Policies to Increase Industrial Competitiveness (PIIC) through Government Investment

2010-2011 Practicum
Final Report

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This study aims to research how countries can select Policies to Increase Industrial Competitiveness (PIIC) through two approaches: a historical reflection on the various policies that countries have implemented in order to enhance specific industries, and the creation of an analytic process on how governments should select specific industries to improve competitiveness. The historical reflection was done through looking at three industry case studies, household appliances manufacturing, tea production, and ecotourism, and by examining two country-specific cases per industry. A historical approach to PIIC showed that a solid system of public infrastructure (roads, health system, electricity, and sewage), the provision of property rights, and an open policy towards foreign investments were the main drivers of enhancing industry competitiveness across all industries. To create the analytic process the team used decision tools from investment science, decision analysis, and cost-benefit analysis. The analytic process showed that sufficient cooperation between the public and private sectors are crucial in policymakers’ ability to select the most beneficial policy measure to enhance industry competitiveness.

The study was conducted by five graduate students from Stanford University in the Ford Dorsey Program in International Policy Studies and the Public Policy Program. The contact information for the group members for any questions or comments regarding this research project is listed below alphabetically by last name.

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</tbody>
</table>
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Tables and Figures</td>
<td>1</td>
</tr>
<tr>
<td>Acronyms</td>
<td>3</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>4</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>6</td>
</tr>
<tr>
<td>I. Introduction</td>
<td>7</td>
</tr>
<tr>
<td>Objectives</td>
<td>8</td>
</tr>
<tr>
<td>II. Methodology</td>
<td>9</td>
</tr>
<tr>
<td>III. Identifying Industries and Policies for Government Support</td>
<td>10</td>
</tr>
<tr>
<td>IV. Industry Case Studies</td>
<td>13</td>
</tr>
<tr>
<td>Households Appliances</td>
<td>15</td>
</tr>
<tr>
<td>Case Study – China</td>
<td>17</td>
</tr>
<tr>
<td>Case Study – South Africa</td>
<td>21</td>
</tr>
<tr>
<td>General Preconditions for Household Appliances Industry</td>
<td>24</td>
</tr>
<tr>
<td>Policy Recommendations</td>
<td>25</td>
</tr>
<tr>
<td>Tea</td>
<td>27</td>
</tr>
<tr>
<td>Case Study – Sri Lanka</td>
<td>29</td>
</tr>
<tr>
<td>Case Study – Kenya</td>
<td>33</td>
</tr>
<tr>
<td>General Preconditions for Tea Production Industry</td>
<td>38</td>
</tr>
<tr>
<td>Policy Recommendations</td>
<td>38</td>
</tr>
<tr>
<td>Ecotourism</td>
<td>40</td>
</tr>
<tr>
<td>Case Study – Costa Rica</td>
<td>43</td>
</tr>
<tr>
<td>Case Study – Tanzania</td>
<td>47</td>
</tr>
<tr>
<td>General Preconditions for Ecotourism Industry</td>
<td>50</td>
</tr>
<tr>
<td>Policy Recommendations</td>
<td>51</td>
</tr>
<tr>
<td>V. Conclusion</td>
<td>53</td>
</tr>
<tr>
<td>Appendix 1: Detailed Methodology Section</td>
<td>54</td>
</tr>
<tr>
<td>Appendix 2: Household Appliances</td>
<td>72</td>
</tr>
<tr>
<td>Appendix 3: Tea</td>
<td>75</td>
</tr>
<tr>
<td>Appendix 4: Ecotourism</td>
<td>77</td>
</tr>
<tr>
<td>References</td>
<td>80</td>
</tr>
</tbody>
</table>
LIST OF TABLES AND FIGURES

Tables:

Table 1: Rationale for Choice of Case Studies ................................................................. 14
Table 2: Household Appliances Industry Key Indicators ..................................................... 15
Table 3: Tea Industry Key Indicators ................................................................................ 27
Table 4: Ecotourism Industry Key Indicators .................................................................. 42
Table 5: Tourism in Latin America: Top 17 Receipt Earners (2008) .................................. 44
Table 6: Tourism in Africa: Top 15 Receipt Earners (2006) ............................................. 48
Table 7: China: Policy Implementation Details ................................................................. 72
Table 8: South Africa: Policy Implementation Details ...................................................... 73
Table 9: Sri Lanka: Policy Implementation Details ......................................................... 75
Table 10: Kenya: Policy Implementation Details ............................................................... 76
Table 11: Costa Rica: Policy Implementation Details ...................................................... 77
Table 12: Tanzania: Policy Implementation Details ......................................................... 78

