An Empirical Evaluation of Long Term Advisors and Short Term Interventions in Technical Assistance and Capacity Building

D. Daniel Sokol
sokold@missouri.edu

Kyle W. Stiegert
stiegert@aae.wisc.edu

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D. Daniel Sokol[1] and Kyle W. Stiegert[2]

ABSTRACT

Technical assistance to improve the capacity of regulatory agencies around the world remains a key priority for international aid efforts. Technical assistance is critical to younger antitrust agencies because more effective agencies can protect consumers against anti-competitive conduct. Beginning in the 1990s, the rapid adoption of antitrust laws and development of agencies to interpret and enforce these laws has transformed the competitive landscape in many countries. Indeed, more than half of the countries with an antitrust legal framework have enacted antitrust laws in the past 15 years. Many of the newer antitrust agencies are not as effective as they need to be to improve the well being of consumers and protect against anti-competitive conduct. Consequently, donors have assigned a significant amount of time and financial resources to technical assistance to raise the capacity and effectiveness of these younger agencies. However, quantitative analysis of the impact of this technical assistance remains limited at best. In this article we focus on what appears to be a particularly important part of technical assistance and capacity building—the use of long term advisors (LTA) and short term interventions (STI).

In 2005, the International Competition Network conducted a survey of antitrust agencies that received LTA and STI services from a wide array of donor agencies. We first perform a descriptive assessment of the survey data. We find LTAs to be more effective than STIs in preparing the agency for tackling work they could not have undertaken previously and in confronting cartels. Most LTA and STI services arrived directly from developed world antitrust agencies and lawyers were superior to economists for STI work while economists tend to perform best as LTAs. In a more general empirical framework, we model the effectiveness of LTA and STI interventions using key survey questions about the initial preparation phase, the ability of the interventions to improve internal tactical qualities of the agency, and the ability of the interventions to improve the agency in its strategic mission. We estimate a three equation seemingly unrelated regression system designed to tease out the factors that led to a successful preparation of tactical and strategic technical assistance. The most important findings are related to two structural

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features of recipient antitrust agencies. Our most prominent finding is that recipient agencies absorb LTA and STI services best when the agency head has a rank of minister or higher and/or when agencies had prosecutorial discretion. At the heart of these agency features is the relative power position of the agency in the domestic political and economic structure. Those agencies with a strong power base seem well positioned to receive the current formatted technical assistance involving LTAs and STIs. Donors should focus on modifying the technical assistance to agencies with less power and should push for stronger agency autonomy and authority. A second prominent finding was that bilateral donor relationships did remarkably better in helping the agencies with their strategic mission. Perhaps bilateral LTA and STI perform better because of a better understanding of the political and economic realities these agencies face or because these donors provide aid through developed world competition agencies. Our suggestion is that multilateral donor agencies work hard to overcome deficiencies that their organizational structure presents to recipient agencies. Overall, our analysis of technical assistance efforts in one field of complex regulation (antitrust) may prove relevant to policies of how to make assistance more effective across regulatory fields.

I. Introduction

Technical assistance has been an important part of the international development agenda since the end of WWII to ameliorate poverty and increase economic development. However, in spite of the emphasis and significant expenditures of human and financial resources in technical assistance, quantified studies of the effectiveness of technical assistance and capacity building remain scarce.[3] The lack of quantified studies of technical assistance is particularly troubling given that the success of such programs has been called into question. As a recent Organization of Economic Development (OECD) report concludes, "While a few countries have done well, donor efforts in many countries have produced little to show in terms of sustainable country capacity."[4] In 2005, over 100 countries committed to the Paris Declaration on Aid Effectiveness to improve the quality of the process of development. One imperative identified in policy circles is the need for increased work in developing quantitative work in this area.[5]

We undertake a quantitative assessment of technical assistance and capacity building in antitrust to better inform policy attempts to create more effective use of aid. Antitrust, described as "the magna carta of free enterprise,"[6] is an area in which there has been an explosion of technical assistance globally. This is a function of the rapid increase in the number of antitrust agencies around the world. Beginning in the 1990s, the rapid adoption of antitrust laws (and move to market based economies more generally) has transformed the competitive landscape in many countries. More than half of the countries with antitrust can enacted them in the past 15 years. Many of the newer

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[3]   Guy McMahon, Applying Economic Analysis to Technical Assistance Projects, World Bank Working Paper Series WPS1749, April 1997.

[4]   OECD, The Challenge of Capacity Development: Working Towards Good Practice (2006).

[5]   See e.g., OECD, The Challenge of Capacity Development: Working Towards Good Practice (2006).

[6]   *United States v. Topco Associates, Inc.*, 405 U.S. 596, 610 (1972).

antitrust agencies are not as effective as they need to be to improve the well being of consumers and protect against anti-competitive conduct. Consequently, donors have assigned a significant amount of time and financial resources to technical assistance to raise the capacity of these younger agencies. Just as with technical assistance more generally, in antitrust circles the effectiveness of technical assistance has been questioned.[7] In antitrust, quantitative studies on the effectiveness of technical assistance have been absent from the analysis of how to deploy technical assistance resources effectively in a given antitrust agency. The lack of guidance has the potential to waste significant resources on ineffective technical assistance, and reduce the successful efforts of antitrust agencies. Where antitrust technical assistance has been ineffective, consumers have suffered and economic development has been stymied.

The issue of how to structure antitrust technical assistance has moved to forefront of international antitrust discussions within Congress. In 2003 Congress authorized a comprehensive review of antitrust.[8] The Antitrust Modernization Commission in its 2007 report to Congress recommended that that Congress directly fund antitrust technical assistance through the Department of Justice and Federal Trade Commission, rather than indirectly through USAID.[9] This recommendation on how to implement antitrust law enforcement was made without any guidance from empirical work on the effectiveness of DOJ/FTC technical assistance or the effectiveness more generally of antitrust technical assistance.

In this article we focus on what seems to be a critical part of technical assistance and capacity building—the use of long term advisors (LTAs) and short term interventions (STIs).[10] An empirical analysis of the effectiveness of LTAs and STIs has important law and policy implications as it will allow for better design and implementation of antitrust technical assistance.[11] This analysis also holds potential lessons for effective technical assistance interventions in other fields of economic regulation. Our case study of the effectiveness of technical assistance in a particular field of complex regulation may help

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[7]   Both the OECD and International Competition Network have raised this issue at some of their meetings and the US agencies have produced an important summary of their experiences. A recent Department of Justice/Federal Trade Commission workshop on Antitrust Technical Assistance formalized this rethink in February 2008.
See http://www.ftc.gov/oia/wkshp/index.shtm.

[8]   Antitrust Modernization Commission Act of 2002, Pub. L. No. 107-273, § 11054(h), 116 Stat. 1856, 1857 (2002).

[9]   Antitrust Modernization Commission Report & Recommendations, dated April 2, 2007

[10]   In a previous paper, we undertook a general analysis of antitrust technical assistance. Michael Nicholson, D. Daniel Sokol & Kyle W. Stiegert, "Technical Assistance for Law and Economics: An Empirical Analysis in Antitrust/Competition Policy" in POLITICAL ECONOMY CONSTRAINTS IN REGULATORY REGIMES IN DEVELOPING COUNTRIES (Simon Evenett & Pradeep Mehta eds., 2008) (forthcoming Palgrave-MacMillan press).

[11]   For quite some time, antitrust scholarship has been concerned with empirical studies to address antitrust's effectiveness. See Keith N. Hylton & Fei Deng, *Antitrust Around the World: An Empirical Analysis of the Scope of Competition Laws and Their Effects*, 74 ANTITRUST L.J. 271, 271 (2007) citing Arnold C. Harberger, *Monopoly and Resource Allocation*, 44 AM. ECON. REV. 77 (1954); George J. Stigler, *The Economic Effects of the Antitrust Laws*, 9 J.L. & ECON. 225 (1966); Richard A. Posner, *A Statistical Study of Antitrust Enforcement*, 13 J.L. & ECON. 365 (1970).

to provide guidance in the creation of better practices across technical assistance missions and create more success stories.[12]

In Part II of the article, we provide a background of long term and short term technical assistance and its overall importance to capacity building and improving antitrust agency effectiveness. We also describe the difficulties of measuring "effectiveness" of antitrust. In Part III we describe the process of technical assistance and the complex ways in which knowledge can be created and transferred. Thereafter, we undertake a cost-benefit analysis of both short term and long term technical assistance in Part IV. We discuss the survey that serves as the basis for the data for our empirical analysis in Part V and disaggregate some data regarding LTAs and STIs. In Part VI, we set up our model and provide results, which to our knowledge, are the first set of results that quantitatively measure the effectiveness of long term and short term advisors in any area of regulatory law. Based on our results, we offer conclusions in Part VII.

II.   <u>Background</u>

The term technical assistance has many different meanings. In a survey of the larger technical assistance literature, McMahon offers a number of potential ways to classify types of technical assistance (also know as technical cooperation).[13] We begin with a simple definition of technical assistance activities—those that enhance the individual and institutional capacities of developing countries' antitrust agencies to pursue more effective antitrust casework and policy. LTAs are advisors that spend an extended time period working in-country with a recipient antitrust agency. STIs are technical assistance interventions based on a "discrete set of issues including concentrated programs that simulate investigations of competition cases, training for judges, or other inputs."[14] Work thus far suggests both of these interventions correlate to successful technical assistance.[15]

Both LTA and STI technical assistance have a long history. In biblical times, King Solomon brought in LTAs from the Phoenician city of Tyre to oversee the construction of the Temple in Jerusalem. Similarly, the bible discusses an early successful short term

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[12]   For qualitative work in other areas of law, see Mark A. Drumbl, *Does Sharing Know Its Limits? Thoughts on Implementing International Environmental Agreements: A Review of National Environmental Policies, A Comparative Study of Capacity-Building*, 18 VA. ENVTL. L.J. 281 (1999); David Zaring, *Best Practices*, 81 N.Y.U. L. REV. 294, 350 n.154 (2006); David Zaring, *Informal Procedure, Hard and Soft, in International Administration*, 5 CHI J. INT'L L. 547 (2005); Mariano-Florentino Cuéllar, *The Mismatch Between State Power and State Capacity in Transnational Law Enforcement*, 22 BERKELEY J. INT'L L. 15 (2004); Caroline Lesser, "A Review of Technical Assistance and Capacity Building Initiatives for Trade Facilitation," OECD working paper (2006).

[13]   Guy McMahon, Applying Economic Analysis to Technical Assistance Projects, World Bank Working Paper Series WPS1749, April 1997, 10-15.

[14]   ICN, Assessing Technical Assistance for Competition Policy: Preliminary Results (May 2005), 2.

