Chapter 5

Anticompetitive Policies Reduce Economic Freedom and Hurt Prosperity

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Excessive government regulation interferes with individual economic freedom. It also imposes a substantial burden on national economies, reducing national wealth and slowing economic growth. Over the past decade, The Heritage Foundation has documented the large and rising cost to the United States economy stemming from overregulation.[1] Regrettably, however, sizable regulatory burdens continue to characterize many (if not all) economies, as documented by the Organisation for Economic Co-operation and Development (OECD)[2] and the World Bank.[3]

One regulatory category that has garnered increased attention in recent years is government rules that distort and harm the competitive process. Competition everywhere faces restraints imposed by governments, either through laws, regulations, and practices or through hybrid public–private restrictions by which government sanctions or encourages private anticompetitive activity. Government-imposed restrictions on competition, which we term anticompetitive market distortions (or anticompetitive regulations),[4] are especially pernicious because they are backed by the power of the state and may be largely impervious to attenuation through market processes. Often, these restrictions—for example, onerous licensing requirements—benefit powerful incumbents and stymie entry by innovative new competitors.

In recent years, recognizing the harm caused by anticompetitive regulations, international institutions have attempted to identify and categorize various types of harmful regulations and to estimate the consumer welfare costs that they impose. The intent of these efforts is to help governments move away from anticompetitive regulations. Such efforts, however, are often stymied by producer lobbies that tend to underplay the harmful effects of such regulations on consumers.

Ferreting out and publicizing the economic impact of these regulatory abuses should be given a higher priority in order to promote economic freedom and prosperity. In this chapter, we first outline the concept of anticompetitive regulations and the arguments for combatting them more vigorously, suggesting the importance of developing a neutral measure (a metric) to estimate their harmful impact. We then describe efforts by two major international organizations, the OECD[5] and the International Competition Network (ICN),[6] to develop methodologies for identifying anticompetitive regulations and to provide justifications for elimination of those restrictions. We then briefly summarize research (much of it supported in recent years by the World Bank) that estimates the nature and size of the economic welfare costs of anticompetitive regulations. Finally, we turn to ongoing research that focuses on a broad metric to measure the economic impact of these regulations on property rights, international trade, and domestic competition.

NATURE AND EFFECTS OF ANTICOMPETITIVE MARKET DISTORTIONARY REGULATIONS

Elsewhere, we have defined anticompetitive regulations as restrictions that "involve government actions that empower certain private interests to obtain or retain artificial competitive advantages over their rivals be they foreign or domestic." These restrictions include "governmental restraints that distort markets and lessen competition" and "anticompetitive private arrangements that are backed by government actions, have substantial effects on trade outside the jurisdiction that imposes the restrictions, and are not readily susceptible to domestic competition law challenge."[7]

Examples given by the ICN include a combination of Japanese government and private restraints that cumulatively have blocked efficient entry into the Japanese photographic film market by foreign firms, the Mexican government's empowerment of Mexico's dominant telecommunications company to fix the rates that foreign telecom carriers had to pay to terminate calls in Mexico, and the government-sponsored Canadian Wheat Board's policies that precluded competing wheat sellers as well as potential wheat buyers from having an adequate opportunity to compete for participation in the Wheat Board's sales. None was challengeable under domestic law, nor were they readily dealt with under existing international trade agreements, even those overseen by the World Trade Organization (WTO).[8]

Anticompetitive regulations have been classified into six major types:

- Government laws, regulations, or practices that eliminate competition completely;
- Government laws, regulations, or practices that lessen competition;
- Laws or regulations that are applied differently among firms, or regulatory exemptions given to some firms;
- Distortions caused by state-owned enterprises (SOEs);
- Action or inaction by competition agencies; and
- Anticompetitive state aid or support (taxpayer subsidies to favored firms or industries).

The size of the impact on welfare of each distortion under evaluation depends on the type of the distortion, the structure of the market at which it is directed, and the form of the policy itself.

Some recent market-specific research has focused on how anticompetitive regulations may distort supply and demand in a market by distorting relative costs faced by different producers.[9] For example, subsidizing domestic farmers will reduce their costs and give them an advantage over foreign farmers in domestic and international markets. To model the potential effect of the regulation then requires simulating the effect of the cost savings on the structure of the market. Specific illustrative examples warrant brief mention.