Figures:

Figure 1: Intersection of Public and Private Sectors ......................................................... 10
Figure 2: Step-by-Step Description of Industry Selection Process ................................... 11
Figure 3: Final Decision Matrix ...................................................................................... 12
Figure 4: China’s Imports and Exports of Household Appliances, 1993-2001 .................. 18
Figure 5: Industry Performance and Policy Implementation Timeline (China) ............... 19
Figure 6: Actual Indices of the Production of Household Appliances Major Group Base: 2000 (100 percent) .............................................................................................................. 23
Figure 7: Global Production of Tea, Acreage and Average Yield .................................... 29
Figure 8: Production and Yield Trends in Sri Lanka with Main Government Policies .......... 30
Figure 9: Profitability of Sri Lankan Tea Producers ......................................................... 31
ACRONYMS

PIIC: Policies to Increase Industry Competitiveness
CST: Certification for Sustainable Tourism
FAOSTAT: Food and Agriculture Organization of the United Nations Statistical Organization
ICT: Costa Rican Tourism Institute
IDB: Inter-American Development Bank
IMF: International Monetary Fund
KTDA: Kenya Tea Development Authority
MINAE: Ministry of Natural Resources, Energy, and Mines (Costa Rica)
SINAC: National System of Conservation Areas of Costa Rica
TAHI: Tanzania Hotels Investment
TANAPA: Tanzania National Parks
TIES: The International Ecotourism Society
TTB: Tanzania Tourist Board
TTC: Tanzania Tourist Corporation
USAID: United States Agency for International Development
WMA: Wildlife Management Areas (Tanzania)
EXECUTIVE SUMMARY

This study aims to help governments formulate incentives to make an industry more competitive, or Policies to Increase Industrial Competitiveness (PIIC). Performed jointly with the International Finance Corporation (IFC), which is a part of the World Bank group, the study used two simultaneous research streams. The first one, called Guidelines to Select Industries and Policies, explored decision methods in the literature to help governments select industries and policies to nurture and contribute to economic growth. The second stream uses case studies in three industries, household appliances manufacturing, tea, and ecotourism, with two country case studies per industry, to evaluate the effectiveness of industry-specific government policies. A critical general finding is that private sector consideration and involvement is crucial in the formulation of PIIC. This statement challenges the common practice in which the government only analyzes and implements policy from its own perspective.

PIIC Guidelines

Based on research results, we developed a set of guidelines that propose a combination of public and private sector perspectives. The result will be that only industries that are attractive to both sectors will be considered the desirable options. When the private and public sectors have incentives to participate, the commitment to the PIIC is self-reinforcing. The proposed guidelines have four steps. First, with a combination of heuristics, analysts select a prospective set of industries to be evaluated in detail. Second, the industries are analyzed from the private sector perspective using portfolio theory. Portfolio theory assumes that the private sector wants to maximize expected profit and minimize risk. Third, different policies to support industries are analyzed from the public sector perspective through cost-benefit analysis. This analysis will guarantee the efficiency of the policy from the government perspective. Finally, the results from the public and private sector analyses are combined for the policymakers to select one or more industries that are attractive to both sectors.

Case Studies

In consultation with the World Bank, we selected the case study industries for the following reasons: these three industries are of accessible and available to developing countries, they are expected to keep growing in the future, and they represent all three basic economic sectors: agriculture sector, manufacturing sector and service sector. The choice of time periods and countries for case studies of these industries was steered by the availability of sources and data, geographical diversity and the World Bank’s preferences. In all case studies, research shows that amongst the range of policy options implemented by governments, those that helped to enhance public infrastructure and encourage investment demonstrated successful results. On the other hand, policies aimed at giving governments greater control over the industries backfired and left the governments turning to the private sector and foreign investment to raise the competitiveness of industries. The case studies support our argument presents as follows:

Household Appliances Manufacturing: Public infrastructure programs, like the electrification program that began in the late 1980s in South Africa, helped the household appliances industry to penetrate the rural markets. Second, both China and South Africa took various measures to
attract foreign direct investment (FDI), by for example offering tax holidays, which proved to be an effective way to bridge the financial gap.

