



Sri Lanka Growth Diagnostic Executive Summary

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Throughout 2016, the Center for International Development (CID) at Harvard University¹ conducted a growth diagnostic analysis for Sri Lanka with the Millennium Challenge Corporation (MCC),² and in partnership with the Government of Sri Lanka (GoSL), led by the Prime Minister's Policy Development Office (PDO).³ This Executive Summary presents the main conclusions, as interpreted by CID, of the collaborative analysis and complements the detailed presentation that was provided to the GoSL in April 2017. The reader is encouraged to refer to the detailed presentation for graphs, tables and notes on the various diagnostic tests summarized here. Page numbers are noted throughout for this purpose.

Introduction

Sri Lanka's Growth Problem Deconstructed [pp.4-39]

In any growth diagnostic exercise, it is critical to first recognize a country's long-term growth story and identify the current growth problem, or in other words, the part of growth that is constrained relative to its potential. Sri Lanka has seen remarkably strong growth over the last three decades given the conflict it faced from 1983-2009. Annual real GDP per capita growth averaged 4.2 percent per year from 1990 to the end of the war, only dropping below 2 percent in one year, 2001. Over this period, Sri Lanka enjoyed steadily falling levels of poverty in most parts of the country, as well as consistently strong health and education outcomes for its level of income. After the end of the conflict, Sri Lanka enjoyed a brief acceleration of growth to above 7 percent in real per capita terms from 2010-12. However, this acceleration proved temporary, with the rate of growth reverting back to the long-term average (4%) in each of the four years from 2013-2016. Compared to an expectation that the end of the conflict would relax a major constraint to economic activity, the "peace dividend" that Sri Lanka experienced was surprisingly limited in scale and duration.

Need for Growth Acceleration and Reduced Vulnerability of Growth

Sri Lanka's GDP per capita is now roughly 4,000 USD. At a sustained growth rate of 4 percent per capita (in real terms), Sri Lanka would reach Malaysia's current level of income per capita in 2038, and Singapore's current level of income per capita around 2080. However, if Sri Lanka could accelerate real per capita growth to a sustained level of 6 percent (a more modest rate than what China experienced from 1990 to 2010, and around what India has sustained for over a decade), Sri Lanka would reach where Malaysia is today in 2031 and where Singapore is today around 2060. In other words, accelerating growth from 4 to 6 percent would mean reaching Singaporean standards of living roughly a generation early.

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² The Millennium Challenge Corporation (MCC) is a United States foreign aid agency. MCC uses the growth diagnostic methodology when developing its grant programs with partner countries. A constraints analysis for Sri Lanka prepared by MCC based on this collaborative research is forthcoming.

³ We appreciate the leadership provided by Mr. Charitha Ratwatte, senior advisor to the Prime Minister, throughout this analysis, as well as the research and coordination support of Dr. Nandaka Molagoda.

But further analysis also shows Sri Lanka's growth problem goes beyond the need to accelerate growth. Sri Lanka's growth history suggests a particular vulnerability to macroeconomic shocks that threatens the sustainability of even modest growth. Sri Lanka maintains a significant trade deficit in goods and services that has driven recurring balance of payments crises. On three separate occasions since 2000, Sri Lanka's trade deficit and overall current account deficit have expanded sharply without being matched by capital account inflows. In each case, Sri Lanka has not allowed the exchange rate to fully adjust through depreciation, which led to the steady drawdown of foreign reserves. In the most recent case, this dynamic led to an increase of government borrowing costs beginning in 2015 as markets reacted to rapidly dwindling reserves. On each of these three occasions, the ending was the same, as Sri Lanka entered into an IMF program to backstop its reserves. Therefore, Sri Lanka's growth problem includes the need to break this cycle, which has been the combined result of a persistent trade deficit, low overall levels of foreign investment, a long-term decline in government revenues as a share of GDP leading to inevitable borrowing needs, and government policy toward managing the exchange rate.