- A study of production levies and quotas that were intended to benefit European Union beet sugar growers revealed that competition in Europe was reduced, European sugar prices rose, and European sugar processors and consumers were harmed. These policies kept lower-cost cane sugar producers from

developing countries out of the European market, thereby distorting competition and diminishing welfare.
- The Indian government's stockpiling of a certain quantity of grain under a public procurement program, with "excess" grain sold on the global market, involves a domestic subsidy that both distorts domestic production incentives and lowers the price of Indian grain relative to the rest of the world.
- The Indian government's fixing of a below-market domestic price for "essential" drugs largely prevents foreign competitors from serving the Indian market, discourages innovative pharmaceutical research, and restricts Indian residents' access to higher-quality drugs, thereby harming long-term consumer welfare.
- Chinese government restrictions on the upward adjustment of cotton prices in the 1970s and 1980s created market distortions.

OECD AND ICN EFFORTS TO CATEGORIZE AND COMBAT ANTICOMPETITIVE REGULATIONS

OECD Toolkit. In 2009, the OECD Council adopted a "Recommendation on Competition Assessment" that calls for governments to identify existing or proposed public policies that unduly restrict competition and to revise them by adopting more procompetitive alternatives.[10] In furtherance of this recommendation, the OECD over the past decade has carried out research to help national competition agencies spot and advocate against regulatory restrictions that distort competition and thus meet the definition of anticompetitive regulations.

The OECD has developed a *Competition Assessment Toolkit* that "provid[es] a method for identifying unnecessary restraints on market activities and developing alternative, less restrictive measures that still achieve government policy objectives."[11] The first volume of the *Toolkit* was published in 2007, and the second and third volumes were published, respectively, in 2010 and 2015.[12]

The value of the OECD's *Toolkit* is demonstrated by its application in a 2014 OECD report on competition-distorting rules in Greece.[13] The study focused on four sectors of the Greek economy (food processing, retail trade, building materials, and tourism); identified 555 regulatory restrictions; and made 329 specific recommendations to mitigate harm to competition. These included such things as the abolition of barriers to entry into the asphalt sector; the abolition of any requirement to seek price approval or to submit prices to the authorities or trade and industry associations for all tourist activities; the liberalization of Sunday trading, including for stores larger than 250 meters square; the elimination of a five-mile restriction on moorings, which would allow marina operators to compete with nearby commercial or fishing ports on prices; the liberalization of distribution restrictions and price controls for over-the-counter drugs and dietary supplements; the elimination of restraints on the ability of retailers to decide freely on shop promotions and discounts, including the determination of periods of seasonal sales; the elimination of minimum requirements for storage or minimum capital requirements in the building materials sector; and the elimination of numerous barriers to investment in tourism activities. The OECD "conservatively" calculated a €5.2 billion benefit to the Greek economy from the lifting of harmful regulations identified in the study, "although the positive effects on the Greek economy over time [would] likely...be far greater."[14]

International Competition Network Initiatives. The OECD *Toolkit* is an excellent "how to" manual for spotting and analyzing regulatory distortions. The International Competition Network has been building support for application of its principles through an Advocacy Working Group, which provides resources that national competition agencies can use to assess and advocate against anticompetitive regulations.[15]

In 2011, the ICN released the Working Group's *Advocacy Toolkit*.[16] This publication provides an overview of the competition advocacy process and the range of advocacy tools available, including techniques for (1) implementation, which includes written guidance and reports (which may be published and accessible to stakeholders via the Internet), as well as training of government officials, recommendations to government in relation to government relations with third parties, and recommendations to government to change the law, and (2) monitoring, which includes publication of monitoring reports, assessing the situation after the advocacy intervention, formal and informal feedback received from recipients of advocacy activity, and measuring the usage of advocacy work products.[17]

As an example of implementation and monitoring, the *Toolkit* discusses the Spanish Competition Commission's evaluation of a regulatory concessions system governing the provision of intercity passenger transport services in Spain.[18] A 2008 CNC report found that the system established high entry barriers due to overly long-term concessions, the existence of a right of preference for the previous holder of the concession, and the high value given in tenders (government procurements) to quality criteria at the expense of other key variables such as price and frequency. The report also found that some regional authorities were extending concessions beyond their original terms, thereby precluding competition. The CNC met with key stakeholders, including potential entrants, incumbents, consumers, the Ministry of Public Works, and regional governments conducting their own tenders.