[15]   Michael Nicholson, D. Daniel Sokol & Kyle W. Stiegert, "Technical Assistance for Law and Economics: An Empirical Analysis in Antitrust/Competition Policy" in POLITICAL ECONOMY CONSTRAINTS IN REGULATORY REGIMES IN DEVELOPING COUNTRIES (Simon Evenett & Pradeep Mehta eds., 2008) (forthcoming Palgrave-MacMillan press).

technical assistance intervention. The book of Exodus recounts how Jethro the Midianite, the father-in-law of Moses, provided technical assistance to advise in the creation of a judicial system for the Israelites, who had relied upon an over-worked Moses to handle all disputes big and small.[16] In the antitrust setting (to our knowledge) the first technical assistance mission took place in 1990 when the US Federal Trade Commission undertook a project to assist the Venezuelan government to help draft the country's competition law.[17] At roughly the same time, after the fall of the Berlin Wall, Poland, Czechoslovakia, and Hungary requested help from the US Department of Justice and the Federal Trade Commission. The US Department of Justice Antitrust Division undertook its first technical assistance mission to Czechoslovakia in 1990 while simultaneously the OECD started organizing technical assistance for the USSR.[18] OECD Eastern European outreach began in 1992. Since then, a number of developed world antitrust agencies, international organizations, lending institutions, development agencies, and private contractors have undertaken a number of antitrust LTA and STI technical assistance missions.

Using the International Competition Network (ICN) 2005 survey of technical assistance recipient agencies, we undertake an empirical analysis of the attributes of what makes for successful STI and LTA technical assistance based on the experience of US and other providers of antitrust technical assistance. In an area that has significant policy implications regarding how scarce financial resources are spent, it is remarkable that there has been a lack of scholarship. Empirical legal scholarship seeks to fill this void.[19] In doing so, it provides policy makers (donors, providers, and recipients of technical assistance) and stakeholders (private lawyers and economists, civil society organizations, academics) with a better grounding of the realities of effective technical assistance and better informs policy decision-making about the costs and benefits of various forms of technical assistance and capacity building.

The reason we examine perceptions of technical assistance effectiveness through a survey rather than actual technical assistance effectiveness is because of the problems with measuring the actual effectiveness of an antitrust agency and as a subset of this question, the actual effectiveness of technical assistance. It is difficult and perhaps impossible to measure the actual effectiveness of an antitrust agency. As such, scholars have yet to develop a quantitative measurement of the effectiveness of antitrust regimes. There are a number of factors that explain why no such measurement has yet emerged. First, such a

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[16] Exodus XVII: 21-22 ("[T]hou shalt provide out of all the people able men…and place such over them, to be rulers of thousands, and rulers of hundreds, rulers of fifties, and rulers of tens…And let them judge the people at all seasons: and it shall be, that every great matter they shall bring unto thee, but every small matter they shall judge: so shall it be easier for thyself, and they shall bear the burden with thee.").

[17] The actual law-writing trip to Venezuela took place in December 1991, more than a year after the first trips to Poland, Czechoslovakia, and Hungary.

[18] See generally, OECD, The United States Experience in Competition Law Technical Assistance: A Ten Year Perspective, CCNM/GF/COMP/WD(2002)20.

[19] Richard L. Revesz, *A Defense of Empirical Legal Scholarship*, 69 U. CHI. L. REV. 169 (2002); Lee Epstein & Gary King, *The Rules of Inference*, 69 U. CHI. L. REV. 1 (2002); Michael Heise, *The Past, Present, and Future of Empirical Legal Scholarship: Judicial Decision Making and the New Empiricism*, 2002 U. ILL. L. REV. 819.

measurement assumes that there is a single "right" way in which to enforce antitrust law. This assumes that an agency's priorities are static and are the same across all agencies. However, such an assumption is not informed by the actual practice of antitrust. Agency priorities shift over time based on economic conditions and the organization of the economy. Agency priorities also are a function of the local conditions in a particular country. Agencies may be limited in what they can do based on the limits of their antitrust law and/or larger legal system.[20] For example, a measurement of agency effectiveness that includes merger control would penalize countries that lack merger control. Moreover, in countries with private rights of action, an agency may not need to spend as many resources against certain types of anti-competitive conduct because private litigants may serve as a backstop for any non-enforcement by the antitrust agency.

Issues of causation limit any potential assessment of what makes an agency "effective." If an agency improves its capacity, it is not clear that this is a result of the technical assistance, norm diffusion of antitrust "best" practices, an increase in agency funding, and/or prestige that allows the agency to hire more or better individuals, a change in agency leadership or larger political economy issues in the country. These factors all work in tandem and it is difficult to isolate any one of them as the cause for the perceived (or actual) improvement of a given antitrust agency.

Even if there were not issues of causation, there is no clear consensus as to what makes for an effective antitrust agency in terms of priorities. For example, one recent U.S. Department of Justice official stated, "Anti-cartel enforcement is our top priority at the Department of Justice, and we believe it should be a top priority for every antitrust agency."[21] Should cartel enforcement (e.g., anti-competitive restraints by competitors regarding price fixing, output restrictions, market allocation, or bid rigging) be the priority for every antitrust agency? That is, are the costs of resources towards enforcement vis-à-vis the payoffs (taking into account the possibility of enforcement errors) in this area likely to be better than in other areas? Let us assume that cartels represent a serious problem in every jurisdiction around the world.[22] The detection and litigation costs may vary across different jurisdictions. Penalties may be different as well. Even if an agency brings a "successful" case, the remedies may be inadequate. Thus, a "success" may lead to under-deterrence because of inadequate remedies.[23]

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[20] On the make-up of antitrust laws across legal systems and what they include, see Keith N. Hylton & Fei Deng, *Antitrust Around the World: An Empirical Analysis of the Scope of Competition Laws and Their Effects*, 74 ANTITRUST L.J. 2 (2007).

[21] Makan Delrahim, "Antitrust Enforcement Priorities and Efforts Towards International Cooperation," Taipei, Taiwan (November 15, 2004) available at http://www.usdoj.gov/atr/public/speeches/208479.htm. See also Gerald F. Masoudi, "Cartel Enforcement in the United States (and Beyond)," Cartel Conference Budapest, Hungary (February 16, 2007).

[22] Frédéric Jenny, *Cartels and Collusion in Developing Countries: Lessons from Empirical Evidence*, 29 WORLD COMP. L & ECON. REV. 1 (2006).

[23] John M. Connor & Robert H. Lande, *How High Do Cartels Raise Prices? Implications for Reform of the Antitrust Sentencing Guidelines*, 80 TUL. L. REV. 513 (2006).

Other potential problems abound. Let us return to the cartel example. In jurisdictions with young antitrust agencies, cartels may operate in the open. The costs of detection of cartels therefore may be low. However, once an antitrust agency in such a jurisdiction wins a number of cases against cartels that operate openly, cartel participants will evolve and become more secretive in their cartel activities. Collusion may move from explicit collusion to the more difficult to detect tacit collusion. Other issues may raise the cost of cartel detection. If there is no antitrust leniency program for cartel participants, this may make additional cartel enforcement very costly.[24] Moreover, if much of the anti-competitive conduct by cartel participants is international in nature, a young agency may not have the expertise or resources to uncover such behavior.[25] Moreover, even if it does, it may not be able to effectively access information from cartel members because the documents may be housed outside the jurisdiction.[26] In such situations, the resources of a young agency might be better spent on other pursuits, such as competition advocacy, vertical or horizontal agreements and/or merger control.[27] Because each of these tasks requires a certain level of human and financial capacity, the determination may be different each year within the same agencies, let alone across agencies in countries of different sizes and levels of economic development.

Another factor that makes it difficult to measure the effectiveness of an antitrust agency is that not all of an agency's work can be effectively quantified. For example, success can be defined as brining the largest number of cases. Alternatively, success may be defined as the highest percentage of successful cases as a percentage of the total number of cases brought by the agency. However, such approaches have significant methodological shortcomings. For example, a measurement that emphasizes the total number of cases brought or even cases successfully brought might reward agencies that are overzealous in their prosecution of conduct.[28] This might lead to situations in that reward errors of mistaken prosecution. Moreover, it might reward agencies that focus on cases of relatively small size and limited anti-competitive impact rather than on cases that have a significant economic impact. More complex cases require the expenditures of additional resources. To illustrate this point, let us examine the Department of Justice during the Reagan era. In the United States, more price fixing cases were brought under the Reagan administration by the Department of Justice than any in any time since Thurmond Arnold's tenure in the Antitrust Division at the Department of Justice in the 1940s.[29] However, the Reagan era is not one thought of as a particularly active one for

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[24] This assumes that sanctions are serious such that there are appropriate incentives to push companies to pursue a strategy of amnesty and/or leniency.

[25] John M. Connor, *Effectiveness of Antitrust Sanctions on Modern International Cartels*, 6 J. INDUST. COMP. & TRADE 195 (2006).

[26] D. Daniel Sokol, *Monopolists Without Borders: The Institutional Challenge of International Antitrust in a Global Gilded Age*, 4 BERKELEY BUS. L. J. 37 (2007).

[27] This is not to suggest a normative prioritization of these other areas for enforcement prioritization. Rather, we merely suggest that there may be other alternatives. Nevertheless, we question the idea that vertical agreements should be a priority for newer agencies. No other area is as ripe for Type I error of mistaken prosecution and every shunned distributor knows how to find the competition agency to make such complaint.

[28] On the limitations of counting the number of cases see William E. Kovacic, *The Modern Evolution of U.S. Competition Policy Enforcement Norms*, 71 ANTITRUST L.J. 377 (2003).

[29] Vivek Ghosal, "Regime Shift in Antitrust," available at SSRN: http://ssrn.com/abstract=1020448.

antitrust enforcement. Indeed, a common perception is that the Reagan era was a period of non-enforcement of U.S. antitrust law.[30]

Other potential measurements of "effectiveness" may be equally difficult. In the area of competition advocacy (advocacy by antitrust agencies against the harmful government restraints on competition), if an antitrust agency is successful in preventing the passage of certain anti-competitive legislation, how does one measure the effect long term or per year of legislation that never passed? For existing legislation that competition advocacy helps to overturn, the direct pro-competitive benefits may be easier to measure. However, indirect benefits may be more difficult to measure (such as the signaling effect of pro-competitive regulation overall to both domestic and foreign investors). Other areas may be particularly difficult to measure quantifiable success such as in the area of judicial training or in terms of creating a "competition culture" in a country. This leads to other types of concerns regarding how to measure effective competition policy. How does one measure the cartel that was never formed or the anti-competitive merger that was never undertaken because of the deterrent effect of enforcement? For these reasons, antitrust remains full of uncertainty.[31]

Because of all of the problems in attempting to quantify effective antitrust agencies, we therefore measure the perceived effectiveness of technical assistance and in particular the perceived effectiveness of technical assistance based on LTAs and STIs.

III.   The Modalities of Technical Assistance

The purpose of technical assistance is to transform an antitrust agency into a more effective one. Technical assistance allows for agencies, their staff and leadership, to learn and assimilate information. Learning is a key to development of institutions.[32] This requires an interactive approach to learning and knowledge.[33] Knowledge is a critical factor in the success of an organization.[34] How to create opportunities for the diffusion of knowledge within an organization so that the organization learns is the challenge for any technical assistance intervention.

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[30]   See e.g., Eleanor M. Fox & Robert Pitofsky, *The Antitrust Alternative*, 62 N.Y.U. L. REV. 931 (1987); Robert Pitofsky, *Does Antitrust Have a Future?*, 76 GEO. L.J. 321 (1987).

