Economic Growth and Food Security:
Overlooked Opportunities at the Local, National, and International Level

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Executive Summary

How can CIDA foster sustainable economic growth and guarantee food security, two of its three priority areas, in developing and middle-income countries? In this paper, we focus on three types of institutions: at the national, enterprise, and international levels. In each case, we identify overlooked opportunities where CIDA could improve.

We first focus on the judiciary, an institution essential to supporting economic growth according to CIDA. We show that this claim is not decisively supported by the theoretical or empirical literature. Evaluating the impact of CIDA’s legal and judicial projects on judicial outcomes, as well as economic outcomes such as investments, contracts, access to justice, and poverty, is thus critical to establish the desirability of these projects, and what works and what does not. However, we indicate that CIDA’s impact evaluations do not use the appropriate counterfactual, making it difficult to say whether CIDA should be doing more or less in this regard. We provide practical guidelines on how to evaluate the impact of CIDA projects, and build evidence for future policy implications.

Second, we focus on business development strategies, which CIDA puts at the center of its efforts to stimulate economic growth, but which also have implications for increasing food security. Micro, small and medium enterprises face market integration challenges due to new standards for quality, food safety, and social and environmental sustainability. We suggest the need for business development strategies that connect economic and social dimensions, which CIDA projects typically address as separate sectors. In rural areas and the informal sector, business survival and growth have links to an often-overlooked aspect of food security: how food safety affects malnutrition. Improving the hygiene and sanitation among micro and small enterprises and rural smallholders involved in food production can both benefit public health outcomes within the country, and improve access to local and foreign markets. Furthermore, businesses in developing countries also require more support to upgrade production processes as required by current private and public environmental regulations. We suggest that CIDA could use a cluster approach to increase the connections between its social and economic projects as a means of furthering CIDA’s goals for achieving food security and strengthening private sector businesses.

The third section considers the issue of food shortages, from the point of view of international trade. Given its role in providing food aid, CIDA holds a privileged position from which it can bring attention to overlooked issues in trade that increase food price volatility. These include the gap between bound and applied tariff rates, which increases unpredictability, and countries’ reliance on export taxes precisely when food prices rise. Offering food aid in exchange of even hortatory country statements to restrain from imposing export taxes would go a long way in decreasing food price volatility. The third claim is that, with the Doha trade round on hold, most trade liberalization today occurs through litigation. And what keeps developing countries from using litigation to gain market access is not a lack of market power, but a lack of legal capacity. The WTO’s Advisory Center addresses this issue, yet it remains a low-priority area for CIDA and DFAIT. Framing legal capacity as a means of achieving developmental goals, CIDA would benefit from increasing its funding of this low-cost, high impact means of helping developing countries gain market access.
Executive Summary

Recommendations

- No policy recommendation can be formulated with respect to CIDA’s legal and judicial projects considering the dearth of evidence.

- Evaluating the impact of CIDA’s legal and judicial projects on judicial and economic outcomes with an appropriate counterfactual is critical to judge CIDA’s actions.

- Increase support for upgrading food safety, quality, environmental and social practices among micro, small and medium enterprises.

- Use the cluster approach to focus attention on enterprises in related activities to better address the connections and complementarities between business competitiveness, food security, and social and environmental improvements.

- Support local enterprise cluster development by encouraging complementary investments in the same geographical area that connect education, infrastructure, environment and private sector growth, instead of isolated sector projects.

- Take a stance on and bring attention to policies that increase food price volatility, such as binding overhang.

- Make food aid during food shortages conditional on hortatory country statements pledging restraint from the imposition of export taxes.

- Increase funding of the WTO Advisory Center, which builds legal capacities of developing and middle-income countries.
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Introduction

CIDA has established three priority themes to concentrate its efforts and increase its aid effectiveness: food security, securing the future of children, and stimulating sustainable economic growth. Given CIDA’s priorities, a relevant question is how to foster economic growth in developing and middle-income countries? This is the common question motivating this policy brief, which collects the suggestions of three McGill University faculty members from as many different fields: business management, economics, and political science. As such, our findings rely on a wide spectrum of scientific literatures and methodologies, yet are driven by a common objective.

We aim to build on the existing strengths and priority areas of CIDA, focusing especially on two of CIDA’s three priority areas: sustainable economic growth and food security.4 We also strive to present low cost, high impact initiatives, which leads us to focus on commonly overlooked issues within CIDA’s priorities. The policy brief proceeds in three sections, spanning the domestic setting, the enterprise level, and the international arena. Throughout, our focus is on institutions, which are the “rules of the game in a society,” or “the humanly devised constraints that shape human interaction” (North 1990), and that have been identified in the literature as fundamental explanations for disparities in economic growth (Acemoglu et al., 2005).

One example of such institutions that has been identified by CIDA as critical for sustainable development is the judiciary. As CIDA claims, the judiciary “supports economic growth by ensuring a reliable, stable, and predictable system of laws and

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regulations that can protect investments, contracts, and other business interactions.” As such, CIDA has been actively engaged in legal and judicial reforms. In our first section, we will ask whether CIDA should be doing more or less on this front. We will review the existing theoretical and empirical literature that looks at this claim. In fact, we will show that the evidence is inconclusive. Evaluating the impact of the CIDA legal and judicial projects on “investments, contracts, and other business interactions” is thus critical to confirm CIDA’s efficacy in supporting sustainable growth. Unfortunately, one cannot draw any conclusions from the available impact evaluations undertaken by CIDA (described in this section) for two reasons: the lack of an appropriate counterfactual, and the lack of attention to relevant outcomes. To really answer the question of whether CIDA should be doing more or less in terms of legal and judicial reforms, we suggest a simple overlooked opportunity: randomizing the assignment of programs. We provide practical guidelines on how to do so in the context of legal and judicial reforms, but our point is more general: impact evaluations should be undertaken for all other CIDA projects.

Section 2 addresses institutions affecting enterprises, which links to CIDA’s strategies for promoting growth and achieving food security. Market integration increasingly involves meeting new rules, or standards, for quality, food safety, and social and environmental sustainability. These institutions pose significant challenges to producers from developing countries who must build capabilities to produce safe products with environmentally and socially responsible practices. This creates the need for business development strategies that connect economic, environmental, and social dimensions, which have been typically addressed as separate sectors. This is an

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opportunity for CIDA to strengthen its efforts to integrate environmental and social improvements into its strategy supporting private sector businesses. Moreover, CIDA could support businesses to improve the safety of food products as part of its strategy to increase food security through better health and nutrition. In rural areas and the informal sector, business survival and growth have links to an often-overlooked aspect of food security: focusing on how food quality and safety affect malnutrition. The claim made here is that international food standards provide a useful benchmark that highlights the deficiencies in matters of hygiene and sanitation among micro and small enterprises and rural smallholders involved in food production. Support to meet these benchmarks can benefit both public health outcomes within the country, and improve producers’ access to local and foreign markets. Improved market access, in turn, facilitates economic growth. In addition, businesses in developing countries also require more support to upgrade production processes as required by current private and public environmental regulations. Along similar lines, Section 2 also demonstrates how increasing the connection between social and economic projects is a means of furthering CIDA’s goals with regards to food security and business development.

The third section maintains the focus on food security, this time considering the issue of food shortages, from the point of view of the international trade regime. The claim here is that CIDA has a role to play not only in intervening once food crises occur, but also in working to prevent these crises, and decreasing their severity. This section identifies three issues that limit the ability of international trade to act as a hedge against volatility in crop yields. The first is the uncertainty flowing from the gap between bound and applied tariffs for middle-income countries, especially in agriculture, which acts as a
tax on trade. The second is the lack of country commitments on export taxes, which are relied on when food prices reach a peak level, and significantly contributes to these price increases. Given its role in providing food aid, CIDA has a privileged position from which it can bring attention to, and take a stance on, these often-overlooked issues, since they bear directly on the likelihood of food crises. In this way, CIDA should push for even hortatory country commitments not to resort to export taxes in return for food aid, as the latter is offered precisely when export taxes grow likely. Finally, and in a way that considers the flip side of the food standards addressed in Section 2, in a trade regime where negotiation is largely on ice, liberalization continues to move forward through litigation. One of the areas with the greatest potential for liberalization through litigation concerns the food standards that are often employed by wealthy countries as import barriers. Building the legal capacity of middle-income countries by increasing contributions to the WTO’s Advisory Center, which provides legal resources to middle-income countries, has heretofore been a low priority of CIDA and DFAIT. Yet it constitutes a low-cost, high impact means of helping these countries improve their access to foreign markets when such access is impeded by opaque trade barriers such as standards.
Section 1: The Judiciary and CIDA

“Helping to strengthen governance institutions and practices” is a cross-cutting theme of CIDA’s action. The judicial system is one such institution. CIDA states that “a predictable legal system with fair, accessible, and effective judicial institutions is essential for the protection of citizens against the arbitrary use of state authority or lawless acts by others. It also supports economic growth by ensuring a reliable, stable, and predictable system of laws and regulations that can protect investments, contracts, and other business interactions. In many developing countries, weak legal institutions and the lack of rule of law endanger development and contribute to poverty. Further, the legal exclusion of the world's poor - who have little access to legal protection of their rights or livelihoods - perpetuates poverty throughout the developing world.”