*Tea Production:* The case studies of Kenya and Sri Lanka confirm the central hypothesis of our guidelines: Sri Lanka’s stagnant tea industry in the 1970s and 1980s was the outcome of government policies geared toward exclusively public sector goals of government revenue and employment creation. On the other hand, both Sri Lanka’s and Kenya’s instances of liberalization led to industry growth. We also found that policies providing consistent support through industry associations, in particular to smallholders, were successful as well.

*Ecotourism:* The openness to foreign investors in creating ecotourism projects was critical in both case studies, Costa Rica and Tanzania. Costa Rica’s early advocacy of foreign investors to its tourism sector allowed a continued and steady growth in Costa Rica’s tourism. Tanzania suffered initially from socialist policies by the government, which discouraged foreign investors to become involved with ecotourism in the country. Yet, eventual liberalization demonstrated that with enough foreign capital and investment, Tanzania’s ecotourism sector was both unique and formidable.

**Recommendations**

Our analysis lays the foundations and frameworks for further research and testing of PIIC applications. These guidelines are a strong foundation for PIIC analysis for both the public and the private sectors. We understand that they will be updated as learning is generated from its application, but they are a very robust first step. Policymakers can use the industry-specific case studies to draw important conclusions that are widely applicable, not only to the selected industries, but to PIIC in general.
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I. **INTRODUCTION**

For centuries, economists have debated the role of the state in running the economy. Attempts by the government to identify and support specific industries or firms through tax breaks, subsidies, and other policy instruments in order to promote competitiveness and growth have been at the center of the debate. Economists like Alexander Hamilton, Friedrich List, and John Maynard Keynes voiced the opinion that governments should take a more active stance in building up its industries for the sake of the overall economy. Today, after being overshadowed by the so-called *Washington Consensus*, a set of neoliberal programs that included economic liberalization and the transfer of industries from government ownership to private control for more than two decades, the call for government intervention appears to have made a strong return. The World Bank’s Chief Economist, Justin Lin, has been openly advocating an active role for the government to promote structural adjustment and growth in developing countries.

States have historically influenced the industrial composition of their economies through the use of government investment or interventions such as tax breaks and industry subsidies. The theoretical foundations for the promotion of certain sectors were based on claims that some industries were more deserving of state protection than others due to their importance to the economy. For example, the U.S. agriculture sector has always received a significant amount of protection due to its political and economic importance. However, opponents of this view, such as Thomas Jefferson, argued that minimal government intervention was desirable for the sake of the economy. Until the Great Depression, the world’s most powerful economies, namely Britain and the U.S., were ruled by the principles of Laissez-Faire Economics, where the private sector was free to engage in economic transactions without extensive government intervention.

The academic foundation for government intervention occurred with Keynesian economics, which identified the relationship between market failures and the role of government intervention to correct these failures. Equally influential was the economic success of the Soviet Union, which grew at an enormous rate, suggesting that government involvement in the economy could be beneficial. Development economists concluded that the push for industrialization in underdeveloped countries must be directly supported by governments allocating resources for investment in public enterprises in the heavy industry sector. Consequently, many Latin American and Asian governments became heavily involved in developing industries, but despite everyone’s hopes that this would provide the boost for these developing economies, the financial crises that followed in the 1970s and the 1980s diverted the world again to the Washington Consensus.

This trend was interrupted, however, by the Chinese model of a strong government role in the economy, a model that is often linked to China’s average growth rate of 10 percent per year since the 1980s. China’s example clearly demonstrates that under the right circumstances, government involvement can be tremendously helpful in developing industries and economies. Similar cases of economic growth, such as South Korea and Japan, have also suggested that governments may play a crucial and positive role in identifying key potentially competitive industries and in spurring their growth through government policies.

Attempts by the government to stimulate growth and development have resulted in both successes and failures. Successes have been obvious in the rising economies of China and South
Korea, although others have tried and failed to provide a boost for their industries to become globally competitive.

The recent intervention by the U.S. government to save two of the world’s largest corporations, General Motors and Citigroup, triggered heated controversy on the uses of taxpayer dollars in corporate bailouts. After all, the U.S. government had already supported industries, such as steel, yielding mixed results. This dilemma is not exclusive to the U.S.; selecting policies that will lead to industrial development is a question that most governments face but seldom have an answer for. Developing countries have been requesting the World Bank develop guidelines on how to choose industries for support and what industry-specific policy tools are most likely to be effective.