Lack of Export Diversification and FDI

Why has Sri Lanka's trade deficit persisted? As Sri Lanka's economy has grown overall, import growth has tended to keep pace with GDP growth, but export growth has lagged behind. This pattern becomes especially clear when benchmarking Sri Lanka against select Asian comparators (especially from Southeast Asia) and Costa Rica (chosen because of several similarities in social indicators and tourism resources). The Sri Lankan economy is highly inward-oriented, and export growth is exceptionally low.

One clear factor behind Sri Lanka's low export growth is its lack of recent export diversification. The composition of Sri Lanka's basket of exported goods has remained largely unchanged for around 25 years. Whereas other countries in the region, and other developing countries globally, generally diversify first into garments and then into other industrial sectors like machinery, electronics or chemicals, Sri Lanka's 1980s garments boom has yet to be replicated in other manufacturing sectors. Between 1995 and 2015, Sri Lanka's exports in goods remained focused in garments, tea, other agricultural exports, rubber products, and gems, and grew by a factor of 3.2. Meanwhile, Vietnam, which had a very similar export basket to Sri Lanka in 1995, diversified its exports substantially and saw exports grow by a factor of 35 over the same period.

This problem of low export diversification is due in large part to the absence of foreign direct investment (FDI) to Sri Lanka, especially in new industries. Sri Lanka has consistently received less than 1.5 percent of GDP in FDI, which is the lowest among the benchmarking group, and FDI to Sri Lanka also saw no noticeable change after the end of the conflict. Moreover, the FDI that Sri Lanka has received has been concentrated in traditional sectors. It is once again striking to compare this reality to Vietnam, which has received FDI inflows averaging over 5 percent of GDP for over two decades, including from Chinese and Japanese electronics companies. This has crucially allowed Vietnam to integrate into global value chains in electronics.

Finally, amidst this lack of export diversification and lack of investment in new industries, Sri Lanka is facing growing labor cost pressures in the export industries that do exist, including tea, rubber and garments. Companies in each of these industries must compete internationally with other exporters, many of which are based in low-income economies (such as Bangladesh and India). This places a ceiling on the wages that they can pay workers while remaining internationally competitive. However, the companies must also compete in the local labor market, where Sri Lankan workers are earning increasingly higher wages from non-tradable sectors like construction, transportation, and government, among others. This places a floor on the wages they must offer to attract local workers. Thus, companies in traditional export sectors may be caught in between a wage floor and wage ceiling, resulting in reports of scarce labor. Export concentration in these traditional sectors adds pressure to the problem of slow export growth, increases balance of payments vulnerability, and further threatens the sustainability of growth moving forward.

The Growth Question

As a result of these findings, our collaborative diagnostic work began with the high-level finding that growth in Sri Lanka is constrained by the weak growth of exports. Deconstructing this further, we learned that slow export growth is connected to a lack of export diversification and low FDI. We therefore focused the remainder of the growth diagnostic on a specific question: *What are the constraints that bind investment in new and non-traditional export-oriented activities?*

Applying the Growth Diagnostic Methodology

The growth diagnostic concept recognizes that not all constraints to economic growth are binding in a specific place and time, and that developing countries have limited capacity to address all constraints at once. Therefore, countries should seek to identify the constraint where a reduction would lead to the largest direct response in economic growth and prioritize response actions to address it. This process of addressing the most binding constraint should be a continuous process - as one constraint is resolved, policymakers can move to identifying and resolving the new binding constraint. The growth diagnostic methodology involves using several diagnostic tests to compare across the potential issues that may be constraining growth - or in this case, specifically the growth of investment in new and non-traditional export-oriented activities - while loosely employing a diagnostic tree [pp.40-44]. When applying these tools, researchers must seek to understand when one constraint may underlie others and recognize that the goal is not only growth alone, but growth that can be sustainable and inclusive.