To promote the rule of law, CIDA disbursed $50M in 2010-2011 alone towards “Legal and Judicial Development”. This represents 1.2% of total CIDA international assistance (at 3,591M$ in 2010-2011). The CIDA website lists 60 operational, 17 terminating, and 25 closed “rule of law” projects.

This section will address the question as to whether CIDA should be doing more, or less, with respect to judicial reforms. To answer this question, we will first review the theoretical and empirical literature to show that there is no definitive evidence to date on the causal impact of the judiciary on sustainable economic growth. Considering the lack of evidence, but the massive investments that are being made by CIDA towards judicial

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projects, it is thus imperative to evaluate the impact of each CIDA project, not only on the judiciary’s performance, but also on “investments, contracts, and other business interactions, economic growth, and poverty”, which are the likely impacts of the judiciary according to CIDA. All CIDA projects are of course evaluated by an external auditor who determines through debriefing with stakeholders and accounting verification if the money was spent on what the project initially said it would spend money on. But in this paper, we are concerned with impact evaluation, not accounting evaluation.

We thus review in our second part the 14 terminating and closed projects focusing on judicial reforms that are available on CIDA’s website, and the seven country evaluation reports that contained information on judicial programs. We find that out of these 21 projects, only 9 present some concrete results, e.g. number of trained personnel. Out of these 9 projects, only 3 look at judicial outcomes, but with no counterfactual. In the absence of a counterfactual, it is impossible to say what would have happened without CIDA’s program, and thus to evaluate CIDA’s impact. Out of these 3 projects, only one looks at the ultimate beneficiaries, i.e. people receiving legal aid, and their perception of the judiciary. None of these evaluations look at investment, contracting behaviour, poverty or sustainable economic growth. We thus conclude that it is impossible to say with certainty whether CIDA should be spending more or less on judicial reforms based on the available evidence. Our only recommendation is to complement the accounting evaluations that are already being done with impact

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evaluations on the ultimate beneficiaries using randomized counterfactuals, following the 2004 CIDA evaluation guide\textsuperscript{11} (p.45). This is imperative to discover what works and what does not, and allocate CIDA’s resources efficiently. We provide seven guidelines on how to do so.

\textbf{1.1 Does the Judiciary Affect Economic Growth?}

\textbf{1.1.1 The Theoretical Evidence}

The key function of the judiciary is to secure property rights and enforce contracts. This may in turn foster investment and entrepreneurship, and contribute to economic growth (North, 1990). Well-functioning judiciaries also reduce the opportunistic behaviour of borrowers; creditors might respond to this strategic behaviour by increasing the availability of credit (Jappelli et al. 2005), which would further stimulate entrepreneurship and growth. Finally, efficient judiciaries that swiftly punish law violations may improve entrepreneurs’ confidence in their property rights, reduce the need for private protection, and attract them to the official economy (Johnson et al., 2000).

Theoretically, however, it is unclear whether the judiciary really matters for growth. Alternative arrangements, such as informal sanctions in social networks, or reputation in repeated interactions, could equally contribute to cooperation among economic agents, and economic growth (Greif, 1993; Dixit, 2003). For example, Greif

\textsuperscript{11}http://www.acdi-cida.gc.ca/inet/images.nsf/vLUImages/Performancereview5/$file/English_E_guide.pdf. The 2004 CIDA evaluation guide states that “a credible evaluation methodology is one that directly ties results to the investment made, thereby eliminating other explanations. The challenge lies in determining causal inferences”. The evaluation guide goes further, highlighting randomized experiments as the first evaluation technique that should be used: “Experimental or randomized designs try to ensure the initial equivalence of comparison groups by administratively creating them through random assignment.”
(1993) describes the 11th century Mediterranean trade between the Maghribi traders. In the absence of any formal judicial system, the traders were at risk of embezzlement of their cargo by intermediary agents. They thus resorted to a multilateral punishment strategy, whereby the offended merchant would write a letter to all other traders in case of embezzlement by an agent. Despite the absence of a formal judicial system, the Mediterranean trade was sustained for a long period. As Acemoglu and Johnson (2005) argue, individuals often find ways of altering the terms of their formal and informal contracts to avoid the adverse effects of weak contracting institutions.

To determine whether the judiciary affects economic growth in practice, it is thus imperative to empirically evaluate the impact of judiciaries on economic outcomes.

1.1.2 The Empirical Debate

The Earlier Literature

The earlier literature often exploited spatial variation in the quality of the judiciary to identify its effect on economic activity. Knack and Keefer (1995) find that countries with greater rule of law, as judged by a panel of business experts, have higher economic growth. Jappelli et al. (2005) find that Italian provinces with longer durations of civil trials, as well larger stocks of pending civil trials per inhabitant, also have fewer loans granted to domestic companies. Cristini et al. (2001) relate differences in judicial efficiency across Argentinean provinces to the size of provincial credit markets. Pinheiro and Cabral (2001) perform a similar analysis (and attain similar results) with data on Brazil. Lambert-Mogiliansky et al. (2007) relate differences in judicial efficiency across Russian regions to the performance of firms that reorganized following a bankruptcy law.
Endogeneity

However, this empirical literature is plagued with endogeneity issues. The first problem is reverse causality. Richer countries can afford better judiciaries; therefore, economic development may be the cause, not the consequence, of better judiciaries. The second issue is omitted variable bias. Better rule of law often comes with other better institutions, which may have a direct impact on economic development. Disentangling the causal impact of the judiciary from these other institutions, and thus formulating policy implications about the desirability of the rule of law for a country's economic development, is impossible without a clear identification strategy.

The More Recent Literature

To address this concern, five more recent papers all attempt to find a treatment group with better judiciaries than in a control group, ideally for exogenous reasons. Chemin (2009a) uses the piecemeal implementation of a judicial reform in Pakistan. To reduce the enormous backlog of court cases, Pakistan enacted a judicial reform entitled the “Access to Justice Programme”, which was conducted by the Asian Development Bank in 2002. Case-flow management techniques were taught to civil and criminal judges in 6 pilot districts out of 117, with the explicit objective of facilitating rapid case disposal. Chemin (2009a) found higher cases disposal, more law and order, higher entrepreneurial rates and access to credit in these pilot districts as opposed to the rest of the country after the reform had been implemented. Chemin (2012) uses the unequal geographic implementation of the 2002 Code of Civil Procedure Amendment Act, enacted in India to facilitate speedy disposal of civil suits. Some State High Courts had
already enacted some of the amendments contained in this reform a long time ago. This spatial variation in the implementation of the reforms is used to identify the effect of court speed on firms’ behaviour. Using data on small firms, Chemin (2012) finds that the reform led to fewer breaches of contract, encouraged investment, and facilitated access to finance. Similarly, Chemin (2009b) uses 94 amendments that complicate judicial procedures enacted by some States in India between 1971 and 1996 to find that these amendments are associated with longer trial duration and have adverse consequences on credit markets, agricultural development, and manufacturing performance. Visaria (2006) examines the effect of tribunals on loan repayment delinquency using a difference-in-differences strategy based on two sources of variation (the monetary threshold for claims to be eligible for these tribunals and the staggered introduction of tribunals across Indian states). She finds that the establishment of tribunals reduces delinquency in loan repayment by between 3 and 11 percent. In the cross-country literature, Acemoglu and Johnson (2005) first find that common-law countries have faster and fairer judiciaries than civil-law countries. Rather than comparing countries with a better or worse judiciary, they then compare common-law to civil-law countries. Through this technique (called an instrumental variable strategy), and contrary to the above findings, they find that contracting institutions have in fact no impact on economic performance.