**OBJECTIVES**

Two objectives for our report are intended to address this need for better guidance in the selection and support of potentially competitive industries:

1) Propose guidelines for policy makers to identify industries that have the potential to become competitive.
2) Identify successful policies to increase competitiveness for specific industries.

The audiences we thus seek to reach with this report are developing countries’ government officials tasked to work on policies to increase industrial competitiveness.
II. METHODOLOGY

This project evolved from discussions between our team and World Bank staff. The goal of the project is to provide guidelines for developing country governments considering industrial policy.

For the guidelines in Section III, we began with a literature review to determine how to identify competitive industries. The works that most influenced the development of our guidelines were written by Ron Howard, David Luenberger, Harvey Rosen and Anthony Boardman et. al. We realized that there was much to be gained by combining different public and private sector analyses into one.

The next step in the development of these guidelines was to conduct interviews with experts. We discussed our approach with Stanford professors in the Department of Economics, Management Science and Engineering, and the Stanford Center for International Development.

For the case studies of Section IV, we engaged for the most part in literature review. A thorough review of the industries was necessary to understand the dynamics in it, including how crucial factors to cost and revenue are appraised. Equipped with this knowledge, we first extracted the policies of importance to a country’s industry. The selection of case studies was a result of a number of considerations, including sources and data. In selecting case studies we ensured from the beginning that we had sufficient sources to identify policies and judge their impact. To judge their effectiveness we then used industry-specific key performance indicators that are generally considered capable to illustrate the effect of policies. From the cases we studied, we identified pre-conditions and policy recommendations for supporting industries with potential. We were engaged in a productive dialogue with the World Bank during this entire process.
III. IDENTIFYING INDUSTRIES AND POLICIES FOR GOVERNMENT SUPPORT

Governments actively pursuing economic development face the difficult task of identifying industries that, when actively supported by policy, can lead to economic growth. Potentially competitive industries might not have been pursued by the private sector because of the lack of information among investors, which is especially true for developing countries\(^1\); and/or because there is a barrier to growth imposed by the government. The purpose of this section is to help governments and the private sector identify industries that, when developed, would benefit both the public and private sectors. Industries at this intersection (see Figure 1) make government assistance cost-effective and are competitive and profitable enough to make them attractive to the private sector.

**Figure 1: Intersection of Public and Private Sectors**

To be attractive to the private sector an industry must offer high returns at moderate or low risk levels. We suggest portfolio theory to analyze the tradeoff between profits and risks in investments. Portfolio theory uses the expected return and the standard deviation to approximate such trade off\(^2\). For the public sector part, we suggest cost-benefit analysis, which compares different policies by contrasting their costs with their benefits.

The entire process should be done in collaboration between government and potential private sector partners, each contributing with information and resources. Analysts from both

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sectors will lead the process. The private sector’s analyst must understand the industry’s profit drivers, competitive environment and trends. The public sector analyst must have modeling and valuation experience. Additionally, he must have basic knowledge on private financials. Figure 2 depicts the overall industry selection process. Step 1 involves selecting industries to be studied. Steps 2 and 3 estimate the impact of these industries on the private sector and on the public sector, respectively. Finally, step 4 combines the private and public sector analyses to identify industries that would be attractive to both the public and private sectors. Many of the tools used in these analyses are typically used independently, and this report combines them in an innovative manner.

**Figure 2: Step-by-Step Description of Industry Selection Process**

![Diagram of industry selection process](image)

Source: Team analysis

The dotted lines denote the interdependencies between the private and public sector analyses. The policies and incentives that the government chooses will affect the private sector performance. In turn, a change in the private sector performance will change total the benefits for society (e.g. an increase in the private sector output creates more jobs.) Hence, this is an iterative process that the analysts can perform to evaluate different policies and their impact.

For the final decision on the industries, analysts combine the private and public sector analyses into one matrix: return and risk to investors in one axis, and efficiency of government expenditure (costs and benefits) in another. In Figure 3 industries are plotted into the matrix after the public and private sector analyses. The higher an industry is in relation to the y-axis, the more attractive it is to the private sector in terms of return. Risk is measured by the vertical lines extending across the plotted points, which is the second variable of interest to the private sector. The larger the lines, the greatest the risk. The variables of greatest interest to the public sector are.
the size of benefits delivered and the efficiency of the government expenditure. The horizontal axis measures the efficiency of the government investment, (i.e. benefits divided by costs), and the size of the plotted industries represents the total relative benefit. Industries on the top right quadrant are efficient and attractive to both the public and private sectors, and if the risk is within the tolerable range of the decision-makers in question, then these are the industries to be prioritized.