Through this exercise, we understood inter-industry coordination failures as both a cause and a result of the lack of export-oriented investment, and we therefore searched for other constraints that were most binding to investment, particularly to FDI, in new and non-traditional exports. We found that access to land, policy uncertainty (especially within tax and trade policy), water and wastewater infrastructure, and transportation infrastructure are the most binding constraints, and that each issue binds in particular ways. Overall, there is a lack of investment-ready industrial land with close proximity to port services. In addition, we found that electricity infrastructure holds an acute risk of becoming one of the most binding constraints in the near future. This somewhat long list of binding constraints was the result of different issues binding for different industries and locations within Sri Lanka. Meanwhile, the process also identified several issues that are often raised as constraints to investment Sri Lanka as *non-binding*, namely: access to finance; education; health; labor regulations; macro-fiscal stability; and corruption, courts and crime. A summary of each potential constraint analyzed is provided below in the order detailed in the report presentation [pp.47-193].

Access to Finance [pp.47-54] - Not Binding

We find that finance is *not* a binding constraint. The financial system is operating at a level that can support economic growth. While the quantity of credit is somewhat low, this appears to be driven by a limited demand for investment finance rather than by major constraints in the supply of finance. The price of finance as captured by the real interest rate (at around 5%) was in line or lower than those of comparators, and reductions in the interest rate over time do not correlate with higher levels of investment. Available evidence also showed that firms often use banks to finance investment and rarely need to go to other sources such as supplier credit. The number of banks and the number of bank branches in the country are high. Non-performing loans are also relatively low, which might be reflective of a somewhat conservative financial system. There are also possible distortions from the two state-owned banks. We encountered concerns about

risk taking and credit rationing for some actors such as SMEs, firms in need of start-up capital, and female entrepreneurs in particular.

These problems are not a binding constraint overall, but addressing such weaknesses would improve conditions for self-discovery of new export sectors. The possibility of government borrowing crowding out the private sector is a concern. However, at this stage it does not appear to be constraining firms' access to finance. On the whole, the availability of domestic investment financing is always less of a concern for FDI because foreign investors typically have international sources of finance available as well as domestic financing. The fact that FDI is very low while the financial system appears to be fairly healthy points to other constraints.

Human Capital: Education [pp.57-71] - Not Binding

We find that education is *not* a binding constraint. Sri Lanka has a low level of tertiary education completion, but also a low level of demand for college graduates in general. At the time of our study, the latest figures available showed that 18% of Sri Lanka's labor force had tertiary education, which was below expectation given its level of income, and Sri Lanka's rate of enrollment in tertiary education (21%) was also lowest among the comparator countries. But the returns to college education were not particularly high and were declining in the observed period, indicating that tertiary education was not the binding constraint. A recent expansion in the supply of tertiary graduates was actually met with an expansion of government employment rather than private sector growth, as college graduates were absorbed into the public sector rather than finding good jobs in the private sector. Given this dynamic, a general expansion of tertiary education alone would not be likely to unlock new growth potential or draw in new FDI.

On the whole, there were no indications that firms saw the education of the workforce as a major constraint. However, there was evidence of a significant mismatch between the skills provided by the formal education system and the skills in demand by the private sector. The Sri Lankan private sector rewards managerial, ICT, and engineering skills through higher wages, but at the same time, they compete for the same pool of domestic talent with richer countries, leading to a brain drain problem that is evident in out-migration numbers among engineers and technicians. So while Sri Lanka faces a need for a targeted expansion of tertiary education to deliver skills that are in demand, it must also face the reality that many of those who it educates will move abroad for better jobs and higher wages. Meanwhile, widespread vocational and professional training services exist in Sri Lanka that appear to be filling some skill gaps as the economy evolves. The data show that these training programs—both public and private—have high returns and that workers with technical and vocational training (TVET) are better employed across a range of professions. Thus, we conclude that the TVET system provides valuable skills that are not supplied by the formal education system. Nevertheless, there are certain skill gaps that the TVET system could address better. The World Bank STEP Survey (2012) found that firms mainly reported a need for English, soft skills and specific technical skills, while cognitive skills were generally strong.