**Non-Random Program Placement**

Beside the contradicting results from this literature, a common concern to all these papers is the non-random program placement of reforms, policies and institutions, which may invalidate their results. In Chemin (2009a), pilot courts in Pakistan were not selected
randomly. In fact, “the selection process considered the judges’ standing within the legal community, their willingness to participate in an experimental programme, their level of judicial experience and the leadership their superiors would provide for them during the project's duration” (p.116). These select judges may have improved their performance even in the absence of the program. Nor were the six pilot areas selected randomly. Project officials note that, “in order to maximize the effective delivery of project resources to focusing on the major problem of delay, it is proposed to focus on those courts where delay is most substantial and chronic, that is Peshawar, Lahore and Karachi” (p.116). But these very same urban areas may have better economic growth independently from the program. It is very hard in these circumstances demonstrate a causal impact of judicial reforms. Similarly, in Chemin (2012) and Chemin (2009b), some States may have implemented amendments earlier because they are simply better on other dimensions. In Visaria (2006), tribunals were not set up randomly in India, but rather in select locations that may have experienced a similar economic growth in their absence. In Acemoglu and Johnson (2005), common-law countries did not become such by accident, but rather have other characteristics that may directly be related to their economic growth.

In sum, due to the non-random program placement that is pervasive in this literature, and the contradicting results, there is still no conclusive empirical evidence about the causal impact of judiciaries and judicial reforms on economic growth.

1.1 **Impact Evaluation of CIDA Judicial Projects**

Considering the lack of theoretical and empirical evidence supporting the claim made by CIDA that judiciaries support sustainable economic growth, it is imperative to
evaluate the causal impact of CIDA projects not only on judiciaries’ efficiency, but also on beneficiaries’ use of the judiciary and economic outcomes, such as poverty, investment, entrepreneurship and growth. This could justify spending more, or less, on judicial reforms. Additionally, this would generate important policy recommendations about what works and what does not.

CIDA is actively engaged in evaluating their projects. All projects are evaluated by an external auditor who determines through debriefing with stakeholders and accounting verification if the money was spent on what the project initially said it would spend money on. However, this is different from an impact evaluation, i.e. an evaluation of the impact of the CIDA project on judicial and economic outcomes.

Of the 21 terminating and closed projects focusing on judicial reforms, we found only three with a mention of the impact of the program on judicial outcomes. We present below two examples to describe the methodology presently used. Unfortunately, these impact evaluations suffer from the absence of an appropriate counterfactual. We thus provide a recommendation and practical guidelines on how to define an appropriate counterfactual.

**Example 1: judicial outcomes in Ethiopia:**

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12 Of the 14 terminating and closed projects focusing on judicial reform and posted on the “Project Browser, Democratic Governance, Legal and Judicial Development”, only 8 post results on the web including 6 that only post results on the number of personnel trained by the project, not on any judicial or economic outcomes (see online appendix on author’s website for complete list of projects and evaluation results posted on the web). It is not obvious that merely training judicial personnel will result in any improvement in judicial outcomes, and more importantly in any improvement for the ultimate beneficiaries, i.e. the general population. More information on judicial reforms can be gathered from the country evaluation reports posted on CIDA’s website which present results pertaining to 7 judicial programs, including 6 with no mention of any judicial or economic outcomes. Therefore, out of 21 projects, we find only three with a mention of the impact of the program on judicial outcomes.
The project with the most detailed impact evaluation results is the Courts Administration Reform Project in Ethiopia. This project (2.5M$, 2000-2005) consisted in “promoting practices that would help achieve and sustain the rule of law. It further sought to reduce the administrative inefficiencies and delays of Ethiopian courts by strengthening the management and administrative capacity of the courts through the introduction of new practices, procedures and technologies.”

13 The “Ethiopia Country Program Evaluation 2003-2004 to 2008-2009” reports a “significant decrease and/or elimination of backlog across all targeted courts; a reduction of 50% in the time required to execute judgments; and significant attitudinal change among judiciary and court personnel towards client-oriented service delivery documented through user surveys.” (p.15)

Problem

This impact evaluation represents a significant improvement over merely stating the results achieved in terms of, say, trained personnel (as in other projects described in the online appendix), as it is not clear how trained personnel translates into improved judicial outcomes. However, the impact evaluation of this program consisted in comparing the targeted courts’ performance before and after the program. This is inappropriate for a simple reason: the lack of a counterfactual, i.e. what would have happened without the program. The results above cannot be attributed to the program, but may have been caused by coincidental changes. For example, independently of this program, Ethiopians may have filed less complicated cases due to, say, their decreasing trust in the system, or a coincidental macroeconomic slowdown. Backlogs would thus

naturally decrease, as well as the time taken to execute judgments on simpler cases. It is possible that these results would have been achieved even in the absence of the program. In fact, without the reform, there could have been a reduction of 80% in the time required to execute judgments in the targeted areas. In this case, the reform would have had negative, not positive, effects, and therefore should not be scaled up.

These issues have very important policy implications. The “Ethiopia Country Program Evaluation 2003-2004 to 2008-2009” states that “CIDA’s Court Administration Reform Project was deemed so successful by the Government of Ethiopia that it spent $20M of its own funds to expand and scale-up the results achieved to courts throughout the country” (p. 23). However, as described above, the results cited do not establish the causal impact of the program. The Government of Ethiopia's $20M may have been more useful supporting another reform. This has important consequences for countries with scarce resources.

**Recommendation**

The example above raises the need for an appropriate control group, not affected by the program but similar in every other way to the treatment group. However, even then, the comparison of targeted to unaffected areas may be inappropriate if the targeted areas were selected in the program for specific reasons (which are not listed in the evaluation reports). For example, treated courts may have been chosen for their proximity to urban centers, or their political buy-in of the reform. These targeted areas may thus differ considerably from other “control” areas. They may attract the best judges, who would reduce backlogs independently of the program. The targeted areas may also attract more educated people, who potentially settle out of court more often and file fewer cases. For
these reasons, targeted areas may perform better than control areas, independently of the judicial reform. A comparison between both areas would not even isolate the causal impact of the program.

Following the 2004 CIDA evaluation guide\(^\text{14}\) (p.45), it is thus imperative to randomly select the targeted areas, and compare them to control areas before and after the program. Any differences arising after the program in treated courts are then directly attributable to the program. In the context of this program, it would have been desirable to collect similar outcomes (backlog of cases, time required to execute judgments, attitudinal change) on other courts, randomly unaffected by the program.

**Example 2: survey on beneficiaries in the Philippines**

It is not obvious that training of personnel and improved judicial outcomes will translate into any gain for the general population, which is nonetheless the ultimate goal. For example, an increased efficiency in judges’ case flow management technique may entice more individuals to use the judiciary, which will clog the system, delay judgments, and may in fact worsen the situation for plaintiffs. It is thus imperative to verify the impact of the reforms on judiciary users. This point is more general than mere randomization: it is about defining the proper outcome variables of the project, which is an issue for any impact evaluation.

We find one evaluation that mentions judiciary users. An independent study\(^\text{15}\) looked at perceptions of the judiciary for beneficiaries of the “Justice Reform Initiatives Support” (S 7,000,000), Philippines 2003-2011. The purpose of this policy brief was to


\(^{15}\) Research on the poor accessing justice and the ALG as a justice reform advocate, Inroads N4 2008, ALG study series
evaluate the impact of the Alternative Law Groups (ALP, a coalition of 18 NGOs providing legal aid to the poor) on access to justice for the poor. This study is the only study that draws answers from the poor themselves, who were the intended beneficiaries of ALG. Questions on physical access to the courts, protection of the poor from abuse and affordability of the courts were asked to 1) ALG clients, trainees and paralegals in target areas, 2) the poor who did not have contact with ALG in these treated areas, and 3) the general population. To the question “whether poor or rich, people with cases in courts generally receive equal treatment”, ALG clients answered more positively than the general population, but similarly to non-ALG partners (p. 16).

**Problem**

This impact evaluation represents a significant improvement over other impact evaluations, since it directly looks at benefits received by ultimate beneficiaries. Unfortunately, this study is subject to the same methodological flaws explained above. First, one cannot simply compare ALG clients in treated areas to the general population, as ALG did not select the treated areas randomly. ALG may have chosen areas where people had a better perception of the judiciary to start with. Only if the treated areas were selected randomly could we then compare them to control areas. Second, one cannot simply compare ALG clients to non-ALG clients. ALG clients self-selected themselves in this program, and may have already held a better perception of the judiciary. Alternatively, ALG may have selected clients with a worse perception of the judiciary to really make a difference in these people’s lives. As the selection process of clients is not explained, the comparison of ALG clients to non-clients could be biased either way. This study is thus unlikely to deliver the causal impact of ALG.
Recommendation

Only if clients were selected randomly could they then be compared to non-clients. This would guarantee that individuals in the treatment and control groups are on average similar before the intervention. Any differences arising after the intervention would be evidence of a causal impact of providing legal aid to the poor.