[31]   Ken Heyer, *A World of Uncertainty: Economics and the Globalization of Antitrust*, 72 ANTITRUST L.J. 375 (2005). We have a much better sense that competition enhancing policies are good for economic development (though not specifically for competition policy). See e.g., Philippe Aghion & Mark Schankerman, *On the Welfare Effects and Political Economy of Competition-Enhancing Policies*, 114 ECON. J. 800 (2004).

[32]   Heitor Conceição & Francisco Veloso, *Infrastructures, Incentives, and Institutions: Fostering Distributed Knowledge Bases for the Learning Society*, 70 TECH. FORECASTING & SOCIAL CHANGE 583 (2003).

[33]   Charles Edquist, "Systems of Innovation Approaches—Their Emergence and Characteristics," in SYSTEMS OF INNOVATION: TECHNOLOGIES, INSTITUTIONS AND ORGANIZATIONS (Charles Edquist ed., 1997).

[34]   Martin Schultz, "Organizational Learning," in COMPANION TO ORGANIZATIONS (Joel A.C. Baum 2002); Paul Ingram, "Interorganizational Learning" in COMPANION TO ORGANIZATIONS (Joel A.C. Baum 2002).

Organizational theory has direct relevance to antitrust technical assistance as management scholars have studied how organizations absorb knowledge. Specific to technical assistance styled interventions, there is a rich business literature that addresses situations in which a member of management from one part of a multinational corporation travels abroad to provide management and assistance to a foreign subsidiary of the same firm. Within this literature, there are few empirical studies on the effects of technical assistance within the same firm of expatriate managers in foreign subsidiaries.[35] However, more generally, there has been significant work in organizational theory on the transfer of knowledge.

Technical assistance affects experiential learning. An organization learns through collecting experiences via routines.[36] This creates a change in the behavior of the organization.[37] Organizational theory literature has expanded upon this idea to examine routines of learning and responses to experiences.[38] As an organization learns through routine, this process of routine helps to create institutional memory. Institutional memory in turn guides individual and group behavior within the organization.[39]

Another element to institutional learning is knowledge transfer. The successful transfer of knowledge requires cooperation between the provider and recipient of the knowledge. This allows the provider to create new knowledge in the organization that did not previously exist, based on the absorptive capacity of the recipients of the knowledge transfer.[40] Effective learning within organizations that is self-sustaining requires that the learning have been at a sufficient depth and the internal resources to improve on its own.[41] A caveat to organizational learning and one that technical assistance must overcome is that it is difficult for bureaucratic organizations to learn from their errors.[42] The more entrenched a bureaucracy becomes, the more difficult it is for bureaucracies to change their behavior, as a bureaucracy's culture becomes embedded.[43] One question

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[35] Yaping Gong, *Subsidiary Staffing in Multinational Enterprises: Agency, Resources, and Performance*, 46 ACAD. MANAG. J. 728, 728 (2003). One such study is Nakiye Boyacigiller, *The Role of Expatriates in the Management of Interdependence Complexity and Risk in Multinational Corporations*, 21 J. INT'L BUS. STUD. 357 (1990).

[36] Barbara Levitt & James G. March, *Organizational Learning*, 14 ANN. REV. SOC. 319 (1988).

[37] G. P. Huber, *Organizational Learning: The Contributing Processes and the Literatures*, 2 Org. Sci. 88 (1991).

[38] Martin Schultz, "Organizational Learning," in COMPANION TO ORGANIZATIONS (Joel A.C. Baum 2002); Linda Argote & Ron Ophir, "Intraorganizational Learning," in COMPANION TO ORGANIZATIONS (Joel A.C. Baum 2002); Paul Ingram, "Interorganizational Learning" in COMPANION TO ORGANIZATIONS (Joel A.C. Baum 2002); G. P. Huber, *Organizational Learning: The Contributing Processes and the Literatures*, 2 Org. Sci. 88 (1991); Barbara Levitt & James G. March, *Organizational Learning*. 14 ANN. REV. SOC. 319 (1988).

[39] Barbara Levitt & James G. March, *Organizational Learning*. 14 ANN. REV. SOC. 319 (1988).

[40] Michael A. Hitt, Haiyang Li & William J. Worthington IV, *Emerging Markets as Learning Laboratories: Learning Behaviors of Local Firms and Foreign Entrants in Different Institutional Contexts*, 1 MANAG. & ORG. REV. 353 (2005).

[41] Gary Hamel, *Competition for Competence and Interpartner Learning Within International Strategic Alliances*, 12 STRAT. MANAG. J. 83 (1991).

[42] MICHAEL CROZIER, THE BUREAUCRATIC PHENOMENON (1965).

[43] JAMES Q. WILSON, BUREAUCRACY: WHAT GOVERNMENT AGENCIES DO AND WHY THEY DO IT (1989).

that we model in Part VI is whether the age of the antitrust agency affects the ability of the recipient agency to absorb new knowledge in the form of technical assistance.

Knowledge has a number of different components. Each of these components may be transferred in various degrees. As Dolowitz explains, degrees of transfer may include, "copying, which involves direct and complete transfer; emulation, which involves transfer of the ideas behind the policy or program; combinations, which involve mixtures of several different policies; and inspiration, where policy in another jurisdiction may inspire a policy change, but where the final outcome does not actually draw upon the original."[44] This transfer may not work if it is not complete (such as because of a lack of capacity or skill set) or because the transfer is inappropriate given larger political economy issues. We test for the contextualized effects of political economy on knowledge transfer in Part VI.

Trust between the provider and the recipient plays a role in the success of the transfer of knowledge from one to the other.[45] In some cases trust can be built up through an understanding of the local culture on the part of the advisor. Cultural knowledge on the part of an advisor plays a role in the ability to build up the capacity of an organization.[46] As the cultural distance between the two settings increases, this increases the cultural barriers to learning. These barriers make the transfer of knowledge more difficult.[47] This does not necessarily mean cultural similarity as much as the ability of an advisor to fit into the host culture.[48] An inability to provide for a good fit increases the costs of successful knowledge transfer.[49] There are ways to facilitate trust and cultural knowledge even when there may be cultural distance between the providers and recipients of knowledge. A translator, for example, may help to bridge the cultural gap in addition to the language gap in technical assistance in the antitrust or other setting.[50] To account for language and cultural issues in our analysis, we include a language variable in one of our models as a proxy for larger cultural understanding.

The development studies literature also provides insights as to technical assistance dynamics. The literature in this field has begun to embrace the ideas that knowledge is

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[44] David Dolowitz, *Learning from Abroad: The Role of Policy Transfer in Contemporary Policy Making*, 13 GOVERNANCE 5, 13 (2000).

[45] Peter J. Buckley, Jeremy Clegg & Hui Tan, *Cultural Awareness in Knowledge Transfer to China—The Role of Guanxi and Mianzi*, 41 J. WORLD BUS. 275 (2006).

[46] Yongsun Paika & Junghoon Derick Sohnb, *Expatriate Managers and MNC's Ability to Control International Subsidiaries: the Case of Japanese MNCs*, 39 J. WORLD BUS. 61 (2004).

[47] Yaping Gong, *Subsidiary Staffing in Multinational Enterprises: Agency, Resources, and Performance*, 46 ACAD. MANAG. J. 728, 730 (2003).

[48] Sunkyu Juna & James W. Gentry, 2005. *An Exploratory Investigation of the Relative Importance of Cultural Similarity and Personal Fit in the Selection and Performance of Expatriates*,. 40 J. WORLD BUS. (2005).

[49] Yaping Gong, *Subsidiary Staffing in Multinational Enterprises: Agency, Resources, and Performance*, 46 ACAD. MANAG. J. 728, 737 (2003).

[50] Comments by a number of antitrust officials in developed world agencies who spend a considerable amount of time of technical assistance matters suggest that the translators can only do so much in bridging the cultural cap.

complex and can take many forms.[51] This includes an increasing focus on "tacit" or "soft" knowledge that is not codified, versus a traditional focus on "hard" tangible knowledge. The shift to include soft knowledge technical assistance allows for an increasing emphasis on practices that facilitate the creation of new knowledge that facilitates learning rather than project specific knowledge. This process requires that advisors work as "knowledge brokers" to transmit knowledge to new institutional settings.[52]

Critical to the success of technical assistance is the relationship between the donor and recipient. This relationship affects the performance of the technical assistance and of the capacity of the recipient.[53] Donors help to identify the needs of countries and agencies. They then help to determine the appropriate technical assistance policy response to meet those needs. However, successful technical assistance increasingly involves recipients taking "ownership" of the technical assistance, its functions, and priorities.[54] The concept of recipient ownership of technical assistance has become an international norm across regulatory fields. It was embraced in the 2005 Paris Declaration on Aid Effectiveness. Specific to antitrust technical assistance, we have identified the importance of recipient "ownership" of technical assistance.[55]

The ability of technical assistance recipients to take ownership of the technical assistance process is perhaps the most important factor in the ability to craft effective technical assistance.[56] Recipients of technical assistance cannot take ownership of the technical assistance unless the recipient develops the necessary capacity to undertake such policies.[57] One factor that technical assistance must consider is absorptive capacity. This is the capacity of an organization to assimilate knowledge and information that is both new and external to it. After assimilating this knowledge the organization must be able to apply this knowledge.[58] One issue that we assume in this paper is that the donors and recipients together have chosen technical assistance goals that are realistic based on the existing capacity of the agency. Capacity may be a problem that hampers technical assistance. Even if donors and recipients identify certain goals, the capacity at the beginning of the technical assistance might not be available to reach these goals.

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[51]   Gordon Wilson, *Knowledge, Innovation and Re-inventing Technical Assistance for Development*, 7 PROGRESS IN DEV. STUD. 3 (2007).

[52]   Joanna Chataway & David Wield, *Industrialization, Innovation and Development: What Does Development Management Change?* 12 J. INT'L DEV. 803, 803-05 (2000).

[53]   Colin Jacobs, *Institutional Strengthening and Technical Co-operation: Developing a Best Practice Model*, 10 J. INT'L. DEV. 397 (1998).

[54]   Gordon Wilson, *Beyond the Technocrat? The Professional Expert in Development Practice*, 37 DEV. & CHANGE 501 (2006).

[55]   Michael Nicholson, D. Daniel Sokol & Kyle W. Stiegert, "Technical Assistance for Law and Economics: An Empirical Analysis in Antitrust/Competition Policy" in POLITICAL ECONOMY CONSTRAINTS IN REGULATORY REGIMES IN DEVELOPING COUNTRIES (Simon Evenett & Pradeep Mehta eds., 2008) (forthcoming Palgrave-MacMillan press).

[56]   Peter Morgan, *Technical Assistance: Correcting the Precedents*, 2 DEV. POLICY J. 1 (2002).

[57]   OECD, 2005 Development Co-Operation Report (2006) 113.

[58]   Wesley M. Cohen & Daniel A. Levinthal, *Absorptive Capacity: A New Perspective on Learning and Innovation*, 35 ADMIN. SCI. QUART. 128 (1990)(noting that most innovative by organization is as a result of borrowing from external sources).