Sri Lanka also exhibits an important pattern when it comes to the movement of skilled people. In many economies, and in particular in developed ones, when firms need skills that the domestic labor market cannot supply, they have the option of employing foreign workers to get the human capital that they need. We found that Sri Lankan firms are not employing large numbers of foreign workers in this way. Instead, Sri Lanka is actually “exporting” many times more skilled workers (for instance, in engineering) than it is “importing”. This is consistent with a need for Sri Lanka to attract more foreign companies that will demand more skilled workers and pay high enough wages to compete with the job opportunities that skilled Sri Lankans seek out abroad. It is also consistent with other work by CID that has found that Sri Lanka’s immigration policies are not well-aligned with its needs to attract more investors, entrepreneurs, skills and ideas from abroad to diversify economic activity, and exports in particular.

Human Capital: Health [pp.72-77] - Not Binding

We find that health is *not* a binding constraint. There are no indications that firms are constrained by the health of the Sri Lankan workforce. The health system in Sri Lanka is actually an asset rather than a constraint. Sri Lankans are healthier than most other countries at a similar level of income. As Sri Lanka develops, communicable diseases are becoming less of a burden and the system must adapt to respond to non-communicable diseases, which are becoming more of a health challenge. This is normal evolution, but the relatively rapid transformation of health risks and the aging population of Sri Lanka requires that the health system rapidly develop new capabilities. This is a challenge but not one that constrains investment in new export-oriented activities. In fact, the historical strength of Sri Lanka’s health system may present opportunities for investment in health-related tourism.

Infrastructure: Water, Wastewater and Sanitation [pp.79-90] - Binding Constraint

We find that water and waste management infrastructure is a binding constraint for some industries. It is unclear how much export diversification is constrained by the scarcity of water and wastewater infrastructure, but at least some new projects in new industries are constrained. While household access to improved water and sanitation is high in Sri Lanka, access to sanitation infrastructure of the kind needed by industry is low. The regulated sewerage tariffs fail to reflect an underlying scarcity of sanitation infrastructure. Overall, water may not be scarce but it may not be widely available where needed for industrial use. This is true in several export processing zones where water demand exceeds water supply. Some wastewater-intensive firms have few options to bypass the wastewater constraint other than to locate in a limited number of industrial zones that have the capacity to handle high volumes of effluent. Likewise, firms have also complained of expensive services for managing solid waste (including hazardous waste). Although there have been clear signs of investor interest, the absence of industrial land equipped with necessary water and wastewater infrastructure appears to have constrained FDI in pharmaceuticals, and potentially in other chemicals, paper products and other high-polluting industries.

Beyond industrial development, water resources are also an area of widespread vulnerability to climate change in Sri Lanka. Both droughts and floods have had significant negative impacts on the economy, including on agricultural output and infrastructure damage, and their prevalence is expected to increase into the future.

Infrastructure: Electricity [pp.91-106] - Not Binding (but acute risk for future)

We find that electricity was *not* a binding constraint at the time of analysis but could become binding in the future if supply is not increased fast enough to keep pace with growing electricity demand. Some industries may be constrained by access to electricity in the quantity or of the quality required, but the evidence is mixed on the scale of this constraint. Power consumption per capita in Sri Lanka is low, but it is not clear that this is the result of constrained supply alone. System losses are not high for Sri Lanka's level of income, indicating that infrastructure quality is acceptable. Based on available information, electricity prices paid by industrial firms appear to be similar to comparator countries, but prices are high for commercial customers. When looking at the export processing zones, there does not yet appear to be an underlying scarcity of supply for exporters (as opposed to the case for water, where low regulated prices coincided with inadequate supply). Firms cited electricity as a constraint a bit above expectation given Sri Lanka's level of income as of 2011, but the occurrence of outages and use of generators were relatively low, a strong indication that firms are not taking action to bypass this constraint. The losses from power outages were reported as somewhat high in 2011, but outages had reached very low levels as of 2015. While load shedding has not been common in recent years, past occurrences of heavy load shedding correlate with sharp slowdowns in growth.