1.2 Seven practical guidelines for randomized impact evaluations

To evaluate the impact of development programs, international funding agencies now resort more frequently to randomized experiments, such as the World Bank does through its “Development Impact Evaluation initiative” (DIME)\(^\text{16}\) and “Strategic Impact Evaluation Fund” (SIEF)\(^\text{17}\). Concerning more specifically legal and judicial projects, two randomized experiments on legal aid have already been conducted, but not in developing countries\(^\text{18}\). We now provide seven guidelines to implement randomized experiments.


\(^{18}\)Greiner and Pattanayak (2011) evaluate the causal impact of the offer of representation from the Harvard Legal Aid Bureau, which provides high-quality and well-respected assistance in appeals to rulings regarding eligibility for unemployment benefits. The authors sought practice areas in which demand for legal services outstripped a provider’s capacity, and in those areas, the provider allowed them to randomize which of 207 eligible potential clients would receive an offer of representation. Seron et al. (2001) randomly offered legal representation to 134 low-income tenants in housing courts, and compared them to 134 individuals in a control group. In practice, a paralegal assigned to the project asked individuals in line at the Clerk’s office of Manhattan Housing Court if they had an attorney and, if not, if they met the federal poverty guidelines. If the randomization indicated “control”, the in-take paralegal returned to meet with the client and explained that it was not possible to provide legal representation. The client was then escorted back to the Housing Court line where he or she could return to the same place in the queue.
Guideline 1: Use waitlists

In these two randomized experiments on legal aid, impact evaluators used waitlists, i.e. excess demand for legal aid, to randomly select out of this waitlist a treatment group, and compare it to an untreated group. When a project consists in training judges, waitlists could be established, and a treated sample could be selected randomly. In the context of the Ethiopia program (an intervention at the court level), a list of potential courts could have been drawn up, and only half treated with the program.

Guideline 2: Involve the community

Beneficiaries or court officials may consider that the randomized assignment of treatment as unethical, since it arbitrarily denies the program to half of the courts. These concerns must be addressed through a constant involvement of the judicial community in the research design. It must be clearly explained that 1) this actually ensures fairness in the delivery of the program (rather than offering the program only to, say, the most experienced or politically connected courts or judges), especially when there are waitlists or excess demand, 2) that it will allow the measurement of the causal impact of this reform for potential scale-up to the rest of the country, and that 3) it would actually be unethical not to do so, and to therefore spend future resources on untested ideas.

Guideline 3: Calculate the adequate sample size

The sample size of the treatment and control group (in Ethiopia’s case: the number of courts in both groups) may be too small to generate any significant results. Sample sizes should be calculated beforehand with adequate statistical power calculations to ensure statistical significance.
Guideline 4: Ensure external validity

The results may not be generalizable to the rest of the country. Attention should thus be paid to the representativeness of the sample used. Experimenters typically ensure “external validity” by collecting basic data on the universe of courts in the country, and selecting (randomly or by stratifying) courts to be part of the study.

Guideline 5: Define the right outcomes

Project implementers are often concerned that important outcomes are not included in an impact evaluation. Consequently, the positive impact of their project may be underestimated. In fact, this is certainly the case in the two impact evaluations presented above that merely focused on backlogs, time to execute judgments and perceptions about the judiciary.

As described above, Chemin (2009a), Chemin (2012) and Chemin (2009b) showed that judiciaries affect entrepreneurs, firms, investment, contracting behaviour, access to credit markets, access to rental markets, and poverty. By ignoring these outcomes, these impact evaluations are likely to underestimate the importance of CIDA’s programs. More attention should thus be paid to the socio-economic outcomes defined in the existing literature. A detailed questionnaire including these outcomes should then be collected on a representative sample of entrepreneurs, firms, judiciary users, and the general population, in randomized treated AND control areas.

Guideline 6: Earmark additional funds to undertake these impact evaluations

CIDA is already devoting large resources to evaluating their projects. The extra recommended costs include: defining a treated and control group through randomization (guideline 1), organizing community meetings (guideline 2), defining the right sample
size (guideline 3), collecting basic characteristics of the universe of the courts to define the study sample (guideline 4), and collecting the right outcomes (guideline 5) on the treated AND control group (guideline 1).

Organizing such an impact evaluation is feasible considering it was already done in the Philippines project described above (albeit with a non-randomized methodology). The costs of organizing such a data collection are minimal compared to the budget of these projects ($7M for the Philippines project) and the likely benefits: CIDA could then compare their different programs with the same outcomes, understand what works and what does not, and advise governments on the most effective ways to reach their goals.

Guideline 7: Introduce positive incentives for impact evaluations

Project implementers may be reluctant to undertake impact evaluations, since negative findings may reflect badly on their work. They may fear dismissal or budget cuts. Consequently, they may resist impact evaluation. To provide positive, rather than negative, incentives to undertake impact evaluations, we suggest the following mechanism. If a project shows on completion (typically after 5 years, the approximate duration of CIDA’s programs) positive impacts through a randomized experiment, then funding is automatically renewed for a further 5-year period. If a project does not present any results, the project is not renewed, as what happens now. Through this system, CIDA will reward projects with positive impacts, and establish what works in development aid. Moreover, CIDA could use these results to demonstrate to taxpayers the efficient use of their funds.
Conclusion

Despite CIDA’s claim that the judiciary matters for growth, the existing theoretical and empirical research is inconclusive. We identify in this section a major overlooked opportunity for CIDA. By randomizing the assignment of their programs, and collecting data on judicial as well as economic outcomes, such as the propensity of entrepreneurs to invest, contracting behavior, and access to credit or rental markets, CIDA could discover which of their programs work and which do not. This approach has already been undertaken by other funding agencies as detailed above, and is recommended by the CIDA 2004 evaluation guide. By adopting this approach, CIDA could inform the debate on the benefits brought by judicial reforms, as well as inform governments of developing countries on the most efficient use of their funds.
Section 2: Increasing Integration between Social and Business Projects to Increase Food Security and Foster Growth and Development

2.1 Introduction

CIDA has focused its aid efforts on three priority themes: increasing food security; securing the future of children and youth; and stimulating sustainable economic growth (CIDA, Aid Effectiveness Agenda). This section addresses two of these CIDA priorities: first, increasing food security, which includes the ability of people to access enough safe and nutritious food to live a healthy life (CIDA, Increasing Food Security); and second, stimulating sustainable economic growth, which emphasizes supporting the growth of a productive and competitive private sector (CIDA, Sustainable Economic Growth Strategy). While both of these priority themes may be viewed as separate, they have many areas of convergence in their aims of alleviating poverty and fostering economic development, particularly in rural areas where the majority of the poor live.

CIDA’s strategies to pursue these priorities lead to investments via sector-specific projects, such as private sector development, rural development, health, or education sectors that in practice separate social sector (health and education) from economic sector (business) focus. Yet, solving problems to grow businesses, build skills, improve product quality, increase market integration, and reduce malnutrition often require dealing with intertwining social and economic issues that might be better addressed by bringing together CIDA sector-focused projects that are being implemented separately today. Improving business competitiveness of small enterprises and rural producers has strong links with food safety and environmental sustainability. CIDA could create more
connections between its investments in business related projects and those in social sector projects such as water and sanitation that are funded separately. One of the ways that CIDA could achieve this is by supporting the upgrading of the products and production processes in existing clusters of enterprises.

In globally integrated markets, the long-term competitiveness of business depends on addressing social and environmental conditions that are central to building and growing successful enterprises. Traditionally, however, support for sustainable economic growth has focused on improving the macro-economic and legal frameworks, increasing access to local and global value chains and financial services, and skill training programs. Food security projects have involved support for agricultural development and improved access to quality food. Typically, improving sanitation services, for example, is seen as a social sector project; however, service upgrades can be crucial for the survival and growth of food industries and ultimately, food security. Achieving integration of social and business development is relevant as all types of enterprises (micro, small, medium or large, informal, formal) in developing countries face the challenges of upgrading their production processes and methods, products, and working conditions to increase their integration into regional and global markets and in global value chains (GVCs).

Studies have shown a rise of GVCs in Africa, Asia and Latin America as foreign companies outsource or procure from firms located in these regions (Gereffi, Humphrey, & Sturgeon, 2005). Large commercial factories and farms, subcontractors, smallholders, and homeworkers in developing countries have become part of GVCs that are led by firms in North America and Europe. Recently, there is also increasing GVC involvement of firms from emerging economies (Hamilton & Gereffi, 2009). These trade and
investment patterns imply that business growth and agricultural development are affected not only by national conditions, but also by foreign norms or standards related to quality, labor and environment, established by international private and public organizations.