Technical assistance has not always been assimilated by recipients. The 1960s, with de-colonialization and an emphasis in international development, was a period during which the development community of donors expended significant funds for technical assistance and capacity building. The subsequent critique has been that such efforts often wasted significant funds and that many technical assistance projects resulted in failure.[59] Yet, this critique also emerged in contemporaneous sources. For example, the 1969 Peterson Commission stated quite harshly, "Experience indicates that technical assistance often develops a life of its own, little related either in donor or recipient countries to national or global development objectives."[60] The same critique perhaps is just as valid today.

In some cases larger economic and social factors need to be considered in whether or not there might be easy entry of new (often foreign) competitors. Political economy concerns may be linked to the effectiveness of antitrust technical assistance because these other concerns may limit the ability of antitrust to act within the larger country setting. Countries that have high levels of corruption are ones in which antitrust may have difficulty in addressing anti-competitive conduct because monopolists can buy political protection from corrupt officials. Similarly, antitrust does not perform well in countries that lack macro-economic stability or where there is civil unrest. Specific to issues of microeconomics, a country whose economic system that has quality of both formal and informal institutions for contractual and property rights provides for greater business certainty and investment.[61] We address these political economy factors in our models herein.

A modern legal system is a necessary but not sufficient factor for increased economic development.[62] For example, in Peru a survey reveals that over a third of respondents would not switch from one supplier to another even if a better price were offered by the new supplier because of a concern that whatever contract one might reach with the new supplier would not be enforceable in the Peruvian courts.[63] Similarly, a survey of Brazilian entrepreneurial businesspeople suggests that a lack of faith in the ability of the judiciary stymies growth by 10 percent.[64] A lack of an effective judiciary may limit

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[59]   WILLIAM EASTERLY, THE ELUSIVE QUEST FOR GROWTH: ECONOMISTS' ADVENTURES AND MISADVENTURES IN THE TROPICS (2001).

[60]   Partners in Development: Report of the Commission on International Development (1969), 180.

[61]   Michael Nicholson, D. Daniel Sokol & Kyle W. Stiegert, "Technical Assistance for Law and Economics: An Empirical Analysis in Antitrust/Competition Policy" in POLITICAL ECONOMY CONSTRAINTS IN REGULATORY REGIMES IN DEVELOPING COUNTRIES (Simon Evenett & Pradeep Mehta eds., 2008) (forthcoming Palgrave-MacMillan press).

[62]   Brian Z. Tamanaha, *The Lessons of Law-and-Development Studies*, 89 AMER. J. INT'L L 470 (1995).

[63]   Maria Dakolias, The Judicial Sector in Latin America and the Caribbean: Elements of Reform, World Bank Technical Paper 310 (1997).

[64]   Robert D. Cooter, "The Rule of State Law Versus the Rule-of-Law State: Economic Analysis of the Legal Foundations of Development," in THE LAW AND ECONOMICS OF DEVELOPMENT (Edgardo Buscaglia et al. eds., 1997).

potential competition. It also may limit the ability of an antitrust agency to have its findings upheld.[65]

The law and development field in particular is one in which technical assistance has at times been particularly ineffective. The first wave of law and development occurred in the 1960s. One assumption of the technical assistance of this period was that there was a causal relationship between the development of a common law based legal system and a modern economy. This view suggested that there was only one path to development and it was through the perceived efficiency of the common law. This view proved to be naïve, as it did not account for the role of non-elites and the social, legal, political and economic factors of the developing world countries in which donors attempted such direct transplantation.[66]

Developments in theory changed the conceptual framework for technical assistance by the advent of the second wave of regulatory and legal technical assistance, which began after the fall of Communism. No longer was the state viewed as the vehicle for economic development. Rather, based on the assumptions of New Institutional Economics, the market and market facilitating legal and regulatory institutions would be the engine for growth in the developing world.[67] Under a New Institutional Economics approach, states that operate under the rule of law create the structure and mechanisms by which economic actors can protect their rights.[68] The lack of market facilitating institutions was the cause of the under-development of much of the world. This focus on private sector growth became a mantra for the multilateral lending organizations, such as the IMF and World Bank.[69]

One element that inhibited private sector growth was the scale of government owned firms in the economy. One legislative response to the problem of state owned enterprises (SOEs) has been to privatize these enterprises.[70] During the 1980s and 1990s, countries

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[65]   ICN, Competition and the Judiciary: A Report on a Survey on the Relationship Between Competition Authorities and the Judiciary (2006).

[66]   David M. Trubek & Marc Galanter, *Scholars in Self-Estrangement: Some Reflections on the Crisis in Law and Development Studies in the United States*, 1974 WISC. L. REV. 1062.

[67]   See e.g., DOUGLAS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE, AND ECONOMIC PERFORMANCE (1990); Claude Ménard & Mary M. Shirley, THE HANDBOOK OF NEW INSTITUTIONAL ECONOMICS (2005).

[68]   One element of this is strengthening the judiciary. As this paper addresses an administrative agency, it does not focus on judicial reform. But see Richard E. Messick, *Judicial Reform and Economic Development: A Survey of the Issues*, 14 WORLD BANK RESEARCH OBSERVER 117 (1999); OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM (1985); Robert M. Sherwood, Geoffrey Shepherd & Celso Marcos de Souza, *Judicial Systems and Economic Performance*, 34 Q. REV. ECON. & FIN. 101 (1994).

[69]   Whether or not this new economics based focus for legal development will work or suffer a demise similar to that of the original law and development movement remains an open question. See Julio Faundez, "Legal Technical Assistance," in GOOD GOVERNMENT AND LAW: LEGAL AND INSTITUTIONAL REFORM IN DEVELOPING COUNTRIES 14 (Julio Faundez ed., 1997).

[70]   In many cases, successful liberalization has proceeded with efforts at privatization of SOEs. John Nellis & Nancy Birdsall, "Privatization Reality Check: Distributional Effects in Developing Countries" in REALITY CHECK: THE DISTRIBUTIONAL IMPACT OF PRIVATIZATION IN DEVELOPING COUNTRIES 12 (John Nellis & Nancy Birdsall eds., 2005). These findings support earlier

privatized over 100,000 firms around the world, particularly in Latin America, East Asia, and the former Soviet block.[71] Where privatization did not lead to greater efficiencies, in many cases it was as a result of the failure of the architects to introduce liberalization in conjunction with privatization. Put differently, when privatization failed, it seems to be because of flawed design and implementation.[72] As such, the mechanics of privatization are critical. Anti-competitive conduct may result from a legislative malfunction prior to liberalization. That is, the rules of the game may be set up to the benefit of certain entrenched interests. Alternatively, anti-competitive conduct in privatized sectors may be a legislative malfunction as a political response by interests who are losers in the liberalization process. Antitrust, within a larger competition policy, must address both issues of government and private restraints on trade that harm consumers.

Liberalization on its own may not fully remedy government imposed anti-competitive restraints, if private conduct can limit the affects of liberalization to shield their anti-competitive behavior. Antitrust therefore has played a more important role in this second wave of market based development. Within this new conceptualization of development, antitrust is a necessary tool to limit market failure—in particular monopolization. Antitrust also limits the spread of private restraints on trade in what had previously been SOEs and state facilitated anti-competitive conduct. Yet, the mere existence of an antitrust law does not suggest that the law will be used in an effective manner (or at all). In spite of significant financial and human resources expended in this area, the impact and success in technical assistance and its components (including STIs and LTAs) remains largely unknown.

IV.   Technical Assistance Specific to Long Term Advisers and Short Term Interventions

There are a number of potential problems that antitrust technical assistance might hold that affects both LTA and STI interventions. Technical assistance advisors may tend to provide general antitrust advice that is not localized to the specific political-economy of a country.[73] Antitrust focuses on the formal rather than the informal economy. In some

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empirical studies that suggest that firms that privatized firms outperformed SOEs and increased their efficiency. See Andrei Shleifer, *State Versus Private Ownership*, 12 J. ECON. PERSP. 133, 134-41 (1998); William L. Megginson, Robert C. Nash & Matthias van Randenborgh, *The Financial and Operating Performance of Newly Privatized Firms: An International Empirical Analysis*, 49 J. FIN. 403, 405 (1994).

[71]   John Nellis & Nancy Birdsall, "Privatization Reality Check: Distributional Effects in Developing Countries" in JOHN NELLIS & NANCY BIRDSALL, REALITY CHECK: THE DISTRIBUTIONAL IMPACT OF PRIVATIZATION IN DEVELOPING COUNTRIES 3 (2005). Those privatizations that were pro-competitive addressed the equity concerns regarding the distribution of the benefits of privatization. Id. at 11-12.

[72]   Harry M. Trebing & Sarah P. Voll, *Infrastructure Deregulation and Privatization in Industrialized and Emerging Economies*, 40 J. ECON ISSUES 1, 5 (2006).

[73]   See generally David Dolowitz, *Learning from Abroad: The Role of Policy Transfer in Contemporary Policy Making*, 13 GOVERNANCE 5 (2000). In other situations, a generalized technocratic message may have some initial credibility because it comes from a neutral advisor. Sebastian Edwards, "Establishing Credibility: The Role of Foreign Advisors," NBER Working

countries this may be problematic since the informal economy may play a significant role in economic activity.[74] In other situations, certain antitrust approaches may not transfer well between common and civil law jurisdictions.[75] Yet, in other situations, technical assistance may be ineffective if agency heads do not hold significant positions within government, such as at the minister level.[76] A low rank in government may signal the relative weakness of the agency in its ability to utilize resources or the ability to undertake case selection of its own choosing. An inability of an agency to bring its own cases (because it requires the authorization of another part of government) may limit the effectiveness of technical assistance because each additional approval required for action is a potential point in which agency action may be blocked. A low rank in government may also hinder the ability of an agency to effectuate a meaningful remedy. We test the importance of agency independence and rank of the agency within government in all three models.

Any critique of antitrust technical assistance must address the fundamental issue that scholars and policy makers ignore—do technical assistance interventions choose the appropriate expert for the technical assistance? It may be that experts are not sufficiently competent to provide technical assistance. The wrong people may be chosen for the STI and LTA missions. That is, so-called experts may be the ones who provide the STI or LTA. The limitations of advisors with limited antitrust specific knowledge (or relatively weak knowledge of antitrust based on only a few years of practice in this area) is that such advisors may not themselves have the appropriate level of knowledge to bring to the job to provide assistance to young antitrust agencies. This certainly helps to build up the knowledge of the advisors but it does not offer as much for the recipient agency because agencies get people who themselves are learning on the job and who therefore are less able to transmit specialized knowledge to the agency staff and leadership. Using our data, we explore more fully who these advisors are and what their perceived impact is on the success of technical assistance in Part V.

The quality mismatch may be a function of supply side issues. Some technical assistance may be in countries or regions that high quality advisors are not willing to travel to or reside in for any number of reasons. If the donor chooses an advisor who is not a member of a current antitrust agency, this may open up technical assistance to a professional class of consultants. Some may have very limited experience specific to antitrust, even though they may be experienced in regulated industries more generally or in public administration. These consultants may tend to be relatively weak in their understanding of antitrust and may yield poor results in the quality of their technical assistance intervention. We track whether advisers are members of antitrust agencies in Part V.