In 2010, the CNC issued two follow-up monitoring reports on national and regional-level concessions. These reports showed that the regulations had been slightly but insufficiently revised in light of the CNC actions and still allowed very little room for competition in the transport sector, since concessions were extended almost automatically. At the regional level, the situation was even worse: Governments had effectively closed down their markets, in some cases in breach of European Union rules.

Soon after the release of the 2010 reports, the CNC requested that two regional governments take action to address the lack of competition in their concessions. When those governments failed to respond, the CNC invoked the Spanish Competition Act and brought a successful court challenge to the regional regulations governing the concessions systems.[19] This case demonstrates that successful advocacy may require long-term commitment, monitoring, and follow-up action by competition agencies.

WORLD BANK AND OTHER STUDIES OF THE EFFECTS OF ANTICOMPETITIVE REGULATIONS[20]

The World Bank supports studies that document the high economic costs of regulatory distortions in order to strengthen the hand of public officials who seek to implement the regulatory reform tools provided to them by the OECD and the ICN.

World Bank-sponsored research on anticompetitive regulations covers many countries. "Drawing on a comprehensive set of studies," a 2012 World Bank survey article concluded that regulatory reforms "to increase market competition can improve a country's economic performance, increase business opportunities and firm productivity, and ultimately benefit consumers through usually lower prices for goods and services."[21] For example, according to that article:

- Elimination of Australia's anticompetitive regional policies in electricity and transportation raised the country's GDP by 2.5 percent (with significant drops in retail electricity prices, rail freight rates, and port charges);
- Opening Mexican air transport and routes to low-cost entrants reduced airfares by up to 37 percent on routes served by low-cost carriers;
- Opening retail markets to competition in India yielded an increase in labor productivity of as much as 87 percent;
- Opening the market and eliminating price controls for maize in Kenya produced consumer savings of U.S. $10.1 million a year; and
- Reforming standardization, testing, and phytosanitary regulation for maize increased economic surplus by over $40 million and increased demand for maize seed by between 85 percent and 175 percent from 2005–2008 in Kenya, Tanzania, and Uganda.

Other studies produce even more impressive estimates.[22] At the 2013 World Bank Forum held in conjunction with the ICN annual meeting, the chairman of Australia's Competition and Consumer Commission reported that regulatory reforms beginning in the 1990s raised Australian GDP by $23 billion per year and real consumption by $9 billion ($1,500 per household) per year.[23] And an overview of government and private-sector anticompetitive restrictions presented at the 2014 Forum documented harm to international trade as well as to a variety of input markets in industry, agricultural, and service sectors and discussed potential gains from regulatory relief.[24] For example:

- Allowing one more competitor to enter the Mexican air transport sector led to a 40 percent reduction in airfares;
- Elimination of a Laotian trucking cartel and backhaul restrictions on transport led to a reduction of 30 percent in logistics costs;
- Elimination of the exclusive rights of lawyers to perform certain basic services would reduce overall legal costs in Australia by 12 percent;
- Eliminating monopoly market power in shipping would boost trade volumes by from 6 percent (for the U.S.) to 15 percent (for Latin America); and
- The removal of restrictive regulations on seeds in East and Central Africa led to savings of $49 million for farmers in Kenya, Tanzania, and Uganda between 2000 and 2008.

A growing number of academic articles that focus on international cross-country comparisons across sectors (not just within a sector) are in harmony with the research efforts of the World Bank. In particular, a body of literature finds anticompetitive services regulation "upstream" to be a major source of harm to "downstream" businesses and to the overall economy.[25] Thus, for example:

- A 2011 analysis based on OECD data found that reductions in anticompetitive energy, telecommunications, transportation, and professional services regulations significantly increased the value added, productivity, and export growth rates of service-intensive users;[26]
- In a similar vein, a 2013 study based on data from 15 OECD countries and 20 sectors found clear evidence that anticompetitive regulations in upstream sectors curb multifactor productivity growth downstream and determined that the effect of increasing competition by instantaneously and completely eliminating such regulations would be to increase multifactor productivity growth by between 1 percent and 1.5 percent per year;[27] and
- Consistent with these broad findings, a 2014 study of firm-level data from Spanish manufacturers found that reducing anticompetitive regulation in the provision of upstream services tended to raise the volume of exports of downstream firms substantially.[28]

Anticompetitive product market and licensing restrictions are also quite costly.