A wide array of public and private standards governing business and production are a growing feature on the global landscape (Bartley, 2003; Djelic & Sahlin-Anderson, 2006; O'Rourke, 2006; Perez-Aleman & Sandilands, 2008; Vogel, 2008). These standards pose challenges to producers in developing countries given their stringent quality, environmental and social expectations (Henson & Loader, 2001; WorldBank, 2005). These market standards can contribute to exclude poorer enterprises in the informal sector or in rural areas given the significant gaps between their existing products and conditions and the standards required to be competitive in increasingly integrated local, regional and international markets (Dolan & Humphrey, 2000; Islam, 2008; Swinnen, 2007). In addition, new norms often require considerable changes and/or investments beyond their financial capacity (Dolan & Humphrey, 2000; Farina, 2002; Perez-Aleman & Sandilands, 2008).

At the same time, the standards that address social and environmental conditions and food safety can contribute to guide processes of upgrading that enhance the capabilities and competitiveness of poorer producers and businesses in agriculture, agro-industry, and manufacturing (Gomes, 2006; Henson & Jaffee, 2007; Perez-Aleman, 2011 and 2012; WorldBank, 2005). Upgrading indicates one or more of the following: a move to higher value added activities in production, improved technology, increased knowledge and skills, or an increase in the benefits deriving from market participation (Gereffi et al., 2005). Upgrading of enterprises can involve “process upgrading” that are
improvements in the production process; “product upgrading” that creates better or more advanced products involving more skilled jobs; “functional upgrading” that is due to a move to higher value added tasks; or “chain upgrading” when there is a shift to new industries or different marketing channels. Upgrading depends on enhancing the capabilities of enterprises (rural, informal sector, poor) to improve their products and production methods to access and compete in markets, generate household income, and raise productivity, which in turn facilitates economic development (Sen, 1999). Studies show that processes of upgrading and development of local enterprises often occur in clusters, that is, geographic concentrations of firms in related businesses (Giuliani & Bell, 2005; Giuliani, Pietrobelli, & Rabellotti, 2005; McDermott, Corredoira, & Kruse, 2009; Perez-Aleman, 2005, 2011; Pietrobelli & Rabelloti, 2006).

2.2 Connections between Business, Social and Environment: Some Examples

This section highlights some examples of interactions between developing more competitive and sustainable businesses and social sector issues associated with food security. One example focuses on food safety given its connection to food security and the growth of rural businesses. Another highlights environmental sustainability to show its connection with economic growth and food security.

Improving Food Safety

Lack of, or limited safety measures in the food supply chain contribute to population health problems in developing countries. Malnutrition is not only related to reduced caloric access, but also to food quality and safety (WorldBank, 2008). Food
contaminants, such as microbial pathogens, parasites, mycotoxins, antibiotics, and pesticide residues, can make people sick, limit nutritional intake, and increase the risk of chronic diseases from compromised immunity (Unnevehr, 2003). In the developing world, contaminated foods are a major cause of mortality and morbidity due to gastrointestinal diseases, especially among children (Kaferstein, 2003). Bacteria and parasites result in major problems such as diarrhea, often linked to the death of children under five. Repeated episodes of food-borne diseases are one of the most important underlying factors for malnutrition in developing countries, with a serious impact on growth and immunity for infants and children (Kaferstein, 2003). In addition, improving food safety can contribute to the food security goal of improved health and nutrition. Implementation of the practices underlying international food safety standards is the primary method to reduce the disease burden and improve food security in developing countries.

International food safety standards usually include dimensions such as: hygienic practices, minimum temperature levels, maximum bacterial limits, and absence of residues from drugs, chemicals or animal diseases. The technological requirements associated with new standards are significant and put pressure on producers to improve extension services for livestock, create labs for quality control, use potable water, and develop sewage systems and electrification for refrigeration, which are generally lacking among rural and informal sector producers. Current international food safety standards differ from present practice among low-income producers, where weak or non-existent government mandates regulating sanitation and food safety are commonplace (Farina, 2002; Perez-Aleman, 2003; WorldBank, 2008).
For example, in the case of Nicaraguan small dairy producers, they typically do milking in unhygienic muddy corrals, lack tests or controls for cattle diseases (mastitis, tuberculosis and brucellosis), and have no refrigeration centers, resulting in milk products with bacterial counts ten times higher than the allowable international standard (Perez-Aleman, 2011). A study done in Brazil reveals that access to refrigerated storage is often missing in the rural zones where smallholders produce milk (Farina, 2002). In Kenya, HACCP requirements for fish exports to the European Union came up against the local lack of hygienic practices, rudimentary or non-existent basic infrastructure, and insufficient training (Henson & Mitullah, 2004). Producing under these conditions inhibits or prevents their ability to meet health and food safety norms.

In the above cases, as is common in others (Dolan & Humphrey, 2000; Henson & Humphrey, 2009; Pietrobelli & Rabelloti, 2006), small rural producers and micro and small urban enterprises experience crisis, and often failure, when facing international food safety standards. In Brazil, for instance, the introduction of higher food safety standards in dairy products, which required control of water quality, pesticides, temperature, and the use of cooling systems, had significant technological and managerial implications for smallholders; many could not afford the major investments required for cooling tanks for milk collection (Farina, 2002). The Brazilian government provided inadequate financial support, and local farmers could not compete with foreign investors in their own domestic market (Farina, Gutman, Lavarello, Nunes, & Reardon, 2005).

Rural producers, however, can improve their milk production methods and successfully adopt global standards when supportive conditions are created to assist the shift in practices (Perez-Aleman, 2011). The foreign norm serves to define a common
goal for public and private organizations and producers to collaborate in the problem-solving effort. In the Nicaraguan dairy case, the combination of foreign aid assistance, local associations and the national government contributed to build the capabilities of producers in a dairy cluster to control for cattle diseases such as tuberculosis, brucellosis, and mastitis (Perez-Aleman, 2011). This, in turn, led to the establishment of new training programs. In the past, small producers guessed blindly at cattle diseases and what to do about them. Similarly, the introduction of maximum acceptable dairy product bacterial levels and the quality monitoring requirement led to the creation of a local microbiological laboratory in the rural zone. A European foreign aid organization funded its construction. These changes ultimately enabled them to process cheese for both local and export markets, as well as to supply milk to local high-end markets, resulting in improved rural income. Moreover, the farmers created new ties with a local university to develop extension programs. With government and foreign aid, they expanded their water and electricity infrastructures.

In Brazil, after a crisis from inadequate support during the initial post-reform of public food safety standards, the government later created public financing and specialized services to assist small dairy producers (Farina et al., 2005). At the same time, dairy cooperatives began to build their managerial capacity and provision of services for their members to increase production for local and foreign markets. Besides investing in new processing plants, co-ops organized new services as well as elaborated a strategic development plan in conjunction with the rural development government agency Embrapa (Brazilian Agricultural Research Organization) to build their capabilities (Haddad, 2007). While in the 1990s many co-ops of small producers struggled and failed,
by early 2000s, some had become successful domestically and abroad. Itambe, which integrates 32 local co-ops with 7,000 small dairy farmers, has developed new procurement processes, state-of-the art facilities, and new services for its producer-members (Haddad, 2007). It now ranks among the 12 largest dairy companies in Brazil.

Finally, the creation of new local institutions that incorporate HACCP food safety standards is visible in fish and fishery products in Kenya. In the late 1990s, Lake Victoria fisheries faced an import ban from the European Union due to major deficiencies in hygiene standards, unsafe residues, weak government capacity, outdated labs, poorly trained personnel, and sub-standard production processes (Henson & Mitullah, 2004). After several unsuccessful attempts and a local crisis, the Kenyan government and local producers jointly began to uncover the problems and work out how to address them. They established new local norms and created lab testing capacity, as well as new physical infrastructure including potable water, toilets, cold rooms, and electrification, all unavailable before. In addition, the government organized training for fisheries and inspection personnel. At the enterprise level, one of the major changes was the formation of the Association of Fish Processors and Exporters of Kenya (AFIPEK). Guided by new local norms, public and private actors coordinated a demanding upgrading to enable Kenyan businesses to export to the EU.

**Improving Environmental Sustainability**

Since the 1990s, environmental activists have promoted the creation of new sustainability standards targeting private companies (Bartley, 2003) for more socially and environmentally sustainable production processes in global supply chains in forestry,
mining, agribusiness (i.e. coffee and cocoa), fisheries, and the garment and footwear industries, among others. Today, approximately 300 codes govern major global economic sectors (Vogel, 2008), nearly all being industry or product specific. As global firms and foreign markets require compliance with environmental codes, this affects smallholders as they must also change their practices to be included in the upgraded or “green” supply chains. While the “greening” pressures arise in foreign markets, research has shown that environmental degradation threatens the livelihoods of small-scale producers and is linked to poverty (Conroy, 2007; Jaffee, 2007). Depletion of forests, farmlands, watersheds, biodiversity, and soil erosion undermine productive conditions and economic survival.