Papers 11429 (2005). The lack if understanding of political economy may be more of a problem with STI rather than LTA advice.

[74] Eleanor M. Fox, *Economic Development, Poverty, and Antitrust: The Other Path*, 13 SW. J.L. & TRADE AM. 211 (2007).

[75] On the limitations of legal transplants, see Daniel Berkowitz, Katharina Pistor & Jean-Francois Richard, *The Transplant Effect*, 51 AM. J. COMP. L. 163 (2003).

[76] On the other hand, having the agency head so thoroughly enmeshed in government has some potentially negative ramifications for political independence.

With some donors, funding choices for projects may come not from the headquarters of the organization but rather from the country representative of the organization. Such representatives may not have a good sense of how and when to identify specific opportunities for antitrust interventions effectively or how to select appropriate advisors. This local based needs assessment may reduce the effectiveness of STIs and LTAs, even if the appropriate people are picked for such missions because the mission itself may not be the most appropriate. In other cases, there may be overlapping technical assistance interventions from different donor agencies because of poor communication within the donor community.[77]

A.   Long Term Advisers

With young agencies, governments may look to human resources from abroad to overcome a small domestic pool of human resources from the existing civil service and/or private sector of the country. Governments overcome a limited national pool with long term advisors. There are many ways to distinguish among different types of LTAs. This could be by the type of work provided (legal or economic) or the function that they serve within an agency.[78] By the function of the work, we draw a number of different possibilities. The function of the LTA may be to serve as informal advisors to the agency's leadership in mapping out a strategic vision for the agency in terms of creating enforcement priorities or in terms of day to day operations assistance.

Another way to conceptualize this is between technical assistance that is tactical (project driven) or strategic. In antitrust technical assistance, a project driven function could be to work with staff to improve case handling or competition advocacy. Functions may include training of the staff in investigative techniques, evidence gathering, analysis or litigation. Project driven technical assistance may focus on issues on the mechanics of identifying and bringing successful antitrust cases. This may go to issues of planning and focusing the investigation. It also includes how to best manage evidentiary issues and issues of timing given the procedural constraints of the legal system.

Strategic technical assistance may revolve around issues of which priorities an agency will pursue and how the agency should interact with other parts of the government. This function may include outreach efforts to other administrative agencies or the legislature. The technical assistance outreach might be with non-government stakeholders in antitrust. Such stakeholders include the media, private firm lawyers and economists, consumer groups, and academics. The purpose of the LTA may be to hold a temporary position in which the function of the LTA is to train staff in replacement duties of the LTA for when the LTA departs.

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[77]   Bill Kovacic tells a story of six advisers all sent by different aid agencies to work with the antitrust authority in Indonesia where there was no clear sense of division of labor or even if the missions were the same.

[78]   For a general taxonomy on the types of possibilities of types, roles, and functions of LTAs, see John M. Cohen, *Foreign Advisors and Capacity Building: the Case of Kenya*, 12 PUBLIC ADMIN & DEV. 493 (1992).

Who seeks technical assistance is an important question. Is it the agency staff or the agency leadership? If an LTA is used as an informal advisor for the agency leadership, this suggests that the function of the LTA is to provide strategic assistance in terms of the goals of the agency. If the advice is case specific, the LTA must interface with the agency staff to assist on case specific work, a tactical approach of technical assistance. Our models in Section VI address the different demands of technical assistance—strategic, tactical and preparatory.

We operate under the assumption that the agency leadership wants the LTA. The motivations for seeking technical assistance may be different within the antitrust agency. The agency management may want capacity building within the agency and help to navigate difficult strategic and tactical issues of undertaking antitrust policy and casework. Alternatively, the motivation for seeking a LTA by the agency management may be some combination of receiving money and prestige from international sources. Agency leadership may not be interested in the actual advice. This may be especially true when economically sound antitrust advice may have public choice ramifications on the agency because the antitrust advice may lead to the closure of inefficient factories or harm politically powerful interests.[79]

The incentives of the staff may be more aligned with an LTA. They want to improve their capacity. This may be the person who has more experience handling cases than the rest of the agency combined. This may also be a person who may be able to help them in the future outside of the hierarchy of their own culture and agency.

1. Positive Effects

Where there is a staff that does not have high levels of knowledge and experience in certain tasks, an LTA can overcome the knowledge gap and jump start the types of work that an agency might otherwise not be able to undertake.[80] Because an LTA is embedded within an agency, an LTA may respond rapidly to local changes.[81] A short term intervention, in contrast, may require months of planning but at the time it arrives, it may be that there is another issue that has developed that is of a higher priority that needs immediate attention. The increased use of LTAs in antitrust follows a trend in moving more operations into the field more generally among aid providers. The World Bank has moved more of its operations in-country and outside of its Washington headquarters. Likewise, USAID has a significantly more of its staff abroad than in previous years.

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[79]   On public choice in antitrust see FRED S. MCCHESNEY & WILLIAM F. SHUGHART II, THE CAUSES AND CONSEQUENCES OF ANTITRUST: THE PUBLIC-CHOICE PERSPECTIVE (1994).

[80]   The US experience in technical assistance suggests that LTAs tend to be the most effective form of antitrust technical assistance. William E. Kovacic, *Antitrust and Competition Policy in Transition Economies: A Preliminary Assessment, in* ANNUAL PROCEEDINGS OF THE FORDHAM CORPORATE LAW INSTITUTE 537 (Barry Hawk ed., 2000) ("The best assistance programs are anchored by the presence of long-term advisors who reside in-country and work directly with the host country's policy officials").

[81]   The degree to which an LTA is embedded varies greatly based on the receptiveness of the recipient agency.

Because an LTA has the ability to contextualize an agency's needs and priorities, the LTA can call in the right STIs for specific needs of an agency. A second advantage of LTAs is that they have the flexibility to wrap themselves around problems as they come up. In contrast, short term missions may not provide an adequate amount of time to make significant progress on an issue. Moreover, should an issue take an unexpected twist, unlike STIs, an LTA need not constantly seek approval to focus on different tasks and when to request additional assistance in the form of STIs. Finally, because of longer tenure at an antitrust agency, an LTA will gain a greater opportunity to develop trust and credibility with the agency than an STI advisor would. Our findings in Section V support these theoretical claims about the importance of LTAs.

2. Negative Effects

The LTA may provide technical assistance. Indeed, the quality of technical assistance may be high but the long term effectiveness may be low if there is technical assistance without a focus on capacity building. A focus of the LTA may be on the execution of a strategic goal or tactical goal. This will put a premium on these skills rather than on transferable skills to improve agency capacity. Solutions to technical issues that allow for quick fix issues have easier to reach (and easier to measure) results. This may skew technical assistance interventions towards these programs rather than on more difficult issues of more structural change.[82]

Staff may prefer to have LTA interventions because the LTA makes the staff look good. However, success through measurable outputs may not allow for the development of indigenous capacity. A related concern is that LTAs may not have the appropriate incentives to train the staff and improve the staff's capacity. A successful LTA is one in which a similar LTA is not needed in the future.[83] The approach of the LTA may be different if s/he knows that s/he is training his/her successor. The LTA may want to do continued work in the country. If so, the LTA will become irrelevant if the capacity improves too much.

LTAs may focus on donor goals rather than recipient agency goals if the two are not the same. This could create a disconnect between the LTA and the recipient agency. For example, goals may diverge when the recipient of antitrust technical assistance begins to investigate a firm from the donor's country. Does the technical assistance relationship lead to effective monitoring by the donor of the LTA or STI? What incentives does accountability (or lack thereof) create? In an effort to reduce the agency problem, donors may focus on efforts with more project related tangible gains. Tangible gains may result in less effective technical assistance than learning based technical assistance.

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[82]   James Smith, *Context-bound Knowledge Production, Capacity Building and New Product Networks*, 17 J. INT'L DEV. 647 (2005).

[83]   Yaping Gong, *Subsidiary Staffing in Multinational Enterprises: Agency, Resources, and Performance*, 46 ACAD. MANAG. J. 728, 730 (2003).

LTAs may not have any background on the politics and economics of the country in which they are providing assistance. They may lack any previous international experience. This may lead them to propose projects or strategic practices based on the system that they know, rather than on one that fits the needs of the agency in which they provide assistance.[84] The LTAs do not necessarily have a true view of the costs-benefit calculation of pursuing certain policies because they do not have to live in the country when their LTA assignment is finished. A case that would be good to bring from an antitrust enforcement perspective might, on the other hand, have significant negative repercussions on the funding and power of an antitrust agency because of public choice concerns. The lack of local knowledge also increases the adaptation time necessary to provide advice that the agency leadership and staff might require. This can increase the cost of having an LTA because the time spent is not spent efficiently.

B.   Short Term Interventions

1.   Positive Effects

Some interventions need not be long term. There may be discrete tasks that can be undertaken in just a few days that require a short term intervention. STIs may be effective in situations in which the donor and recipient are in agreement as to the appropriate assessment of the agency, its strengths and weaknesses. A STI can serve a diagnostic purpose to gage the skills and temperament of the agency staff and leadership. Alternatively, a short term intervention may highlight the need for and create legitimacy the better to push for an LTA. STIs tend to be effective when there is a well defined problem that requires specialized skills. For example, a competition agency analyzing its first merger in the banking industry might benefit from an STI that includes a merger specialist in the banking sector. The most effective STIs will be those that build technical skills and capacity in an agency on discrete issues. Such interventions need to understand far less political economy concerns because of the tactical focus of such technical assistance interventions. STIs that might be particularly effective might be those that address issues of investigative techniques rather than ones of strategic issues, such as which priorities to pursue.[85]

2.   Negative Effects

STIs may not be effective because an agency may not express its needs for STIs very well. Consequently, the wrong experts may be sent over, or an intervention may spend too much or too little time on certain issues. For example, an agency may identify what it believes to be an exclusive dealing issue, whereas after the first day of a three day mission an advisor may discover that the underlying problem for the agency is actually a predatory pricing issue. Similarly, a cartel expert may be sent over under the mistaken

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[84]   John Merryman, *Comparative Law and Social Change: On the Origins, Style, Decline and Revival of the Law and Development Movement*, 25 AM. J. COMP. L. 457 (1977).

[85]   In some cases STIs may be used in regional competition policy settings (e.g., ASEAN, the Andean Community) to help to facilitate better inter-agency cooperation and harmonization of better practices.

belief that the issue is one of price fixing, whereas the actual anti-competitive conduct is a group boycott. For STIs, the advisor may assume that an agency's skill set is too great or too low based on the material that he/she has prepared. This leads to an ineffective use of presentation time.

STIs have the potential to provide general policy prescriptions that are not localized to deal with the specifics of a country and its political economy.[86] It is what development economist Albert Hirschman termed the "visiting economist syndrome." In this syndrome, well known professors provided classroom truths during short term interventions that did not show an understanding of local situations.[87] An additional problem for STIs is the potential lack of an opportunity to provide follow up assistance. This may lead to general confusion on the part of the recipient agency as to whether and how to implement the advice of the STI. Similarly, slow reaction time may be an issue. By the time donors launch an STI intervention, the issue may no longer be relevant.