- A 2011 study found that product market regulations that restrict competition are associated with lower total factor productivity of firms, with the burden particularly high for firms that are on a path to catch up with the most productive firms in their industry;[29]
- A 2010 study determined that the contribution to productivity growth due to competition spurred by regulatory product market reforms is 12 percent to 15 percent;[30] and
- A 2007 study of occupational licensing restrictions within the United States estimated their cost at between $34.8 billion and $41.7 billion per year and noted that by limiting competition, those restraints decreased the rate of job growth by an average of 20 percent.[31] As the percentage of the American workforce subject to occupational licensing has risen since 2007, it is likely that these welfare costs have risen significantly.[32]

PRODUCTIVITY SIMULATOR: A BROAD MEASURE OF ANTICOMPETITIVE REGULATIONS

Application of sector-specific analyses of anticompetitive regulations requires enormous information demands, creating a difficult obstacle for governments to overcome if they are to identify and quantify all of the anticompetitive regulations harming their economy. This is particularly true for developing countries that are afflicted by significant distortions.

Currently, one of the leading researches on developing a measure of anticompetitive regulations seeks to avoid these complications by developing a broad yet simple metric to assess the impact of market-distortionary anticompetitive regulations, based on a "Productivity Simulator."[33] The Simulator estimates the additional national economic growth that can be generated through far-reaching national regulatory reforms that, to the greatest extent possible, strengthen property rights, liberalize trade, and enhance market-based competitive forces.

The Simulator enables policymakers to understand the scale of distortions in a way that they do not understand them now and to prioritize policy reforms based on the most significant barriers to economic growth. It also allows for relative comparisons of regulatory policy and the burden of anticompetitive regulations among jurisdictions. Nation-specific Simulator scores are currently being compiled. The goal is to give each country a score that reflects the degree to which policy in that area promotes competition that maximizes economic welfare.

The Simulator sheds light on the relative importance of particular regulations on productivity and economic growth.

- With respect to strengthening property rights, the most important factors include intellectual property rights, the cost of enforcement of contracts, the ability to challenge government regulations, and the strength of investor protection.
- For promoting domestic competition, the most important factors include the competitiveness of the labor market, the efficiency of the regulatory promulgation process, and the degree of competition in infrastructure.[34]
- Surprisingly, for international competitiveness, the most important factors are trade facilitation-type issues rather than tariffs and non-tariff barriers. This suggests that during a time when tariffs and NTBs are being reduced around the world, all other factors affecting the ease with which goods flow between countries are becoming increasingly important.

Preliminary estimates based on applying the Simulator reveal the huge economic gains that could be achieved in India (a country regarded as having a very poor regulatory system) if it improved its regulatory performance in several different regulatory categories.[35] Improvement to the highest performance level (the level of the country with the best regulatory record) in a basket of performance categories encompassing freedom to own foreign currency bank accounts, international capital controls, resolving insolvency, intellectual property protection, favoritism in government decision-making, transparency in government policymaking, and a host of doing-business factors (time and cost of getting electricity, the time and cost involved in starting a business, and the time involved in getting construction permits) would raise India's per capita GDP from $1,500 to $3,723—a gain of 148 percent. Improvement in all measures of regulatory quality to the level of the world's most procompetitive regulatory framework would raise India's per capita GDP from $1,500 to $29, 691—a stunning gain of 1,875 percent.

While this "regulatory nirvana" level may be only a theoretical aspiration, the point driven home by the Simulator is that far-reaching regulatory improvements in nations with poor regulatory quality have the potential to create enormous gains in the size of an economy and, thus, in economic welfare.