As with water infrastructure, the bindingness of electricity infrastructure may vary by sector. Based on data from the Annual Survey of Industries, more electricity-intensive industries in Sri Lanka do not appear to be at a disadvantage versus less electricity-intensive industries. However, international comparisons show that Sri Lankan manufacturing is very concentrated in moderate energy-intensity industries. Firms interviewed had some complaints about voltage fluctuations, but the scale and costliness of this problem was not clear. Likewise, the bindingness of electricity infrastructure could also vary subnationally, with a larger effect in regions where access is lower.

While the evidence on electricity is therefore mixed, there were clear indications of growing risk of this constraint becoming binding in the future. Electricity infrastructure may have been a critical gap in the past and there are indicators that planning for new supply and grid upgrades is not keeping pace with expected demand. At the time of the diagnostic, concerns were being voiced by planners and members of government that a recent cancellation of the Sampur coal power plant project would pose a serious threat to adequate supply moving forward. Before the cancellation, some projections had shown a major reliance on new coal power for the future. The Ministry of Power and Energy's own energy sector development plan included coal as a less dominant but still critical part of the plan for the future. In the time since the analysis, government decisions on large energy supply projects remain unclear. Large outages due to

grid failures also occurred during the growth diagnostic work revealing weaknesses in the system.

Infrastructure: Transportation [pp.107-123] - Binding Constraint (varying by region)

We find that transportation infrastructure is, at minimum, a major constraint to more inclusive growth across regions. It may also be a binding constraint overall, since land availability appears most limited in areas that are well-connected to Colombo, where economic activity and economic infrastructure is concentrated (and where the country's major port is located). There are significant weaknesses in transportation infrastructure and planning that have kept some people and some regions disconnected from the growth process. Sri Lanka faces an acute problem with increasing congestion in and between some cities. The national road network is extensive, but the provision of limited-access expressways is relatively low. Congestion is becoming an increasingly severe problem in the largest urban areas, including Colombo and Kandy and the route between them, as indicated by very low average travel speeds. Industrial zone occupancy has a tight relationship with connectivity to Colombo. This is likely the result of closer locations providing easier access to port services and agglomeration externalities in the Western Province. Overall, firms did not report transportation as their biggest obstacle at a high rate in 2011, but newer survey data is needed given a steady growth of vehicles and congestion since that time.

The evidence suggests that these weaknesses are increasingly affecting economic activity in the Western Province and prospects for economic expansion in other regions of the country. Transportation infrastructure is likely binding for some regions of the country with limited connectivity (and high transportation costs) to and from Colombo, but further research is required to test for these region-specific constraints. As one partial test, we found no clear signals that the opening of the Southern Expressway has lifted a constraint to new exports or export-oriented investment in that area, although we did see that the expressway coincided with a drop in outward migration for foreign employment from the impacted area. Different parts of the country appear to face different transportation gaps in roads, air travel and marine transportation infrastructure while rail infrastructure is outdated and limited, especially for the transport of goods. The growth diagnostic tests do not provide overwhelming evidence that transportation infrastructure is the single, most binding constraint, but they do show that improved planning and execution of public or public-private investment in transportation will be very important for overall growth and the inclusiveness of growth moving forward.

Government Failures: Access to Land [pp.125-139] - Binding Constraint

We find that access to land is a binding constraint to growth and economic transformation. State coordination is insufficient to meet demand for land for new private sector investment, including for new and non-traditional export-oriented investment. This constraint is likely most problematic in the Western Province, although there are a few mixed signals. Land is primarily state-owned in Sri Lanka (~80%), and governed by a disconnected institutional structure and a complex legal

environment. In 2016 alone, there have been a number of reports of lost or stalled high-profile FDI projects due to land disputes with the government. One recent legal change limiting foreign land ownership and another allowing for a series of government expropriations preceded a recent drop in FDI. World Bank Enterprise Survey data suggest that land access is a constraint based on the unusually high rate of firms reporting it as their main obstacle. World Bank Doing Business Indicators are also consistent with a very low quality of land administration in Sri Lanka. Available land price information is limited, but suggests that the price of land in Sri Lanka is high overall, with prices increasing most rapidly in the Western Province. High land prices are not yet passed on as high rents for commercial space or industrial space (at least within BOI-administered zones), though they are rising.