The connections between biodiversity conservation, food security and smallholder competitiveness are apparent in coffee production. New “green” norms for sustainable coffee production include standards for soil management, water, waste and pollution management, energy and pesticide use, as well as biodiversity conservation for each respective stage of growing and processing. In a study of small coffee producers in El Salvador (Mendez, 2008), shaded coffee agro-forestry allows production with minimal environmental degradation, while providing firewood, and fruits such as bananas and plantains. In Mexico, two thirds of the coffee landscape involves small farmers growing corn, beans, or other food crops together with or adjacent to coffee plots (Bray, Sanchez, & Contreras, 2007). When Central American farmers made the transition from conventional to sustainable coffee farming practices, they required new knowledge on soil structure and processes (Mendez, 2008). As well, they faced major challenges related
to managing weed, insect and pathogen populations that require new pest management practices.

These examples illustrate that the challenges and requirements that sustainability standards pose for smallholders are both a potential barrier and a source for upgrading (Perez-Aleman, 2012). Research capacity in local universities, extension services, and professionals is often lacking. Moreover, small-scale farmers generally do not have access to technical assistance and extension services, which the conversion to sustainable agriculture requires to improve product quality and production efficiency (Perez-Aleman & Sandilands, 2008). Strategies aimed at building local capabilities and facilitating the emergence of local financial and technical assistance services that could assist the implementation of the new norms are necessary (Perez-Aleman & Sandilands, 2008). Upgrading production along environmental dimensions entails the development of expertise in technologies related to soil management and field-crop production, and local research and extension services, private and public. These, in turn, contribute to improve the capacity of small-scale producers to achieve sustainable competitiveness.

While CIDA has been integrating environmental sustainability goals into all of its programs, it could do more to address the challenges that poor businesses and farmers face to upgrade their environmental performance. Beyond an environmental assessment of its programs, what is needed is to look at the situation from the perspective of poor businesses and their ability to meet “green” standards required in global value chains. More support could be provided to meet international environmental and social standards focused on specific industries and value chains with a strong presence of poorer producers and enterprises. For example, there is a need to increase support so poorer
enterprises can eliminate toxic substances, improve waste management, and increase water and forest conservation in their production practices.

In Vietnam, the creation of farmer field schools for rice management to teach new pest control methods led to reduced pesticide use (Pretty & Smith, 2004). This kind of initiative has also helped farmers reintroduce food sources, such as fish protein. In Bangladesh, pesticides had eliminated fish from rice paddies. With new practices that drastically reduced pesticide use, thousands of small farmers reintroduced fish into the rice paddies (Pretty & Smith, 2004). Changing to more sustainable production has occurred in concert with increased food security.

The connections between improving environmental sustainability (upgrading production), food security and economic growth are visible in Kenya’s fisheries development. The local Nile perch boom, along with increased export demand contributed to overfishing, which in turn resulted in declining biodiversity and productivity (Kambewa, Ingenbleek, & van Tilburg, 2010). Lack of attention to environmental management made the Kenyan fisheries unsustainable. Local fish consumption declined and rural malnutrition increased due to the reduced fish supply (Kambewa et al., 2010).

2.3 Recommendation

Efforts to increase access to markets for producers from developing countries will confront expectations for improved consumer safety through safe products, decent labor conditions, and positive environmental impact. In this context, strategies that foster upgrading in these areas contribute to growing sustainable businesses, improving local
skills and know-how, and facilitating agricultural and rural development. Past experiences indicate that fostering business growth does not automatically address upgrading in terms of safety, quality, environmental and social dimensions. These upgrading strategies will involve treating social and environmental sector projects as business sector projects, thus requiring increasing connections between these CIDA activities.

One way to address these connections in practice is to focus on a cluster of enterprises, which is a group of firms or producers concentrated in the same geographic area engaged in production in the same or related industry (suppliers, services) (Porter, 2000; Saxenian, 1996). There are many clusters in developing countries, such as root crop producers in Vietnam, furniture makers in Indonesia, fish processors in Lake Victoria, cocoa farmers in the Ivory Coast, cut flowers in Colombia, and coffee producers in Rwanda and Nicaragua. Clusters include businesses as well as other organizations (local government, local universities, schools, associations, local services and infrastructure). Studies indicate that processes of development and upgrading of local enterprises often occurs in clusters (Giuliani & Bell, 2005; Giuliani et al., 2005; Gomes, 2006; McDermott, 2007; McDermott et al., 2009; Perez-Aleman, 2005, 2011; Sabel, 1994; Saxenian, 2006). Using the cluster level approach facilitates focused attention on the enterprises, producers and the organizations interacting in the related industry, and on the social, economic and environmental problems within one geographic region of the country. The cluster framework may provide a useful entry point to avoid isolated actions and address the connections and complementarities between business competitiveness, food security, social sector improvements, and growth.
This approach would focus first on identifying the areas that need upgrading (i.e. social conditions, environmental practices, product quality, production process) so that the enterprises in the cluster achieve sustainable competitiveness. For example, instead of providing training in general, targeted training to a cluster of enterprises would ensure that it is directly relevant to the improvement of products, processes and skills related to the activity in the cluster. Similarly, the provision of infrastructure would target areas where there are clusters of enterprises to improve logistics and services that are limiting their productivity and competitiveness. A cluster perspective would foster complementary investments, rather than isolated sector project interventions. It would focus on identifying the main constraints and gaps in product quality, lab and extension services, infrastructure such as water and electricity, environmental sustainability, training and education affecting the micro, small and medium enterprises, and producers’ ability to upgrade and improve the competitiveness of the cluster. The cluster approach is particularly relevant for micro, small and medium producers and enterprises in rural and urban areas as it fosters local joint action to address collective challenges and improve their capabilities and competitiveness.
Section 3: Food Security and International Trade—An Active Role for CIDA

Introduction

Food security has gained salience in recent years. World food prices peaked in 2008, leading to food riots, social unrest, and political instability in a number of regions. CIDA has been a leader among development agencies in its work on food security, designating it as one of its priority themes, and working with the World Food Program and the Canadian Foodgrains Bank to offer immediate international assistance during food crises. Such initiatives aim at addressing ongoing crises, yet CIDA also has the opportunity to play a role in preventing these crises, and reducing their severity when they do occur.

The extreme weather events that affect crop yields will only grow more frequent with climate change; little can be done about this directly. Yet we now know that policy also plays a significant role in food shortages. In fact, the severity of the 2008 crises was due in large part to government behavior, as the actions that governments took to insulate their own countries from price increases contributed significantly to the global price increase (Martin and Anderson 2010). By implication, there is a role for international coordination in bettering government policy during food shortages.

International trade constitutes a reliable defense against food shortages and price volatility in commodities. This is nothing new: Condorcet and Adam Smith, writing in the late 18th century, saw free trade in corn as the surest way of preventing scarcity in Europe. Economists today are equally of one mind on the matter. This section highlights
three frequently overlooked aspects of the international trade that play an important role in food security. These are the considerable gap between countries’ bound and applied tariffs for agricultural goods, and its effect on trade flows; countries’ persistent reliance on export taxes, and the lack of international commitments on this policy instrument; and the importance of legal capacity in trade litigation, especially as concerns food standards. While these traditionally fall under the purview of DFAIT, CIDA may hold comparatively greater sway over related policies, since it is directly involved in providing aid during food shortages. CIDA would gain from emphasizing the importance of, and taking a clear stance on, the issue of binding overhang. Tying food aid to even hortatory statements over exercising restraint in the imposition of export taxes during food shortages could prevent further price increases. And finally, aiding developing countries in build legal capacity by supporting the WTO’s Advisory Center is a low-cost, high-impact means of making the trade regime work for these countries, and bolstering its ability to hedge against the risk of food shortages.