CONCLUSION

In recent years, substantial research has been devoted to estimating the economic harm of market distortionary regulations: anticompetitive, overly burdensome national regulatory measures that undermine efforts to enhance economic dynamism and growth. Several international organizations (in particular, the World Bank, the OECD, and the ICN) have developed tools to help governments identify and measure the effects of anticompetitive regulations and have urged governments to prioritize the reduction or elimination of these harmful distortions. Most recently, certain researchers have developed a “Productivity Simulator” that allows for broader nationwide assessments of the harm caused by anticompetitive regulations and facilitates interjurisdictional comparisons of the restrictiveness of national regulatory policies.

If governments that are concerned with promoting national economic growth and welfare will take advantage of these new policy tools and initiatives to reform their regulatory structures and phase out anticompetitive regulations, they can advance both economic freedom and prosperity.

ENDNOTES

1. James L. Gattuso and Diane Katz, "Red Tape Rising: Six Years of Escalating Regulation Under Obama," Heritage Foundation *Backgrounder* No 3015, May 11, 2015, http://www.heritage.org/research/reports/2015/05/red-tape-rising-six-years-of-escalating-regulation-under-obama.
2. A 2012 OECD review of research studies concluded that "regulation, when it is not well designed, can stifle economic activities and ultimately reduce economic growth." David Parker and Colin Kirkpatrick, "The Economic Impact of Regulatory Policy: A Literature Review of Quantitative Evidence," OECD *Expert Paper* No. 3, August 2012, p. 38, http://www.oecd.org/gov/regulatory-policy/3_Kirkpatrick%20Parker%20web.pdf (accessed October 7, 2015).
3. For example, the World Bank lists intricate regulation and its arbitrary enforcement as being among the key obstacles to growth in developing countries. World Bank, *World Development Report 2005: A Better Investment Climate for Everyone* (Washington and New York: World Bank and Oxford University Press, 2004). A 2004 research study commissioned by the World Bank concluded that a heavier national regulatory burden reduces economic growth and increases volatility. Norman V. Loayza, Ana Maria Oviedo, and Luis Servén, "Regulation and Macroeconomic Performance," September 2004, http://web.worldbank.org/archive/website01241/WEB/IMAGES/WPS3469.PDF (accessed October 7, 2015). "The World Bank is a vital source of financial and technical assistance to developing countries around the world. We are not a bank in the ordinary sense but a unique partnership to reduce poverty and support development. The World Bank Group comprises five institutions managed by their member countries." More specifically, the World Bank provides low-interest financing and grants to developing countries and offers support to developing countries through "policy advice, research and analysis, and technical assistance." World Bank, "What We Do," http://www.worldbank.org/en/about/what-we-do (accessed October 7, 2015).
4. See generally Alden F. Abbott and Shanker Singham, "Enhancing Welfare by Attacking Anticompetitive Market Distortions," *Concurrences*, No. 4 (2011), pp. 1–5, https://www.ftc.gov/sites/default/files/attachments/key-speeches-presentations/ssrn-id1977517.pdf (accessed October 7, 2015).
5. The OECD is an international research organization that is funded by 34 of the world's wealthier industrialized countries. "The OECD provides a forum in which governments can work together to share experiences and seek solutions to common problems. We work with governments to understand what drives economic, social and environmental change. We measure productivity and global flows of trade and investment. We analyse and compare data to predict future trends. We set international standards on a wide range of things, from agriculture and tax to the safety of chemicals." Organisation for Economic Co-operation and Development, "About the OECD," http://www.oecd.org/about/ (accessed October 7, 2015).
6. The ICN is an informal "virtual network" comprised of most of the world's government antitrust agencies (referred to as "competition authorities") and several hundred voluntary private-sector advisers. It "provides competition authorities with a specialized yet informal venue for maintaining regular contacts and addressing practical competition concerns. This allows for a dynamic dialogue that serves to build consensus and convergence towards sound competition policy principles across the global antitrust community." International Competition Network, "About," http://www.internationalcompetitionnetwork.org/about.aspx (accessed October 7, 2015).
7. Abbott and Singham, "Enhancing Welfare by Attacking Anticompetitive Market Distortions," p. 2.
8. The WTO, which is run by its 161 (as of 2015) member governments, administers major international trade agreements, serves as a forum for trade negotiations, handles trade disputes, monitors national trade policies, and provides technical assistance and training for developing countries. World Trade Organization, "Understanding the WTO: What We Do," https://www.wto.org/english/thewto_e/whatis_e/what_we_do_e.htm (accessed October 7, 2015).
9. See Shanker Singham, U. Srinvasa Rangan, and Robert Bradley, "The Effect of Anticompetitive Market Distortions (ACMDs) on Global Markets," *Concurrences*, No. 4 (2014), pp. 1–16, https://uploads.strikinglycdn.com/files/249882/826d872a-c8a9-4dbd-8f8a-6c673dd57d65/Concurrences%202014.pdf (accessed October 7, 2015). The brief discussion of distortionary European, Indian, and Chinese policies is drawn from this article.
10. See Organisation for Economic Co-operation and Development, "OECD Recommendation on Competition Assessment," http://www.oecd.org/daf/competition/oecdrecommendationoncompetitionassessment.htm (accessed October 8, 2015).