When it comes to manufacturing, a large share of exports and most export innovation has occurred in a few export processing zones, primarily in the Western Province, that are now generally at capacity. Both firms and BOI representatives reported that clarity of land access in these zones versus the outside of zones continues to be a draw for investment. Analysis of BOI data also supports this view. Outside of the zones, middlemen are commonly used in land deals due to a lack of information on land availability and permits. A very large number of government agencies have responsibilities and control over plots of land and over land administration, but they lack systems for coordinating decisions. This makes land acquisition for investment costly and risky, and at times, virtually impossible. Some firms even reported that they remain informal because of an inability to secure formal land approvals. In this way, government failure to make appropriate land available for new investment is a binding constraint.

This constraint also applies to investment in land-intensive investment outside of manufacturing, including in tourism and agriculture. When it comes to agriculture, additional legal restrictions on plot size and land use are long-standing, although the sector has evolved under this constraint, including through the use of community planning and aggregating companies. Small land parcels, the absence of land titles and longstanding laws affecting rural land use all reduce agricultural productivity and rural well-being, but these constraints are not as directly binding on the growth of exports and export-oriented investment as the inability of the government to adequately facilitate land use for new investment.

Government Failures: Labor Regulations [pp.140-150] - Not Binding

We find that labor regulations are strict in Sri Lanka but they are *not* a binding constraint. This finding differs from a common view of observers of the Sri Lankan economy. The problem for many exporting industries tends to be less one of releasing workers and more one of attracting and retaining workers who are drawn to higher wages in non-tradable industries. Many existing exporting industries find it difficult to attract labor based on wages, despite the strong protections provided to workers. There may be some labor regulations that could be changed to improve productivity on the margin, but Sri Lanka's traditional exporting industries would only find it more difficult to attract the workers if labor regulations were scaled back. There is no strong evidence suggesting that labor regulations are binding for new export industries either.

Sri Lanka's strong labor standards are an often mentioned draw for investors and brands whose customers value ethically sourced products.

There is some evidence that labor regulations are relatively strict. The rate at which firms report labor regulations as a constraint is very high and regulations are stricter than comparator countries in terms of third party approval for dismissals and severance pay. But regulations are also less strict in terms of probationary periods and compulsory retraining or reassignment. We observed that firms often use this to their advantage by employing temporary workers, contractors and trainees, which are not entitled to the same benefits and protections as permanent workers. The minimum wage is low enough to not bind for most industries, with international comparisons compiled by the U.S. Bureau of Labor Statistics suggesting that Sri Lanka's total compensation costs remain low—roughly half of those of the Philippines. The most commonly cited regulatory constraint on labor is the Termination of Employment of Workmen Act (TEWA), which dates back to 1971. The fact that this policy was in place all through Sri Lanka's last wave of structural transformation suggests that it was not binding in the past. Likewise, the success of the garment industry, which is highly labor-intensive, is strong evidence that labor regulations are not a binding constraint to export diversification and FDI.

Government Failures: Policy Uncertainty [pp.151-166] - Binding Constraint

Our evidence suggests that policy uncertainty is a binding constraint for new investment, and especially foreign investment. The private sector faces serious constraints from frequent and unpredictable changes in tax policy, extending to trade policy and to a lesser extent land policy.⁴ Important changes in tax policy are seen as *ad hoc* and policy reversals and unclear implementation of policy changes are the norm. The Board of Investment has historically had a large degree of discretionary power to provide incentives through various exemptions that have added to the complexity and difficulty of implementation. The structure, complexity and uncertainty of import duties and para-tariffs, which were introduced as a means of both trade protection and revenue generation, also creates a bias against new exports that is very problematic. Sri Lanka's tariffs and para-tariffs are marked by high effective rates of protection with high variance across products. Additionally, the unpredictability of changes results in the uncertainty of firms, especially in new industries, over their costs of production.