**Figure 3: Final Decision Matrix**

Source: Team analysis

In Appendix 1 we describe in detail the entire process to reach the decision matrix of Figure 3.
IV. **Industry Case Studies**

We have laid out guidelines to assist governments wishing to select specific industries to support in their goal to become globally competitive. A cornerstone of these guidelines is the incorporation of private sector interests into the calculations by the public sector or the government. Beyond the assertion that government policy can change the cost structure of firms, the question of how a particular industry can be most effectively supported remains. Industries are fundamentally different in their cost structures and therefore industry-specific policies are needed. In deciding what policies governments should implement to support an industry, we see a benefit in looking into how other countries have effectively (and ineffectively) supported their industries.

In the case studies that follow we have set out to explore what policies governments have implemented, regardless of whether the policy explicitly targeted on an industry or not, and the impact of these policies. While the reason governments have decided to implement certain policies is often opaque to us, we have identified policies and deduced their impact on industries. For these three industries we first show which policies were successful, then provide industry-specific policy suggestions should a government choose to support one of these industries. We also enumerate certain preconditions that need to be met for these industries to command the potential to become globally competitive. One of the lessons the case studies offer is that when governments prioritize public sector interests and lack in understanding of private sector objectives and needs, the result is often poor growth for that industry. This finding strongly supports our guidelines recommending the inclusion of the private sector perspective.

The three industries we examine are household appliances manufacturing, tea and ecotourism. The selection of these industries was decided in conversation with the World Bank for the following reasons: these three industries are of relevance for developing countries, they are expected to keep growing in the future, and they represent all three basic economic sectors. The choice of time periods and countries for case studies of these industries has been steered by the availability of sources and data, geographical diversity and the World Bank’s preferences. The countries we examine are China and South Africa for the household appliances section, Kenya and Sri Lanka for the tea section, and Costa Rica and Tanzania for the ecotourism section.
Table 1: Rationale for Choice of Case Studies

| Household Appliances | • Potential candidate for delocalization to developing countries where both input costs and market saturation rates are lower.  
| | • Considered an industry that helped diminish the technology gap between developed and developing countries. |
| China 1979-2009 | • Emerged from a very low production in the mid-1980s to the champion of white goods manufacturing by 2001 due to persistent efforts to open up the economy and reduce import tariffs. |
| South Africa 1971-2009 | • Reflects a dilemma between rapid liberalization and protection of infant industry. The excessive protection for the household appliances industry was dismantled from 1994 onwards, which led to liquidation of some domestic manufacturers and shrinking employment opportunities. |
| Tea | • Represents agricultural products’ importance to developing economies for sector is taking advantage of their competitive advantage of low-cost labor and land. |
| Kenya 1970-2000 | • Immense success story (28 fold increase in production) also due to smart industrial policies. |
| Ecotourism | • Often used as a method for developing countries to jumpstart their economies and to bring in foreign exchange.  
| | • Ideal industry to examine as a method for developing countries to invest in to enhance development and preservation. |
| Costa Rica 1930-2008 | • Representative success case starting off as a small, low-key destination for nature enthusiasts, Costa Rica has grown to be one of the most popular and famous destinations for ecotourism. |
| Tanzania 1959-2000 | • Tanzania has had both tremendous success and failures in its pursuit of ecotourism as an industry to stimulate economic growth  
| | • Demonstrates the contrast in impact between government-run policies and private investment-oriented policies. |
HOUSEHOLD APPLIANCES

Overview of Industry

Household appliances are electrical/mechanical machines that accomplish routine housekeeping tasks, including but not limited to cooking, food preservation, or cleaning. Household appliances can be classified into two categories: major appliances/white goods and small appliances/brown goods. Major appliances are differentiated from small appliances first because they are large, difficult to move, and generally fixed in place. In addition, major appliances typically have higher electricity requirements than standard electricity outlets can satisfy, and these requirements necessitate special electrical wiring to supply high current. Major appliances include air-conditioners, clothes driers, refrigerators, kitchen stoves, water heaters, etc. In contrast, small appliances refer to appliances that are portable or semi-portable, such as televisions, telephones, CD and DVD players.