11. Organisation for Economic Co-operation and Development, "Competition Assessment Toolkit," http://www.oecd.org/competition/assessment-toolkit.htm (accessed October 8, 2015).
12. See Organisation for Economic Co-operation and Development, *Competition Assessment Toolkit*, Volume I: Principles, 2007, http://www.oecd.org/daf/competition/46193173.pdf (accessed October 8, 2015); Volume II: Guidance, 2010, http://www.oecd.org/daf/competition/45544507.pdf (accessed October 8, 2015); and Volume III: Operational Manual, 2015, http://www.oecd.org/daf/competition/COMP_Toolkit_Vol.3_2015.pdf (accessed October 8, 2015).
13. Organisation for Economic Co-operation and Development, *OECD Competition Assessment Reviews: Greece*, 2014, http://www.oecd.org/daf/competition/Greece-Competition-Assessment-2013.pdf (accessed October 8, 2015).
14. Ibid., p. 40.
15. For a full description of the Advocacy Working Group's activities and publications, see International Competition Network, "Advocacy," http://www.internationalcompetitionnetwork.org/working-groups/current/advocacy.aspx (accessed October 8, 2015). The following discussion of the Working Group's initiatives is drawn from this resource.
16. See International Competition Network, *Advocacy Toolkit*, Part I: Advocacy Process and Tools, Presented at the 10th Annual Conference of the ICN, The Hague, May 2011, http://www.internationalcompetitionnetwork.org/uploads/library/doc745.pdf (accessed October 8, 2015). "To complement the Toolkit, the AWG has created a Competition Advocacy Postings facility on the ICN website to enable ICN member agencies and non-governmental advisers (NGAs) to post their notes, articles, pronouncements, statements, and messages on competition advocacy matters for wider discussion by the ICN membership, NGAs, competition professionals, scholars, and the general public." Ibid., p. 4.
17. Ibid., p. 21.
18. Ibid., pp. 22–23. The *Advocacy Toolkit* discusses a variety of other case studies as well.
19. See Organisation for Economic Co-operation and Development, Directorate for Financial and Enterprise Affairs, Competition Committee, "Latin American Competition Forum, Session III–Advocacy: Mainstreaming Competition Policy into the Overall Economic Policy and Government Actions in Latin American and the Caribbean," August 18, 2014, http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/LACF(2014)6&docLanguage=En (accessed October 8, 2015).
20. Although the World Bank does not use the term "ACMDs," the regulatory distortions that have been documented in World Bank-sponsored research undermine the competitive process and fall within the definition of ACMDs.
21. Markus Kitzmuller and Martha Martinez Licetti, "Competition Policy: Encouraging Thriving Markets for Development," Note No 331, World Bank Group *Viewpoint*, September 2012, http://siteresources.worldbank.org/EXTFINANCIALSECTOR/Resources/282884-1303327122200/VP331-Competition-Policy.pdf (accessed October 8, 2015).
22. See, for example, World Bank Group, "Pre-ICN Forum 2013," https://www.wbginvestmentclimate.org/advisory-services/cross-cutting-issues/competition-policy/pre-icn-forum-making-markets-work-for-development.cfm (accessed October 8, 2015), and "Pre-ICN Forum 2014," https://www.wbginvestmentclimate.org/advisory-services/cross-cutting-issues/competition-policy/pre-icn-forum-2014.cfm (accessed October 8, 2015).
23. Rod Sims, Chairman, Australian Competition and Consumer Commission, "Australia's Experience Driving Economic Growth Through Competition Policy Reforms," speech delivered at World Bank Forum, "Making Markets Work for Development: A Reform Agenda on Competition," Warsaw, Poland, April 23, 2013, E2%80%99s-experience-driving-economic-growth-through-competition-policy-reforms (accessed October 8, 2015).
24. Martha Martinez Licetti, "Competition Policy: Key for Trade and Competitiveness," presentation prepared for World Bank Pre-ICN Forum, Marrakech, Morocco, April 22, 2014, https://www.wbginvestmentclimate.org/advisory-services/cross-cutting-issues/competition-policy/upload/Martha-Licetti_Pre-ICN_clean.pdf (accessed October 8, 2015).
25. The following examples are merely illustrative.
26. Guglielmo Barone and Federico Cingano, "Service Regulation and Growth: Evidence from OECD Countries," *The Economic Journal*, Vol. 121, Issue 555 (2011), pp. 931–957, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1931357 (accessed October 9, 2015).