Sri Lanka's tax policy risk, as measured by the Economist Intelligence Unit, is high relative to comparators. While tax rates in Sri Lanka are not high by international standards and firms do not tend to report tax rates as a major obstacle, tax administration is also a major constraint reported by firms. Policy uncertainty was the most ubiquitous constraint encountered when interviewing firms as part of the growth diagnostic, which matched the results of recent firm surveys. The problem extends to trade policy, where changes to tariffs and para-tariffs are made frequently and unpredictably in part to fill revenue gaps. Investor sentiment appears to

⁴ The Government of Sri Lanka has announced promising policy and strategy changes in regard to each of these three areas (tax policy, trade policy, land policy), but policy uncertainty overall remains very high and binding as implementation of these changes is yet to be seen and trusted by the private sector.

have been affected by a recent intensification of tax policy uncertainty. The longer-term trend of lower than expected FDI is consistent with this being a long-term and growing problem. Firms are able to bypass many levels of policy uncertainty (as well as reduce their tax burden) by utilizing the Board of Investment. Therefore, it is not surprising that the BOI handles a large number of investments, both local and foreign. Analysis of investment data and qualitative interviews agree that this has become a less effective means of bypassing the constraint over time. Evidence also suggests that domestic firms remain informal partly to avoid policy uncertainty.

Government Failures: Macro-Fiscal Stability [pp.167-176] - Not Binding

We find that macro-fiscal instability is *not* directly binding private sector decisions in Sri Lanka, but macro-fiscal weaknesses do exacerbate more binding constraints by entrenching policy instability and uncertainty, which are binding private sector decisions. Tax revenue is too low to support the needs of the government, leading to policy adjustments to generate new revenue. The deficit was 6.9% in 2015 with problems existing on both the expenditure and revenue sides. Tax revenue, at 13.1% of GDP in 2015, remained extremely low despite a slight improvement over what it was during the previous few years. After a sharp devaluation of the exchange rate in late 2015, the more free-floating rupee gradually continued to depreciate through 2016. Inflation has remained below levels that would hinder growth and the financial system is well-capitalized. Foreign reserves contracted sharply in 2015 but have been stabilized since with international assistance.

Prior to Sri Lanka's most recent problem of low foreign reserves, indicators of macroeconomic risk (sovereign, currency and banking risk) for Sri Lanka were all trending downward between 2013 and early 2015 but without any noticeable uptick in new export growth, diversification or FDI. Indicators of sovereign risk grew through 2015 and early 2016 but stabilized in April 2016 as the current IMF Extended Fund Facility backstopped reserves. Firms interviewed did not see distinctions between these periods, but rather highlighted policy inconsistency throughout this time frame as a major constraint. Thus, during both the good times and the bad in terms of perceived macroeconomic risk, there was not a fundamental change in private sector decisions around investment. Therefore, macro-fiscal stability is not directly binding. While the IMF backstop of reserves successfully curbed growing sovereign risk, there are no indications that the EFF has served as a signal that tax, trade or land policy will be more stable moving forward.

Government Failures: Other Rule of Law Failures [pp.177-178] - Not Binding

We did not encounter any strong evidence that government failures related to rule of law (i.e. the judicial system, corruption, and crime) were binding constraints. In surveys and interviews, Sri Lankan firms consistently placed rule of law issues well below other possible constraints, and did not report perceptions of especially high costs related to corruption. Based on these indicators, deeper analysis of these microeconomic risks was not needed.

Market Failures [pp.179-193] - Binding Constraint (both a cause and effect)

We find that inter-firm coordination failures are a binding constraint to export diversification and sustained growth in Sri Lanka. This is both a causal factor and an outcome in itself of the problem of low investment in new industries. Domestic innovation is limited by Sri Lanka's position in the Product Space as export-oriented activities are focused in just a few products where Sri Lanka has discovered a comparative advantage, and the capabilities required for these products have limited connections to new products. Limited diversification of exports over the last two decades has occurred into "nearby" areas of the Product Space at a rate slower than most comparator countries. Firms don't exhibit difficulties in self-discovery within existing product clusters in Sri Lanka but face significant inter-industry coordination problems when attempting to move to new industries or enter global production networks. Innovation has occurred within the apparel sector and a few other industries at a smaller scale, but Sri Lanka has seen little transformation in what it exports over the last 20 years. There is a "chicken and egg" problem where industries that have been successful in comparator countries require integration in global production networks, but firms in Sri Lanka are not connected through these, so Sri Lanka remains unattractive for firms that depend on a connected environment.