3.1 The Price of Uncertainty: Inefficient Flexibility

International organizations such as the General Agreement on Tariffs and Trade / World Trade Organization (GATT/WTO) allow countries to exchange reciprocal binding commitments to reduce import barriers. The result of these commitments is bound tariffs, which correspond to the maximum rate at which a country can raise its rates before falling foul of its obligations. Any country that raises its rates beyond its tariff bindings is in violation of WTO rules, and liable to be challenged in dispute settlement, which is among the better functioning enforcement mechanisms in global governance today.
Yet as part of the Uruguay Round negotiations that led to the inception of the WTO, a great number of countries were offered an implicit tradeoff under the scheme of “tariffication”: they agreed to convert their quotas and opaque import barriers into *ad valorem* tariffs, and in exchange, they were allowed to cap those tariffs at very high levels, often considerably higher than they have ever imposed in the past. This led to a striking, yet often overlooked outcome, referred to as “dirty tariffication” (Ingco 1996): as it turns out, current bound rates are so much higher than applied tariffs, that the average country today could hike its average tariff line overnight by just over 18% (Pelc 2011b), without falling foul of its WTO commitments. In other words, on the international trade highway, countries are driving at an average speed of 110km/h, while the speed limit is closer to 140km/h. Armenia and Pakistan, for example, both levy an applied tariff on tomatoes of 10%, but whereas Armenia’s bound rate is 15%, Pakistan’s is 100%. This gives Pakistan much greater latitude to raise its applied tariff without violating its bound rate.

Add to this the fact that such binding overhang is highest in agriculture, and highest for developing and middle-income countries, and the link between binding overhang and food shortages becomes apparent. The result of this large gap between bound and applied tariffs is considerable uncertainty, and this uncertainty has a price. To calibrate what is at stake, it is estimated that if countries raised their tariffs to their bound rates on all products, global trade would drop by a stunning 7.7% (Bouët and Laborde 2009). Yet there is little risk of such tariff hikes across the board, since binding overhang is seldom relied upon, even during hard times (Davis and Pelc 2012). Even accounting for the underlying selection bias, countries rely more heavily on trade remedies - the set of

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19 2008 tariffs, from the World Integrated Trade Solution (WITS), hosted by the World Bank.
highly constrained flexibility measures that includes antidumping, countervailing duties, and safeguards - than they do on binding overhang (Busch and Pelc 2012). The true cost of binding overhang lies not in its use by countries, but in its continued availability, and the unpredictability this represents. The result is that binding overhang acts as a tax on trade: exporters and investors faced with uncertainty over the duty they will face tomorrow prefer to choose another market with less uncertainty, even when the applied rates are somewhat higher. The aggregate effect of such decisions can be isolated and measured.

Using a modified gravity model of trade, Pelc (2012) shows that a point of binding overhang corresponds, on average, to nearly half the tax-on-trade effect of a tariff point. Hence, an increase of one standard deviation from the mean level of binding overhang leads to an average 17.6% drop in imports for that product, all else equal. More telling still, a difference of 85 percentage points of binding overhang, corresponding to the difference between Armenia and Pakistan on tomatoes, should lead to a 68.2% decrease in imports. This impact holds after controlling for overhang’s effect on volatility—what we are seeing is the effect of binding overhang acting through expectations alone.

Given how concentrated binding overhang is in agricultural goods, it hinders the hedging effect that trade can play in preventing food crises in the wake of droughts, or other natural disasters. Trade flows are simply less than the level needed to assure continued provision of food commodities in cases of domestic insufficiency. Developing and middle-income countries prize binding overhang because it acts as a form of flexibility, allowing them to quickly offer import relief to beleaguered industries (WTO 2009). Yet the implication of the disproportional cost of binding overhang is that it
constitutes a suboptimal flexibility measure: we know this by how high the cost of its availability is in proportion to the benefit flowing from its actual use—binding overhang remains less used than traditional trade remedies, yet represents greater uncertainty, with corresponding tax-on-trade effects. As a result, almost any form of contingent flexibility measure—whose use depends on specified circumstances—would be preferable, whatever the terms of its use. Concretely, the special safeguard mechanism (SSM), which was the policy instrument requested by developing countries in exchange for cutting their binding overhang during the Doha Round negotiations in Cancun, and which was rejected by developed countries, including Canada, is an example of such a mechanism. While undoubtedly a second-best flexibility measure, it would exert a lower price in terms of trade flows than continual access to binding overhang. As per the broader lesson of trade agreements, gains from trade lie in self-imposed constraints on government behavior, and the reassurance to traders and investors that such constraints produce.

Binding overhang thus represents an inefficient and costly means of providing flexibility. Insofar as CIDA has developing countries’ attention through its role in delivering food aid, it has the unique opportunity to bring attention to this overlooked issue, and to link it to food shortages which every country has an incentive to avoid.

3.2 Export Restrictions: An Absence of International Coordination

While import barriers, erected to protect domestic industries from competition, have been the focus of the international trade regime, there has been far less attention paid to export restrictions. Yet these are the barriers that governments fall back on precisely during food shortages, and that contribute to the emergence of regional food
crises. In aggregate, they are seldom relied upon, yet their use coincides precisely with the circumstances of interest to CIDA.

Import barriers such as tariffs, and uncertainty over the future level of those tariffs, impede the formation of trade networks with predictable effects on trade flows. Yet in the midst of food crises, when the needs of consumers suddenly trump those of domestic industries, the tendency among governments is to not only decrease tariffs to increase food imports—which comes at little welfare cost except for the resulting volatility—but also to restrict exports. Developing countries, especially, have a record of restricting or taxing food exports in cases of shortages. India is the prime example, having imposed a quasi-ban on its rice exports since 2008. Russia and Central Asian countries have done much the same for their wheat exports—some of these barriers remain to this day.

Such state behavior yields a familiar situation, whereby individually rational actions lead to a socially suboptimal outcome, akin to a run on the banks: every country has an incentive to restrict food exports when others do so, which increases the incentive for other countries to do so as well. Yet the result aggravates the food shortage, and once trade partners respond in kind, there remains no individual benefit to having put in place export restrictions. In sum, export restrictions are most often ineffective in their avowed goals, yet have the effect of aggravating the very crisis that they try to abet.

The cost of such socially suboptimal behavior is significant. Recent evidence shows that in 2008, individual government attempts to insulate their countries from the initial price increases accounted for nearly 40% of the price spike of rice worldwide (Martin and Anderson 2010). In other words, had governments not taken distortionary action, the crisis in rice would have been far less severe.
The issue comes down to international coordination. Export taxes lie in a grey legal area, since countries can make binding commitments not to rely on them, but they are not required to do so (WTO 2009). As a result, most countries, and especially those that rely on these policies most frequently, have made no such commitments. The issue of export taxes is overlooked within the trade regime in part because it emerges so rarely, precisely during events such as food shortages, and otherwise lies dormant. This is why CIDA can play a role in bringing attention to this gap in commitments, since export taxes are relied on precisely during the periods critical to CIDA’s goals.

Moreover, the history of the trade regime teaches us that the use of flexibility and contingency measures such as export taxes, precisely because their true price relies so heavily on expectations, can be deeply affected by informal norms of behavior. Binding overhang is one such example, and Article XXI, the GATT security exception, is another: while both constitute effectively unconstrained exceptions to countries’ commitments, informal norms against the exercise of each instrument have contributed to a near moratorium on their use. Article XXI has been invoked only once throughout the WTO era, and never ruled on in a dispute settlement. And non-binding country declarations during the recent economic crisis have been shown to contribute to countries’ observable restraint in their reliance on unconstrained flexibility measures, such as binding overhang (Davis and Pelc, 2012). In this way, tying food aid to even hortatory statements about refraining from export taxes can achieve a similar result, reassuring trade partners that they need not impose export taxes of their own, contributing to the norm against export taxes during food shortages and decreasing the severity of food crises as a result. Inducing a single large country to make a non-binding declaration to this effect could
have a systemic impact, and through CIDA’s access to policymakers thanks to its food aid, it is ideally placed to compel countries to take a public stance on the issue of export taxes. When it comes to country behaviour concerning flexibility measures, “cheap talk” can have an observable, positive effect.

3.3 Enforcement of Rules: The Importance of Legal Capacity

Part of the solution to food shortages may lie in trade liberalization. Yet negotiations at the WTO are stalled for the foreseeable future. By contrast, what has kept liberalization moving forward is litigation. The WTO’s dispute settlement understanding has been called the “cornerstone of the trade regime”, and it regularly compels countries to liberalize trade barriers. One of the areas where there remains significant capacity for liberalization-through-litigation is developed countries’ use of trade standards, especially in agriculture.

The law of standards is complex, and evolving. Just last year, two landmark appellate body rulings, in *US—Clove Cigarettes*, brought by Indonesia, and *US—Tuna II*, brought by Mexico, rewrote countries’ expectations with regards to technical barriers to trade. Such rulings are highly significant. Despite there not being binding precedent at the WTO Dispute Settlement Understanding (DSU), it is widely accepted that countries and WTO panelists behave according to *de facto stare decisis*: judges’ reasoning in past rulings exerts considerable influence over subsequent rulings (Bhala 1999).