This need to follow up may be the result of the STI's failure to understand the recipient agency's larger legal environment. This includes the scope of antitrust legislation, the role of the judiciary, and the context for obtaining non-agency approval to undertake enforcement. In countries where there is significant corruption within government, the need to request approval from other parts of government to undertake enforcement serves as a way for corrupt officials to extract rents. For these reasons, we find in Section V below that recipient agencies are less satisfied with STIs.

Like with long term advisers, the inability to contextualize may cause advisors for STIs to point to their country's experience. For example, an advisor from the United States may point an agency to the US experience to get to a result even when the context is quite different. This holds true more often on procedure than on substance, and is more a problem with lawyers than economists because of focus by many lawyers on the legal system and its procedural rules. The lack of context may also affect the prioritization of STI topics. Prioritization of an STI based on a developed world model may not be appropriate, as the recipient agency and country may have more concentrated industries and more highly interventionist economies. The ties between regulators and newly privatized firms may be particularly strong.

V.   Discussion of the Survey

In 2004/2005, the International Competition Network (ICN), an international organization comprised of the world's antitrust agencies, which also receives participation from non-governmental stakeholders (private lawyers and economists, professors, and civil society groups) undertook a project in the ICN Competition Policy Implementation working group to provide a better sense of the effectiveness of technical

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[86]   Jonathan Zeitlin, "Introduction," in GOVERNING WORK AND WELFARE IN A NEW ECONOMY: EUROPEAN AND AMERICAN EXPERIMENTS (Jonathan Zeitlin & David Trubek eds., 2003).

[87]   Ana Maria, Bianchi "Hirschman and the Visiting-Economist Syndrome" (May 31, 2006). Available at SSRN: http://ssrn.com/abstract=920109.

assistance.[88] In a year long project, the ICN surveyed its member agencies on antitrust technical assistance. The questionnaire contained over 1,000 questions on various aspects of technical assistance, including the status and assessment of project design and implementation. Forty-nine agencies responded to two broad surveys: the agency and the general surveys. Additionally, the ICN collected sub-survey data if the agency engaged a LTA advisor or participated in a STI intervention by one or more advisors.[89]

Before we introduce our formal model of the effectiveness of advisors (whether long term or short term) in the technical assistance process, we first disaggregate some of the data. Among 49 agencies surveyed, 17 agencies had an LTA while 29 agencies had an STI. On the general effectiveness of LTAs and STIs, we examined the following question: *Has the Agency undertaken enforcement cases after the beginning of this project that it could not have undertaken without the technical assistance received during the project?:*

In the case of LTA, Figure 1 illustrates that 47.06 percent of respondents answered yes, that the presence of the LTA had assisted recipient agencies to undertake work that they could not have undertaken previously. An additional 47.06 percent answered "no" while 5.88 percent did not respond to the question.

*Figure 1: New Types of Enforcement Due to LTAs*
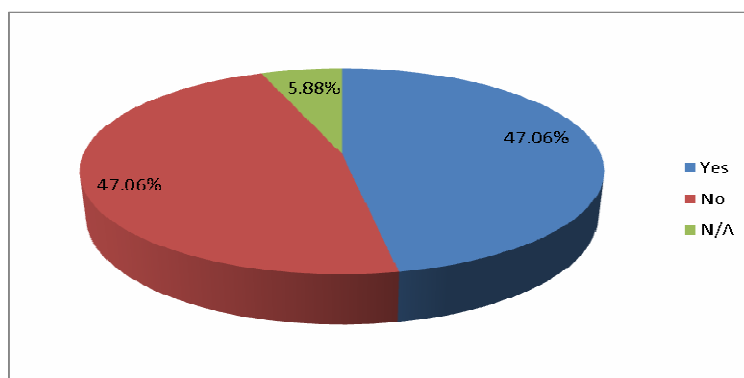
In the case of STI, Figure 2 illustrates that only 13.79 percent of technical assistance recipients found that the STI allowed them to take on new cases that they could not have undertaken previously. In contrast, 82.76 percent answered that STI intervention was ineffective in that it did not allow agencies to take on new kinds of cases. These findings

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[88] On the dynamics of the ICN see D. Daniel Sokol, *Monopolists Without Borders: The Institutional Challenge of International Antitrust in a Global Gilded Age*, 4 BERKELEY BUS. L. J. 37, 105-116 (2007).

[89] There are potential problems with the use of perception based surveys as to both validity and the potential bias that they may introduce. See CHRISTIANE ARNDT & CHARLES OMAN, USES AND ABUSES OF GOVERNANCE INDICATORS (2006); Marcus J. Kurtz & Andrew Schrank, *Growth & Governance: Models, Measures and Mechanisms*, 69 J. POL. 538 (2007).

support the general theory that LTAs may be more effective in creating increased capacity for young antitrust agencies.

Figure 2: New Types of Enforcement Due to STIs
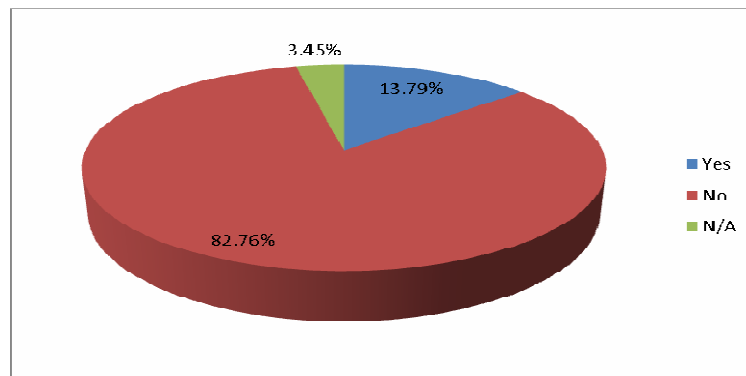
Next, we break out the types of cases that agencies have undertaken as a function of the technical assistance provided. Figure 3 shows the types of anti-competitive practices that technical assistance sought to overcome: cartel agreements, non-cartel horizontal agreements, vertical agreements, and abuse of dominance/monopolization. Excluding unavailable responses, abuse of dominance has the highest percentage of technical assistance intervention at 31.25 percent. The next highest was vertical agreements at 25 percent, with cartel agreements and non-cartel horizontal agreements at 21.88 percent.

Figure 3: Types of Cases
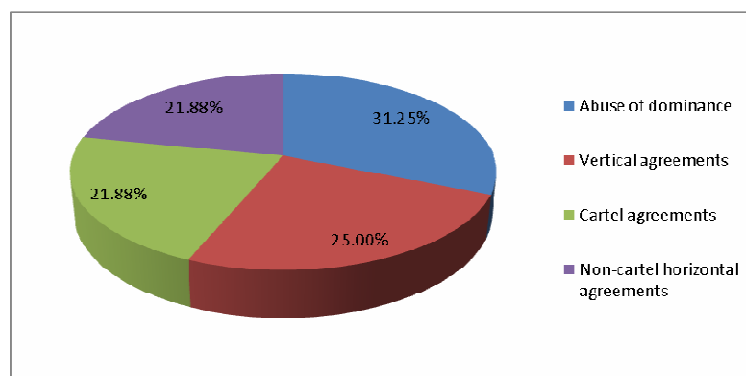
Though not shown graphically, Figure 4 can be broken down into both LTA and STI components. In the case of LTA interventions, the breakdown for types of cases was abuse of dominance at 40 percent followed by the remaining three types of cases evenly split at 20 percent each. In the case of STI interventions, abuse of dominance made up 44 percent of the cases, vertical and non-cartel vertical agreements each made up 22 percent

of the cases, and cartel agreements made up the remaining 11 percent of the type of cases undertaken.

To evaluate the effectiveness of each of these types of interventions, the survey used a scale of 1 to 7. A score of 1 implies that in spite of the technical assistance, there was no improvement in the ability of the agency to undertake the case. A response of 7 implies that the technical assistance was very effective in the ability of the agency to undertake the case. We wanted to understand how recipients perceived the effectiveness of each type of technical assistance. In each type of case, the agencies' assessment of the ability to address this conduct as a result of the technical assistance received showed relative improvement. Table 1 identifies this improvement:

Table 1: <u>Agency Improvement by Type of Conduct</u>

Types of cases	Average	The percentage of responses at or above a score of 5
Cartel agreements	4.84	44.90
Non-cartel horizontal agreements	4.84	55.10
Vertical agreements	4.56	48.98
Abuse of dominance	4.88	55.10

Figures 4 and 5 identify the educational backgrounds of LTAs and STIs respectively. LTAs and STIs have similar educational backgrounds. The highest percentage of LTAs and STIs have law backgrounds (53.85 percent and 44.44 percent for LTAs and STIs respectively) followed by economics (23.08 percent and 33.33 percent. for LTAs and STIs respectively). Next are advisors with joint law and economics degrees (15.38 percent and 9.26 percent for LTAs and STIs respectively). The educational backgrounds of the remainder of advisors were unknown. Of interest is that none of the advisors had a public administration background.

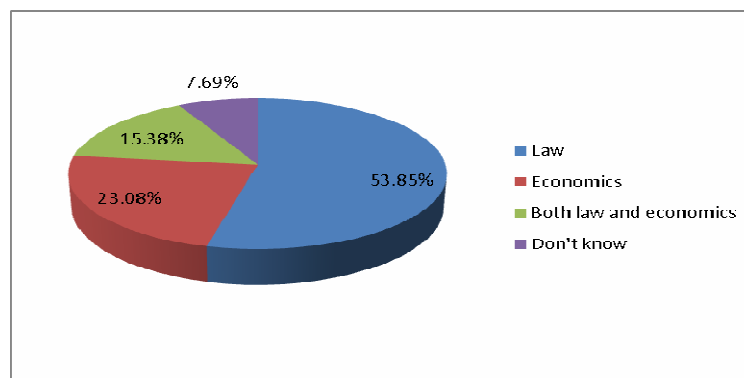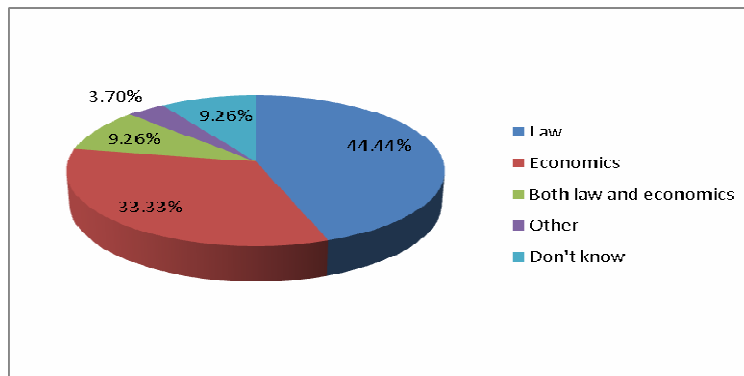*Figure 4: Educational Background of LTA*

Figure 5: Educational Background of STI

What remains unclear is what percentage of lawyers and economists had a background in competition law or competition economics. We get at this answer by examining the origin of the LTA and STI. Of LTAs, 71.43 percent came to the recipient agency from competition agencies. Of the remainder, 14.29 percent came from law school faculties, 7.14 percent from economics departments or business school faculties and 7.14 percent from private firms. The breakdown looked a bit different in terms of STIs, which may account for why STIs seemed to be less effective. A smaller percentage of STIs came from competition agencies (61.54 percent). The next highest number of STIs originated in law school faculties (14.29 percent), followed by economics departments or business school faculties (9.23 percent), multination lender or multinational organizations (6.15 percent), private firms (6.15 percent) and not available (3.08 percent).