The Diagnosis

Summary of potentially binding constraints

Recall that our collaborative diagnostic work began with the high-level finding that growth in Sri Lanka is constrained by the weak growth of exports, and that we focused the growth diagnostic analysis that followed on a specific question: *What are the constraints that bind investment in new and non-traditional export-oriented activities?*

We found that access to land, policy uncertainty (especially within tax and trade policy), water and wastewater infrastructure, and transportation infrastructure emerged as the most binding constraints based on the diagnostic tests. We also understood inter-industry coordination failures as both a cause and effect of the lack of new and non-traditional export-oriented investment. In addition, we also found that electricity infrastructure holds an acute risk of becoming one of the most binding constraints in the near future. These most binding constraints bind differentially across industries and regions of Sri Lanka. For example, access to land is binding in the Western Province but may not be binding in other provinces. Access to water and, particularly, wastewater infrastructure is binding for potential pharmaceutical industry FDI but not for many other industries.

It is also clear from the analysis that the constraints do not exist in isolation from one another. Globally competitive firms require not just land in Sri Lanka but land that is well-connected to specific types of infrastructure. The severity of policy uncertainty further depends on whether an investor is renting or buying land and whether the investor is protected by some of the special rules of export processing zones. Policy uncertainty also depends on what industry, as policy uncertainty tends to be much higher for potential new industries than traditional industries.

Growth Syndrome [pp.194-200]

It is clear that this group of binding constraints emerged, and continues to persist, due to a shared underlying cause, which we refer to as a *growth syndrome*. We believe that the growth syndrome facing Sri Lanka is a problem of extremely high fragmentation in policymaking and the policy implementation. There is a critical lack of government coordination between a very high number of ministries (around 50), as well as numerous boards and agencies, with overlapping responsibilities and decision-making authority. Policy uncertainty is a result of this underlying dysfunction, as are persistent failures to meet the demand for government-owned land (especially through industrial zones) and for key industrial infrastructure (water, wastewater, electricity, and transportation) -- or, at times, the presence of these public goods in the wrong places.

Interviews suggest that there exists a vicious cycle in Sri Lanka where overlapping government bodies rely on disordered rules and deals when interacting with the private sector in order to

deal with the existing bureaucratic complexity. This has led to various kinds of incentives, including use of scarce industrial land, to be provided to traditional industries (which are more able to navigate the complex bureaucracy and which appear less risky to risk-averse bureaucrats) at the expense of potential new industries. Over the last several decades, the system developed a reliance on tax holidays to attract investment, in effect compensating firms for these large transaction costs, but the ever-expanding reliance on tax holidays has exacerbated deep revenue gaps. When the Government of Sri Lanka has attempted to address these revenue gaps, it has tended to do so only partially addressed through *ad hoc* policies and decisions, such as the creation of para-tariffs, which in turn have led to further institutional complexity and intensified the original problem.

Sri Lanka needs to fundamentally accelerate and re-orient its growth. This will require a proactive, export-oriented policy agenda that is especially attuned to the needs of investors in new and non-traditional sectors. However, this growth syndrome currently stands in the way. The syndrome manifests itself in many ways, including in very high policy uncertainty, ineffective land administration, and shortages of critical industrial infrastructure that investors in new export-oriented activities will need. Although some improvements have been made since the time of this analysis, Sri Lanka's ability to grow faster and more sustainably will depend on the success of the Government of Sri Lanka in continuing to address these binding constraints and the underlying government coordination problem. These issues also constrain the ability of growth to reach more places and people across Sri Lanka, though region-specific growth diagnostics are required to identify which problems are most binding in which places.