Trade standards constitute an especially tricky matter, since there is a fine line between protectionism and legitimate responses to genuine consumer concerns. This represents the flipside of the beneficial global standards we allude to in Section 2.
Producers in developed countries tend to support bolstering such requirements, since they act as an effective barrier to entry by foreign producers (Kono 2006). The results of the proliferation of such standards are those we associate with distortionary policies: they reduce global trade flows, result in a suboptimal allocation of resources, and ensure that the most efficient producers are producing less than they should. In other words, they reduce the size of the global pie. When this occurs in the realm of agriculture, it also inhibits the ability of trade to hedge against the risks of scarcity.

One of the ways by which developing and middle-income countries can maximize their gains from trade is to improve their ability to legally challenge unfair trade standards, especially in agriculture. We know a lot about the factors behind countries’ litigation decisions. While the conventional wisdom has long been that the greatest impediments to dispute settlement participation are lack of market power and vulnerability to retaliation, survey evidence shows that more countries point to their lack of legal capacity: in explaining the advantage of powerful members using the DSU, 88% cited legal capacity, versus 48% who cited issues related to market power (Busch et al. 2009). Legal capacity, in this case, corresponds to the human and bureaucratic resources dedicated to monitoring and enforcing rights and obligations.

The WTO has responded by creating the WTO’s Advisory Centre, which lends legal experts to developing countries specifically in the area of trade law, as well as conducting trade law training modules. The center represents a low-cost, high-impact initiative from a development standpoint. Yet it has nonetheless remained a relatively low priority issue: Canada contributes $1M annually to the Advisory Center, less than it does to comparable initiatives. By highlighting the benefit of increasing legal capacity for its
priority issues, CIDA has the opportunity to raise the salience of the problem, and
increase the resources allocated to the center. In a trade regime where liberalization is
being advanced through litigation more than through negotiation, where any concessions
gained through litigation are immediately extended to all other members,\(^{20}\) and where the
trade interests of developing countries, especially in agriculture, are being impaired by
complex instruments such as quality standards, increasing legal capacity brings
disproportional benefit in terms of gains from trade, with the insurance against food
shortages this represents.

\(^{20}\) This is due to the most-favoured nation principle: any solution obtained in dispute settlement, whether in
early settlement or subsequent to a ruling, must be extended to all WTO members (see Article 3.5 of the
Dispute Settlement Understanding).
4. Conclusion

The existing development literature has shown that institutions, understood as the rules of the game in a society, may provide a *fundamental* explanation for disparities in economic growth and for providing supportive conditions for economic development and poverty alleviation. In this policy brief, we describe three types of institutions that may have large consequences for achieving the goals of sustainable economic growth and food security, which correspond to two of CIDA’s three priority themes. CIDA is actively involved in these areas, and we suggest ways for CIDA to increase support to build the capacities of the judiciary, of micro, small and medium private businesses, and to deal with food crises and trade. But we also identify an overlooked opportunity for gathering further evidence to evaluate the impact of CIDA’s existing projects and ascertain how CIDA can optimally allocate its resources.

At the national level, a key economic institution that secures property rights and guarantees the exchange of goods and services across agents is the judicial system. CIDA is actively engaged in judicial reforms aimed at providing a quick, fair, and impartial judiciary, but there is still no evidence to date that these judicial reforms or even the judiciary—as opposed to other informal means of contract enforcement—matter for growth.

At the local level, there are also institutions affecting private sector development due to market integration in value chains. In particular, providing an integral institutional framework that incentivizes firms to adapt to international standards to improve food safety and environmental sustainability—such as building capabilities of firms, providing
basic water and sanitary infrastructure, investing in agricultural extension services, improving waste management—could contribute to guaranteeing food security and promoting sustainable economic growth. The gaps between regulations related to safety, social and environmental expectations and the current production practices of developing country enterprises require more efforts to build their capacity to improve their performance in these areas and increase their integration into regional and global markets. However, we argue that CIDA engages frequently in sector-focused projects that separate social and private sector development, without considering their interconnections for growing businesses.

To achieve more integration between social and business sector projects, one recommendation is to support local cluster development which includes businesses (small, medium and large, informal or rural), the surrounding community, and related infrastructure and organizations. This approach could help to identify social problems limiting business development in a specific locality and to support the design of projects that connect investments in education, infrastructure, environment, and private sector growth. At the same time, the projects supporting a cluster of businesses could create opportunities for complementary investments in the social sector within that location, rather than isolated social or business projects.

At the international level, the rules of the game guaranteeing the exchange of goods and services across nations are critical to the prevention of food crises. However, the design of some of these rules can in fact exacerbate food crises: the large gap allowed between bound and applied tariffs, especially for middle-income and developing countries, creates uncertainty in agricultural trade. Similarly, countries are not required to
make any commitments on export taxes, which impose negative externalities on neighboring countries precisely during food shortages. CIDA has a privileged position through its role in providing food aid during shortages, which it can use to increase the salience of these issues. Theory tells us that even hortatory commitments to limit export taxes among food aid recipients could have an observable impact in reducing the odds of policies that exacerbate existing food shortages. Finally, developing countries’ lack of legal capacity impedes their ability to keep liberalization moving forward through litigation and negotiations in the shadows of the law. This is especially a concern with regards to food standards, which can be employed by developed countries as opaque import barriers. While issues of international trade usually fall to DFAIT, they have a direct impact on CIDA’s priority theme of food security. Moreover, through its provision of food aid, CIDA may be in an optimal position to bring attention to these overlooked issues.

One broad recommendation cuts across the substantive issues we have identified. One shortcoming we identify in CIDA’s efforts is the lack of impact evaluation of their numerous projects. As described in this policy brief, CIDA’s evaluations consist of comparing outcomes in the treatment group before and after the program took place. However, this method does not allow CIDA to causally attribute changes in outcome to the project in a reliable fashion. In fact, outcomes may have improved by a greater amount in the control group, had the corresponding data been collected. In this case, the impact of CIDA’s projects cannot be unambiguously ascertained. In the absence of a rigorous impact evaluation, it is impossible to discover with certainty what works and what does not, and generate policy implications regarding the desirability of future
projects. Moreover, no attention is paid to the ultimate beneficiaries of foreign aid, be it the users of the judiciary, small businesses, or exporters and consumers. Finally, no attention is paid to unintended beneficiaries: sector-focused projects on say, food security, may have unintended impacts on sustainable economic growth.

Our recommendation is not to stop funding development projects aimed at improving local, national and international institutions. Our recommendation is rather to rigorously evaluate the impact of these projects to build evidence on what works and what does not. A simple, quick and costless way to do this is to assign the program randomly, and compare outcomes in the treatment and control group, following the 2004 CIDA evaluation guide (p.45).

When a project consists in training judges, waitlists could be established, and a treated sample could be selected randomly. This would ensure fairness in the delivery of the program, rather than offering the program only to, say, the most experienced or politically connected judges. When a project consists in building capacities of small firms to adapt to international food standards, assistance to firms could be randomized. When a project consists in funding the WTO’s Advisory Center, which provides legal expertise and training, CIDA could insist that these funds be used in a legal training program randomized across country members. Randomization is also a means of ensuring fairness in the assignment of these legal experts, without any preferences given for strategic or political reasons. Comparing the early settlement records of developing countries assisted or not would give precious indications on the importance of the WTO’s Advisory Centre, and the significance of CIDA’s contribution to the Centre. These randomized experiments are cheap to implement, relative to the multi-million dollar CIDA projects.
They are also quick to implement, relative to the 5 to 10 year windows of CIDA’s projects.

This is not to say that randomized experiments can evaluate any project or question. One recommendation cited in this policy brief, encouraging countries to lower the gap between bound and applied tariffs, does not easily lend itself to a randomized experiment. For these issues, one must rely on more traditional econometric evidence, as in Pelc (2012). Indeed, micro-level projects are usually better suited to impact evaluations through randomization. Moreover, randomized experiments should always be complemented with more qualitative approaches, such as those CIDA already implement to detect less measurable results and inform the survey instruments. For example, our second section emphasizes how wide-ranging outcomes in private sector development should be included in projects seemingly unrelated to promoting sustainable economic growth. Qualitative work and extensive debriefing with beneficiaries, i.e. people, not just governments, should be undertaken. But for projects targeting clear individual beneficiaries, as in the majority of cases, randomized experiments represent a relatively cheap and feasible way to inform CIDA’s actions.

In sum, this policy brief offers a range of ideas that build on CIDA’s existing initiatives and priority themes. We consider how CIDA can further address overlooked policy opportunities at the local, national, and international level. Throughout, we have emphasized the importance of implementing projects in a way that facilitates their subsequent evaluation. It is only once there is reliable evidence of what works, and what does not, that CIDA can allocate its resources in a way that best achieves its objectives.
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