We evaluated the accomplishments of TAs by a variety of questions concerning how satisfied agencies were with the technical assistance. To simplify, we concentrated on three overall evaluations on both the LTA and STI survey: (a) the overall quality of the LTA/STI component; (b) the overall quality of the advisors themselves; and (c) the overall impact of the LTA/STI component on the effectiveness of the agency at fulfilling its mission or objectives. Agencies answered the questions by using a scale of 1 (very dissatisfied) to 7 (very satisfied). We calculated the averages of each response. We classified all evaluations by the educational background of LTA/STI.

Figure 6: The Average of the Overall Evaluations of Technical Assistance Providers (Law)
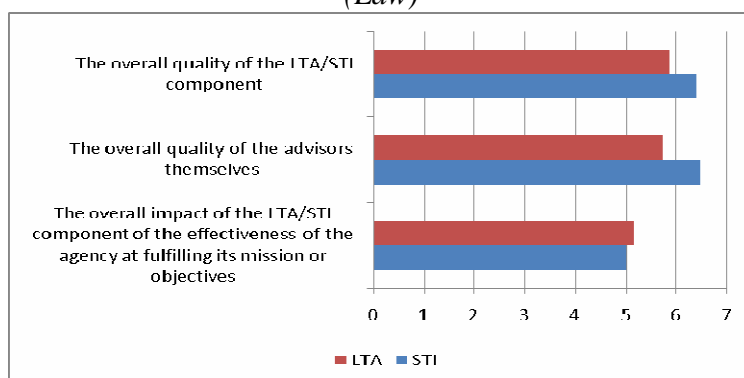
Figure 6 shows that for LTA and STI providers whose educational background is law, agencies are more satisfied with STI than LTA interventions in the overall quality of the component and advisors. In contrast, the overall impact concerning the effectiveness of the agency at fulfilling its mission or objectives shows a higher LTA evaluation than STI.

Figure 7: The Average of the Overall Evaluations of Technical Assistance Providers (Economics)
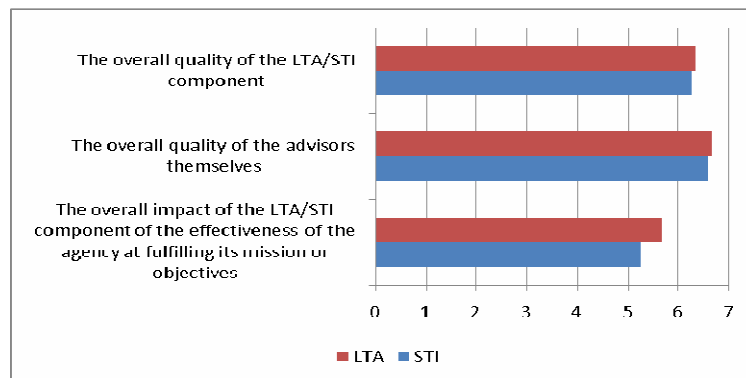

Figure 7 illustrates that recipient agencies are more satisfied with LTA than STI providers who have a background in economics.

VI.   Model and Results

Based on the numerous survey responses targeting several aspects of the technical assistance service, out model focuses on three key areas of performance observed in the LTA and STI surveys: the preparation phase of the intervention (P), the tactical support that technical assistance provided (T) and the strategic support that technical assistance provided (S). The research used to analyze STI and LTA advisors was developed from a 3-equation framework. We constructed the dependent variable for the preparation phase (P) as the average response from the following five questions (1 strongly disagree to 7 strongly agree):

- The goals and objectives of the intervention were clearly articulated.
- The activities of the advisor(s) were appropriate for the agency's age and capacity.
- Agency had influence in selecting the advisor(s).
- Agency had influence in choosing the timing of the intervention.
- Agency had influence in drafting the terms of reference for the intervention.

We constructed the dependent variable for the effectiveness of the intervention as it pertained to tactical training (T) from survey questions that deal principally with the intervention's assistance in addressing key internal functions of the agency. The variable

was calculated as the average response from the following four questions asked about the responder's level of satisfaction (1 strongly dissatisfied to 7 strongly satisfied):

Intervention's work in writing manuals of investigative and analytical techniques.

- Intervention's work in drafting new regulations and internal procedures.
- Intervention's work in conducting internal workshops/staff training sessions.
- Intervention's work in helping the agency handle new cases or violations.

We constructed the dependent variable for the effectiveness of the intervention as it pertained to <u>strategic training</u> (S) from survey questions that deal principally with the intervention's assistance with higher ranked agency officials, helping the agency to achieve its larger mission and to interact in the legal and governmental community. The variable was calculated as the average response from the following four questions asked about the responder's level of satisfaction (1 strongly dissatisfied to 7 strongly satisfied):

- Advising senior agency officials.
- Conducting external conferences.
- Improving the enforcement success of the agency.
- Improving the quality of the decisions rendered by the agency.

A model of intervention effectiveness could certainly be complex in structure and involve many elements that describe the agency, the intervener, the general economy, the political conditions, and the cross effects among these factors. However, our survey dataset is very limited. The total number of surveys addressing STI and LTA advisors was 38. Of those, 34 were useable: four were dropped because of large amounts of missing data. Thus, it was important that the model be parsimonious in structure, and that it be constructed using strategies leading to improved efficiency of the estimators. On the positive side of the ledger, the survey asked the same precisely worded questions to respondents about both LTA and STI advisors, which allowed us to construct a grouped set of data and control for the mode of intervention using a binary variable (MODE) set equal to 0 when the LTA advisor was used and 1 when the survey was about a STI intervention. As we see below, MODE was not significant in any equation, which suggests the respondent's answers about STI and LTA were of roughly the same scale and thus combining the surveys from each group was an acceptable strategy.

One must also be cautious about using survey opinion data to explain the intervener effectiveness measures described above. As is the case in most surveys, the answers to most of the performance questions are correlated and do not correspond well to a strict causal relationship as prescribed by classical hypothesis testing. Using the opinion data on the right side leaves the model results susceptible to significant endogeneity bias that might be extremely difficult to manage.[90] Therefore, when we used survey data as explanatory variables, we chose only those that describe an agency or donor

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[90]   For a defense of this approach regarding endogeneity, see Edward L. Glaeser, Rafael LaPorta, Florencio Lopez-de-Silanes, and Andrei Shleifer, *Do Institutions Cause Growth?*, 9 J. ECON. GROWTH 271 (2004).

characteristic and also relied on extraneous data when possible. Although more complex analyses are possible when extensive data are available, it should not be presumed that a simpler approach yields weaker outcomes. As antitrust styled technical assistance moves forward in the years ahead, heuristic decision guidelines are likely to be honed and styled around fairly simple ideas. As we show below, the results from our analysis can help in shaping that process.

We modeled the P, S, and T equations using Zelner's seemingly unrelated regression (SUR) technique. It is well-known that efficiency gains are possible from the SUR approach when the error terms from each equation become more correlated while the matrix of explanatory variables becomes less correlated. These opportunities for efficiency gains informed the reduction approach selected for the analysis. In particular, we ran each of the P, T, and S models in a single equation least squares environment, using the complete set of variables, which are discussed. We subsequently dropped variables with p-values above 0.80 from each equation to seek a more parsimonious system and to introduce less correlation in the system matrix of explanatory variables. We dropped one variable entirely, average tenure of agency head, because it was highly correlated with the agency age variable. These reduced equations were entered into the SUR system.[91] To reduce the parameter set further, we evaluated potential restrictions that the parameters of variables common to each equation were the same. The F-test that the parameters for three of the variables (Mode, Agency Efficiency, and Agency Age) were the same across each equation could not be rejected. Thus, our final results are presented with those cross-equation parameter restrictions in place. The parameters from two other variables, RANK and AUTH, were statistically different across equations and restrictions were not applied in those cases. The system estimated for this project is:

$$P = \alpha_0 + \alpha_1 MODE + \alpha_2 AE + \alpha_3 AGE + \alpha_4 PS + \alpha_5 RANK + \alpha_6 AUTH + \varepsilon_1$$
$$T = \beta_0 + \beta_1 MODE + \beta_2 AE + \beta_3 AGE + \beta_4 RQ + \beta_5 RANK + \beta_6 AUTH + \beta_7 LANG + \varepsilon_2$$
$$S = \delta_0 + \delta_1 MODE + \delta_2 AE + \delta_3 AGE + \delta_4 CC + \delta_5 RANK + \delta_6 AUTH + \delta_7 GNIPC + \delta_7 DONOR + \varepsilon_3$$

where the restrictions $\alpha_i = \beta_i = \delta_i$ for $i = 1, 2, 3$ are imposed. The error structure of the SUR system allows contemporaneous correlation between the error terms in each equation. These subtle cross-equation connections derive the term "seemingly unrelated," which allow for more efficient standard errors relative to the case of running each equation in a standalone manner.

The model for the preparatory phase included a 2005 World Bank indicator for political stability (PS). PS measures the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means. The tactical equation used the World Bank indicator for regulatory quality (RQ) and the strategic equation used the indicator for country corruption (CC). RQ measures "the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector

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[91] Additionally, another candidate variable (average term of the agency head) was highly insignificant in all of the stand-alone regressions and was dropped from the system entirely.

development" while CC measures the extent to which there is corruption within government. Because of fairly high pair-wise collinearity among these indicators, we could only introduce one per equation. We selected each on theoretical grounds and the CC indicator was chosen over a fourth variable (government effectiveness) because CC performed better in the regression. All variable symbols and descriptions can be found in Table 1. Variables AGE, AUTH, RANK, LANG, and DONOR come from the ICN survey. AGE is the age of the antitrust agency, defined by the year that the "agency was actually established". AUTH is whether the agency has prosecutorial discretion. RANK is a variable that measures whether the head of the antitrust agency has a rank of "minister or higher" within government. This variable is a measurement of the relative importance of antitrust within the survey respondent's country. The LANG variable measures whether the adviser spoke an official language of the recipient agency. DONOR refers to whether the donor for technical assistance was a bilateral source (e.g., USAID) or a multilateral source (e.g., World Bank).

These variables capture characteristics of the agency and should not be biased by the success or failure of the assistance program. Agency efficiency arrives from the World Economic Forum's World Development Indicators. Specifically, we use the data that measures the perceived effectiveness of countries' antitrust systems. As noted earlier, there is no objective way to measure the effectiveness of an antitrust agency. Consequently, we use this subjective measurement. We used gross national income per capita (GNIPC) data collected by the World Bank among its World Development Indicators. We estimated the iterated SUR system with restriction with STATA 9.0 software.