27. Renaud Bourlès, Gilbert Cette, Jimmy Lopez, Jacques Mairesse, and Giuseppe Nicoletti, "Do Product Market Regulations in Upstream Sectors Curb Productivity Growth? Panel Data for OECD Countries," *The Review of Economics and Statistics*, Vol. 95, No. 5 (2013), pp. 1750–1768, http://www.mitpressjournals.org/doi/abs/10.1162/REST_a_00338 (accessed October 8, 2015).
28. Mónica Correa-López and Rafael Doménech, "Does Anti-Competitive Service Sector Regulation Harm Exporters? Evidence from Manufacturing Firms in Spain," BBVA Research *Working Paper* No. 14/13, June 2014, https://www.bbvaresearch.com/wp-content/uploads/2014/06/WP-14-13.pdf (accessed October 8, 2015).
29. Jens Matthias Arnold, Giuseppe Nicoletti, and Stefano Scarpetta, "Regulation, Resource Reallocation and Productivity Growth," *European Investment Bank Papers*, Vol. 16, No 1 (2011), pp. 90–115, http://www.eib.org/attachments/efs/eibpapers/eibpapers_2011_v16_n01_en.pdf (accessed October 8, 2015).
30. Sandra Ospina and Marc Schiffbauer, "Competition and Firm Productivity: Evidence from Firm-Level Data," International Monetary Fund *Working Paper* No. WP/10/67, March 2010, https://www.imf.org/external/pubs/ft/wp/2010/wp1067.pdf (accessed October 9, 2015).
31. Adam B. Summers, "Occupational Licensing: Ranking the States and Exploring Alternatives," Reason Foundation *Policy Study* No. 361, August 2007, http://reason.org/files/762c8fe96431b6fa5e27ca64eaa1818b.pdf (accessed October 7, 2015).
32. See U.S. Department of the Treasury Office of Economic Policy, Council of Economic Advisers, and U.S. Department of Labor, *Occupational Licensing: A Framework for Policymakers*, The White House, August 2015 (discussing multiple studies), https://www.whitehouse.gov/sites/default/files/docs/licensing_report_final_nonembargo.pdf (accessed October 7, 2015).
33. This research, which has been developed by Shanker Singham, U. Srinivasa Rangan, Robert Bradley, and A. Molly Kiniry, has not yet been published and is being updated. The following description of the SRAB approach and preliminary results is based on draft materials available to the author of this chapter.
34. For purposes of the Simulator, competition in infrastructure means that there is competitive private-sector delivery of key services used in providing infrastructure such as energy, transportation services, telecommunications, and water supply.
35. The following estimates are derived from Shanker Singham, U. Srinivasa Rangan, Robert Bradley, and A. Molly Kiniry, "Anti-Competitive Market Distortions and Their Impact: A Case Study of India," preliminary draft, September 2015, prepared for the Legatum Foundation.