The household appliances industry has several characteristics:

• Similar and simple to produce in despite of some cross-national differences stemming from different environmental regulations and variety of electricity voltages.³
• Mature and consolidated industry with several global brands dominating the market.⁴
• Potential candidate for delocalization to developing countries. Not only the lower input costs, but also the higher demand growth rates due to lower market saturation rates, offer developing countries a pronounced late-comer advantage.
• Brand loyalty serves as a significant competitive factor, which acts as an information-based barrier to entry and reduces the amplitude of short-run demand shifts and allows firms to experiment.⁵

Table 2: Household Appliances Industry Key Indicators

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<th>Indicator</th>
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<tr>
<td>Global Market Size (2007)</td>
<td>658.3 million units</td>
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<tr>
<td>Global Market Value (2007)</td>
<td>$124,998 million</td>
</tr>
<tr>
<td>Growth Rate (2006-2007)</td>
<td>3.8 percent (Market Size)</td>
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<td></td>
<td>3.1 percent (Market Value)</td>
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<tr>
<td>Main Producers for Major Appliances with Markets Shares (2009)</td>
<td>Haier, China (5.1 percent)</td>
</tr>
<tr>
<td></td>
<td>Whirlpool, USA (4.5 percent)</td>
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<tr>
<td></td>
<td>LG, South Korea (4.3 percent)</td>
</tr>
<tr>
<td></td>
<td>Panasonic, Japan (3.1 percent)</td>
</tr>
<tr>
<td></td>
<td>GE, USA (3.0 percent)</td>
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Household Appliances Industry Demand

International demand for household appliances has increased rapidly. The global demand for major appliances increased strongly from 267.4 million units a year in 1999 to 328.3 million units a year in 2004. In 2009, the world’s demand for white goods was expected to rise 2.8 percent annually through 2013, exceeding 490 million units. 6 It was also reported that in 2009 the world market of small appliances registered a 1.6 percent increase in value. 7

The demand for household appliances is intricately correlated with the state of the housing market, people’s disposable income and the state of the macro-economy. An increase in home purchases regularly triggers the purchase of household goods. However, whenever the real income decreases, people defer their purchase for appliances or opt for cheaper items. Not surprisingly, the recent economic crisis has witnessed consumer spending being reduced drastically. In 2009, because of the ailing housing market and weak consumption overall, the global turnover of major appliances decreased by eight percent. In the U.S. the downturn led to a sharp reduction of major appliances sales by approximately 12 percent. 8

The global appetite for household appliances is geographically uneven. Owing to the increasing level of electrification, world demand grew sharply throughout the 1960s and well into the 1970s, with a geographical concentration of demand on three markets representing over 70 percent of market share. These three markets were the US, Western Europe and Japan. By the end of 1970s, demand for household appliances approached saturation in these three markets, and thus the growth rates in developed countries fell, and replacement demand became the primary drivers for the sale in these markets. In vivid contrast, the most salient increases in demand were supported by customers from the developing countries, particularly from the Asian-Pacific, East European and South American economies, which maintained nearly double-digit growth rates in household appliances sales.

Geographic differences in demand resulted from regional variations in economic conditions and demographic structures. Compared to developed countries, where the demand mainly came from replacement, emerging economies have untapped potentials to expand their domestic markets for household appliances resulting from the low level of penetration in domestic markets, rapid urbanization, and growth in real income.

Household Appliances Industry Supply

The Household appliances industry is an already consolidated industry in which a small number of multinational manufacturers with well-known brands dominate the market. However, accounting for limited domestic demand and the on-going process of manufacturing outsourcing to developing countries, developing countries could play a role in developing this industry.

The major production of domestic appliances has long been concentrated within the US, Western Europe and Japan. In 1997, the output of major domestic appliances was 60 million

8 Ibid.
units in the USA, 57.5 million units in Western Europe, and 14.6 million units in Japan, in total accounting for 70 percent of world output.\(^9\) However, owing to the long life span of household appliances, the demands for new household appliances declined, which led to a decline in production in developed countries. Meanwhile, more and more Japanese companies outsourced their production to other Asian countries.