The regression results appear in Table 2. The Chi-Squared test for each equation easily rejected the null hypothesis that all parameter estimates are jointly equal to zero. This implies that the variables chosen in each equation describe the different survey responses better than if we simply looked at their means. The R-squared results suggest forcefully that the survey responses are reasonably well described. The parameter estimates for the restricted variables (included in each equation and restricted to be of the same value) reveal important findings. The MODE variable was highly insignificant, which implies that no identified systematic difference or bias exists between the survey responses for LTA advisors and the survey responses for STI advisors. The result supports the decision to combine the survey responses in the manner we selected. Agency efficiency (AE) was statistically insignificant and positive while the agency age (AGE) was negative and insignificant. Though we do not have the support of statistical significance, the results may imply that older and more dysfunctional agencies could not successfully absorb technical assistance services.

Instead of enumerating each of the results from each equation, we highlight the major findings that track across the system. Key important results emerged from the related findings with RANK and AUTH. Agencies with a high ranking agency head vis-à-vis the country's political structure (e.g., an agency head with a ministerial rank) and the ability to choose and pursue its own cases found the technical assistance interventions more useful in general than when these characteristics were not present. Furthermore, the

marginal impact of RANK was quite large and statistically significant in the tactical and the strategic equations. When the agency head was ranked as minister or higher (RANK=1), the effect on tactical and strategic interventions was to increase the average of the grouped questions by approximately 1.0. The ability to choose cases (AUTH=1) improved the preparatory phase and tactical intervention but had no effect on the strategic component. It seems that agencies with this characteristic have a stronger internal core, and therefore can see the benefits of improving the inner workings of the agency in general and in preparing for the technical assistance.

Each of the World Bank indicators (PS, RQ, and CC) offered important insights about the success of the intervention.[92] Not surprisingly, where there was less country corruption the antitrust agency perceived the interventions to improve the strategic component of the agency. More political stability created better conditions in preparing for the intervention. Finally, in countries with well-structured regulatory quality correlated with more intra-agency improvements.[93]

Two remaining variables used in the model provided additional insight. The agency did downgrade the effectiveness of the LTA or STI interventions when there was a language barrier. Although LANG did not make it into the two of the equations, the language barrier was present in developing Tactical technical assistance support. This seems quite reasonable given the extensive day-to-day training that would be necessary in providing tactical services. Technical assistance donors should carefully consider the limitations present from language barriers. Language barriers were not observably present when assisting in the more strategic components, working with agency heads as opposed to staff suggests that local translators were able to communicate effectively to achieve the mission. Finally, DONOR (1 if bilateral) was highly significant in explaining positive strategic intervention. It seems that the technical assistance funded by bilateral donors did a better job than did multilateral donors. This suggests that nations with natural political, institutional, and philosophical ideals may better assist nascent competitions agencies than can donors with broader mandates. Young agencies may be more willing

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[92] The World Bank Governance indicators are aggregate indicators that combine a number of sources. For a methodological defense of the use of these aggregate indicators see Daniel Kaufmann, Aart Kraay & Mastruzzi, Massimo, "Governance Matters III: Governance Indicators for 1996-2002" World Bank Policy Research Working Paper No. 3106 (2003) at 8-12; Daniel Kaufmann, Aart Kraay & Mastruzzi, Massimo, "Worldwide Governance Indicators Project: Answering the Critics," World Bank Policy Research Working Paper No. 4149 (2007). Because the data measured is by its nature subjective (such as corruption) there are no "objective" methods of measurements that we could use. We have avoided the more controversial measurements of the World Bank's Doing Business project, which make a number of assumptions of how law interacts with business. For a critique of the Doing Business variables see, Kevin E. Davis and Michael B. Kruse, *Taking the Measure of Law: The Case of the Doing Business Project*, 32 L. & Soc' Inq. 1095 (2007); Benito Arrunada, *Pitfalls to Avoid when Measuring the Institutional Environment: Is Doing Business Damaging Business*, 35 J. COMP. ECON. 729 (2007).

[93] We considered the Heritage Index freedom variable as a replacement to the RQ and CC variables. In either case, no additional insights were attained from the freedom index and the World Bank indicators were retained for presentation.

to make structural changes when the donor is from a nation that has fostered long-term trust.[94]

VII.   Summary and Conclusions

Since the global movement to more liberalized markets began and countries enacted competition laws and created antitrust agencies to support these market based reforms, there has been significant technical assistance in the area of antitrust. Consequently, donors have assigned a significant amount of time and monetary resources to technical assistance to raise the capacity of these younger agencies. Just as with technical assistance more generally, in antitrust circles the effectiveness of technical assistance has begun to be questioned by donors and agencies during a period of increased antitrust technical assistance. Quantitative studies on the effectiveness of technical assistance have until recently been absent from the analysis of how to deploy technical assistance resources effectively in a given antitrust agency. Some of this technical assistance and capacity building has taken the form of LTA or STI. The lack of guidance has the potential to waste significant resources on ineffective technical assistance and reduce the successful efforts of antitrust agencies.

In this paper, we conducted a descriptive assessment of a survey of antitrust agency technical assistance and employed cross-section regression analysis of competition agencies that engaged a STI or LTA advisor as part of a technical assistance program. We found LTAs to be more effective than STIs in preparing the agency for tackling work they could not have undertaken previously and in confronting cartels. Most LTA and STI services arrived directly from developed world antitrust agencies and it was found that lawyers were superior to economists for STI work while economists tend to perform best as LTAs. Specifically, we estimated a three equation seemingly unrelated regression system designed to tease out the factors that led to a successful preparation in advance of the intervention, what led to success in offering tactical services to the agency, and what led to success in offering strategic services to the agency. Tactical services were defined as those that improved the inner workings of an agency, while strategic services were defined as those that assisted the agency to fulfill its broader mission. Interestingly, agency age and agency efficiency rankings were not significant in explain survey responses.

One overriding result from the modeling exercise has to with the receiving agency structure and its ability to absorb technical assistance in its current form. *When the agency head was ranked as minister or higher and when the agency could pursue its own caseload, LTA and STI services were more effectively absorbed.* Having a ranking head statistically improved the survey responses for both the tactical and structural parts of the LTA and STI. The ability to pursue a caseload improved the responses in the preparatory and tactical phases. These results seem quite plausible and we encourage donors and providers of technical assistance to consider this dimension in setting formats for future

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[94]   We also considered a modified version of the DONOR variable. In particular, we changed the EU donor response from multilateral to bilateral. The regression results were not materially altered except that the RQ variable was no longer significant.

LTA and STI. At the heart of these agency features is the relative power position of the agency in the domestic sphere of political, social, and economic activity. Those agencies with a strong power base seem to receive the current formatted technical assistance as addressed by interventions and advisors. Thus donor agencies should focus on modifying the technical assistance to agencies with less power and should also push for stronger agency autonomy and authority in carrying out their respective missions.[95]

A second prominent finding was that bilateral donor relationships did remarkably better in helping the agencies with their strategic mission. Many possible scenarios are suggestive of this finding. Perhaps bilateral LTA and STI perform better because of a better understanding of the political and economic realities these agencies face and because the providers of such aid are competition agencies themselves. Countries with similar political, institutional, and philosophical ideals may better assist nascent competitions agencies than can donors with broader mandates. Perhaps bilateral donors have previously established greater levels of trust, which is a necessary condition for real change to occur or have fewer agency cost problems. Our suggestion is that multilateral donors look to the bilateral setup for assistance to understand and overcome deficiencies that multilateral organizational structure presents to recipient agencies.

While the results from this study are interesting, we expect the findings to be viewed with a good deal of caution. The dataset was small (34 observations) and surveys across different regions, languages, and cultural norms probably have considerable noise present. We used a standard reduction method, paid great attention to the parsimony principle, and employed successfully three cross-equation restrictions in order to improve the efficiency of the system. A larger dataset could have allowed us more flexibility in exploring other modeling arrangements such as considering interaction terms or broadening the scope of the analysis. However, in light of these shortcomings, the model performed surprisingly well and provides a significant learning tool for improving the efficacy of the rapidly emerging network of competition agencies worldwide. Overall, our analysis of technical assistance efforts in one field of complex regulation (antitrust) may prove relevant to policies of how to make assistance more effective across regulatory fields.

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[95]   These findings resonate with work outside of antitrust that suggest that in other areas of regulation, an independent agency seems to increase social welfare. Martin A. Rossi. & Antonio Estache, "Regulatory Agencies: Impact on Firm Performance and Social Welfare," World Bank Policy Research Working Paper No. 4509 (2008); Brian Levy & Pablo T. Spiller, *The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulation*, 10 J.L. ECON. & ORG. 201 (1994); Pablo T. Spiller, *Institutions and Regulatory Commitment in Utilities Privatization*, 2 INDUST. & CORP. CHANGE, 387 (1993); Giandomenico Majone, *Nonmajoritarian Institutions and the Limits of Democratic Governance: A Political Transaction-Cost Approach*, 157 J. THEO. & INST. ECON. 57 (2001).

Table 1: <u>Variable Names</u>

Symbol	Descriptor	Equation(s)
MODE	=1 for STI advisor(s), =0 for LTA advisor(s)	P T S
AE	Agency Efficiency	P T S
AGE	Function age of agency	P T S
RANK	=1 head ranked minister or higher, 0 o/w	P T S
AUTH	=1 agency pursues own caseload, 0 o/w	P T S
PS	World Bank Political Stability Indicator	P
RQ	World Bank Regulatory Quality Indicator	T
CC	World Bank Country Corruption Indicator	S
LANG	=1 Advisor fluent in language, 0 o/w	T S
GNIPC	National Income per capita	S
DONOR	=1 bilateral group of donor assistance; =0 o/w	S

Table 2: <u>Regression Estimates</u>

```
-------------------------------------------------------
Equation        R-sq   Chi2   P-value
-------------------------------------------------------
P: Preparation  0.25   15.37  0.0176
T: Tactical     0.34   17.39  0.0150
S: Strategic    0.24   23.32  0.0015
-------------------------------------------------------
```

Restricted Variables (common to all equations)
```
-------------------------------------------------------
 Variable       Coefficient    Std. Err.
-------------------------------------------------------


MODE            0.120          0.292
AE              0.187          0.195
AGE             -0.065         0.046
-------------------------------------------------------
```

preparation equation
```
PS              0.296          0.162*
RANK            0.260          0.409
AUTH            0.658          0.251**
CONST           4.590          0.854**
-------------------------------------------------------
```
tactical equation
```
RQ              0.588          0.242**
RANK            1.036          0.365**
AUTH            0.449          0.277*
LANG            0.601          0.297*
CONST           3.682          0.801**
-------------------------------------------------------
```
strategic equation
```
CC              0.592          0.060*
GNIPC           0.001          0.001
RANK            0.867          0.398*
AUTH            0.256          0.214
DONOR           0.617          0.230**
CONST           3.89           0.881**
-----------------------------------------------------------------------
```
* (**) significant at the 90% (99%) level or higher.