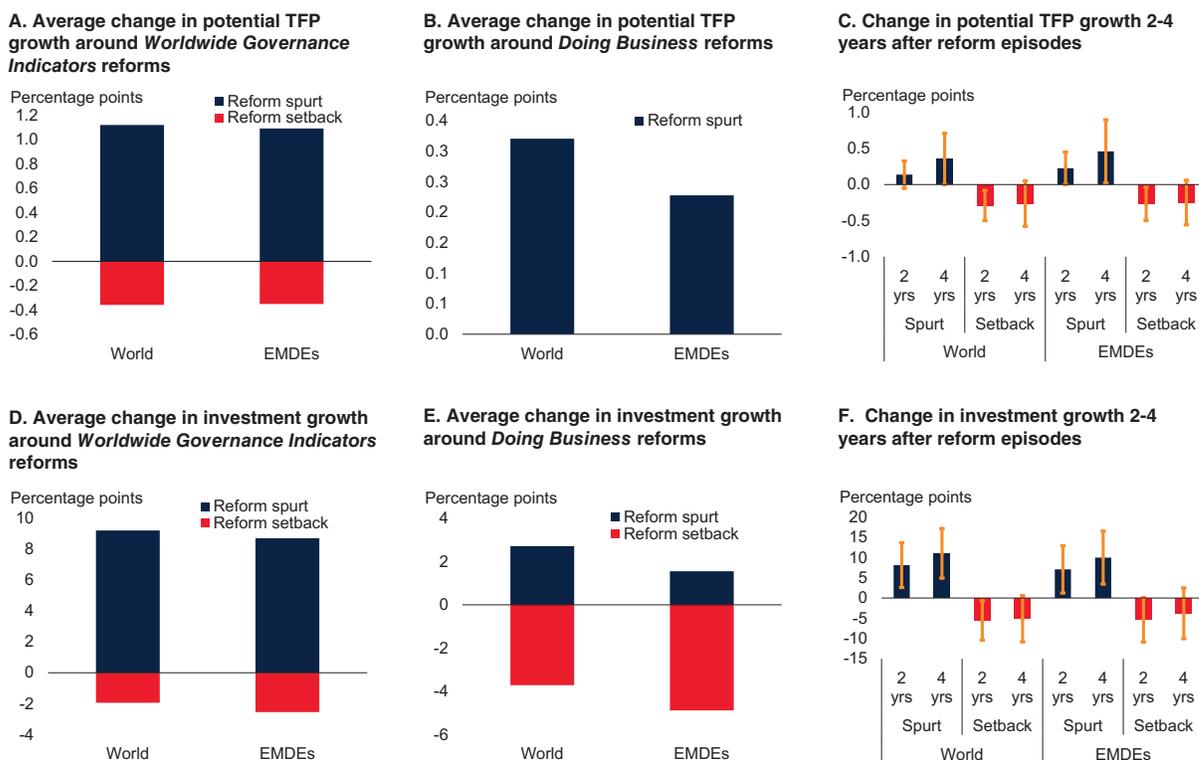
⁶ This yields 44 events in 127 EMDEs and 34 advanced economies during 2002-17. The sample for potential TFP growth is smaller so there are no setbacks identified in the case of *Doing Business* among this smaller sample.

⁷ For comparison, using industry-level data, Bourles et al. (2013) estimate that a removal of all anti-competitive regulations in upstream industries might have raised TFP growth by 1.7 percentage points per year in the average OECD country during 1995-2007. Dabla-Norris et al. (2015) estimate that the full elimination of labor and product market distortions would lift TFP in 13 advanced economies by 3.8-19.5 percent. Studies of aggregate growth find better business climates are associated with 1 percentage point higher actual growth in EMDEs or 0.8 percentage point higher per capita growth in a broader sample of countries (Didier et al. 2015; Divanbeigi and Ramalho 2015).

BOX 3.5 Productivity and investment growth during reforms (concluded)

FIGURE 3.5.2 Potential TFP and investment growth around reform spurts and setbacks

Reform spurts were, on average, associated with a statistically significant 0.1 percentage point per year increase in TFP growth above its “normal-year” average (0.8 percent) and 2.8-3.5 percentage points per year increase in investment growth above its “normal-year” average (6.4 percent) two-four years after the reform spurts.



Source: World Bank staff estimates.

Note. TFP growth refers to potential TFP growth, as estimated in Annex 3.1. A detailed methodology is available in Annex 3.5.

A. B. D. E. Simple averages of potential TFP (A and B) and investment (D and E) growth during reform spurts and setbacks (minus simple average potential TFP and investment growth outside such episodes) for all countries (“Global”) or for EMDEs only (“EMDE”). For Worldwide Governance Indicators (A and D), based on an event study of statistically significant 247 reform events—defined as two-standard-error changes in one of four *Worldwide Governance Indicators*—for 136 EMDEs and 38 advanced economies during 1996-2015. For *Doing Business* indicators (B and E), based on an event study of 44 reform events—defined as two-standard-deviation change in one of ten *Doing Business* Indicators—in 127 EMDEs and 34 advanced economies during the same period during 2002-17. TFP data not available for the 4 reform setback events in *Doing Business* indicators (A).

C. F. Regression coefficients of potential TFP (C) and investment (F) growth on dummies for structural reform spurts and setbacks—defined as two-standard-error changes in one of four *Worldwide Governance Indicators*—from local projections model for lags of two and four years, for a sample of 136 EMDEs and 38 advanced economies during 1996-2015. Vertical bars show 90 percent confidence interval.

Typically, while it takes four years for growth dividends to materialize after governance reform spurts, the adverse impact of reform setbacks materializes faster (within about two years) and is less persistent for governance reform setbacks. Potential TFP growth is, on average, about 0.1 percentage point per year above its “normal-year” average (0.8 percent) four years after reform spurts and about 0.2 percentage point per year below two years after setbacks. Investment growth is, on average, about 2.8-3.5 percentage points per year above its “normal-year” average (6.4 percent) two-four years after governance reform spurts

and about 2.7 percentage points per year below two years after reform setbacks.

Conclusion

Governance reforms have accelerated over the past three years while mixed progress has been made on business climate reforms. A renewed boost to both types of reforms promises sizable dividends for both productivity growth and investment.