In contrast, developing countries have rapidly developed home appliance industries. For example, in Brazil, the output of appliances grew at 20 percent annually from 1994 to 1997.\(^10\) China has also maintained an annual growth rate around 32 percent from 1986 to 1995. In 2010, outputs of China-made refrigerators, automatic washing machines, air conditioners and microwave ovens take up 50 percent, 45 percent, 72 percent and 72 percent of world’s total, respectively, and their export value accounts for 28.6 percent in world's total export market.\(^11\)

**CASE STUDY – CHINA**

**Introduction and Competitive Analysis of Household Appliances in China**

China’s household appliances sector has carved out rapid growth over the past decades with a 14.5 percent Compound Average Growth Rate (CAGR) and has become one of the world’s largest household appliances production bases. In 2010, outputs of China-made refrigerators, automatic washing machines, air conditioners and microwave ovens took up 50 percent, 45 percent, 72 percent and 72 percent of world’s total, respectively, and their export value accounted for 28.6 percent in world's total export market.\(^12\)

Due to its success, the household appliances industry made huge contribution to the national economy. In 2010, the household appliances and electronic information industries in China altogether contributed with about a 10 percent share of GDP, representing about 35 percent\(^13\) of China's total exports. In 2008, the most recent year for which data is available, the industry supported more than 1.56 million jobs with an annual growth rate of 4.61 percent\(^14\).

The production capacity\(^15\) of the household appliances industry has increased dramatically. Amongst major appliances, for example, the annual output of refrigerators has increased from 11.6 thousand units in 1984 to 9.09 million units a year in 2003\(^16\).

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\(^{10}\) Ibid.


\(^{12}\) Ibid.


\(^{15}\) The production capacity refers to volume of products that can be generated by a production plant or enterprise in a given period by using current resources, according to BusinessDictionary.com, Retrieved March 11, 2011, from http://www.businessdictionary.com/definition/production-capacity.html#ixzz17r7OK0M2.
In the global context, China’s competitiveness has increased rapidly. While both imports and exports of domestic appliances increased quickly from 1993 to 2001, the growth rate of exports outruns that of imports by a large margin (Figure 4). Amongst all the household appliances, television is the largest export category. In 2009, the export volume and value of Chinese television were $55.64 million and $10.76 billion with growth rates of 8.3 percent and 1.7 percent respectively. The household appliances industry aims to keep an annual output growth pace of between eight and ten percent in 2011-2015 Chinese white good enterprises also accelerated their paces on internalization. China’s national flagship enterprise, Haier Group, has been the largest white goods manufacturer in the world. This internationalization process started from Southeast Asia in 1990s even before Haier became large. The strategy that actively attracted foreign direct investment and carefully planned their target markets and forged partnership with global counterparts proved effective for Haier’s overseas expansion. Despite some backwardness in core technologies, a few Chinese companies have successfully evolved from “original equipment manufacturers” with a foreign brand affixed to “original design manufacturers” and to “original design manufacturers”.

Figure 4: China’s Imports and Exports of Household Appliances, 1993-2001


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Several factors have helped China boost its household appliances industry. First, the hike in average per capita income has been boosting the demand for household appliances. Only within a decade, Chinese average per capita income tripled from $350 in 1990 to around $1000. At the end of 2008, the number tripled again to another high of $3000. 20 In addition, Chinese exports benefited from a stable exchange rate regime and an under-evaluated currency. Moreover, the Chinese Household Registration System loosened its control over labor mobility at the end of 1980s; rural laborers fluxed into the urban manufacturing enterprises and largely reduced labor costs.

Policy Tools and Implementation Timeline

Figure 5: Industry Performance and Policy Implementation Timeline (China)

The white goods industry in China had its origin in the 1950s, as one of the first industries opening up to market forces. Since its inception but particularly from the late 1970s onwards, the industry expanded rapidly. The policy implementation process for China took place

as follows. In 1979, the light industry, the category to which the household appliances belong, was targeted. Government granted long-term priorities to consumer goods. From 1980 to 1984, central governments laid great emphasis on importing assembly lines, building new factories, and helping military enterprises shift to producing civilian durables. Meanwhile, local governments invested massively in household appliances industry and regarded it as “pillar industry”. In this period, the industry still relied heavily on foreign components and raw materials. From 1984-1992, because of the explosive investment in imported assembly lines during the prior periods, the central government faced extreme shortage of foreign exchange. Thus, government only granted production permits to approved factories first to abate such pressure and to relieve surplus capability, second stopped importing assembly lines. During this period, the industry was strongly protected by policies such as import licenses, restrictions on foreign ownership and close monitor on FDI. The period from 1992 to 2002 was characterized by wide-scale institutional changes and trade liberalization. Light Industry Bureau was established to replace the Ministry of Light Industry, which signaled the relaxation of government control over the industry. Government interventions became more market-friendly. From 2002 to present, leading Chinese companies accelerated the process of internalization. Domestic capital was encouraged to pour into the industry. And government successfully maintained the growth of the industry through stimulus programs during the economic downturn. A more detailed overview over the policies may be found in Appendix 2, Table 7.

Effectiveness of Policy Tools

Policies of Targeting

Industries with great potential for growth are identified by the government as targeted industries. In 1979, the light industry, to which the household appliances belong, was targeted by the central government. In 1992, electronics was targeted. In 1999, household appliances industry was targeted as an export-oriented industry. The policy of targeting not only conveyed a signal to commercial banks that investments in household appliances industry were safe, but also created incentives for local government to develop this industry.

Market-oriented Institutional Change

In 1992, the Light Industry Bureau was established to replace the Ministry of Light Industry, signaling the relaxation of government control over the industry. The Ministry of Light Industry, as a legacy of central-planned economy, proved ineffective to develop the household appliance industry. The fixed production base system adopted by the Ministry of Light Industry in order to curtail development of small and medium-sized enterprises failed because of the local protectionism.

Picking Winners

Government started to target specific enterprises, rather than the industry in general, under the strategy of picking winners. The policy of grasping the big and letting go the small, under which well-performing companies were encouraged to acquire loss-making ones, accelerated the consolidation process within domestic manufacturers. Data show that in the refrigerator sector, the number of producers fell from 114 in 1988 to 72 in 1992 and 50 in 1994.
The output concentration rate of the top four increased from 29 percent in 1988 to 44 percent in 1991 to 65 percent in 1996\textsuperscript{21}.

**Subsidy Programs during the Economic Downturn**

The government stimulus plan for both rural areas and urban areas proved most successful in 2009. In rural areas the government expanded the scheme to 14 provinces, autonomous regions and municipalities. This scheme boosted rural demand substantially. For example, Frestech, the country's leading refrigerator producer, saw output of refrigerators and freezers reach 3.5 million units in the first 11 months in 2010, up more than 20 percent from the same period in 2007.\textsuperscript{22}

**CASE STUDY – SOUTH AFRICA**

**Introduction and Competitive Analysis of Household Appliances in South Africa**

In the African context, South Africa has long been regarded as a leading producer and consumer in household appliances industry. The retail market has witnessed robust growth in recent years. Such growth was largely attributed to strong demand from the emerging black middle class, although a slowdown due to tighter credit conditions and increasing food price inflation was evident in the second half of 2007 and into 2008. This trend should be further supported by the strong Rand/US Dollar exchange rate.

Household appliances retail sales in South Africa increased at a compound annual growth rate of 8.3 percent between 2003 and 2008\textsuperscript{23}. Amongst all types of appliances, major appliances sales led the market with a share of 89.9 percent in 2008\textsuperscript{24}. The largest market for major appliances, refrigeration, continued to improve. Value was boosted by side-by-side models and volume driver bottom freezers with respective growth rates of 35.9 percent and 12.9 percent in 2010. In 2010, washing machines tracked a healthy growth of 9 percent in volume and three percent in revenue growth, partly due to that average retail selling prices for washing machines dropping about five percent to US$371 in the first six months of 2010. Microwave ovens, on which import duties were lifted, have experienced double-digit growth\textsuperscript{25}.

In South Africa, the key players in the household appliances industry are Amalgamated Appliances (Amap), LG Electronics and Nu-World Holdings. Amap is the leader in importing, manufacturing and distributing household appliances in South Africa, and reported revenue of US$316m in 2006, a 21 percent increase on 2005, representing 58 percent of total market revenue. In comparison, Nu-World's revenue was US$235m in 2006. LG Electronics is an


\textsuperscript{25}Ibid.
international company and its latest annual report does not show a breakdown of revenue by country.

Although South Africa has secured its position as a leading producer in Africa, its white goods industry remains marginal in a global context, and its domestic market is predominantly import-orientated. To develop the industry, the government encouraged foreign investors and treats local and foreign investors equally. However, consumer-goods industries account for a very limited amount of inflows of FDI. The backwardness of the industry is reflected in several aspects. First, none of its homegrown manufacturers has been able to penetrate export markets. Second, with the exception of Whirlpool, which has dedicated manufacturing facilities in South Africa, most global multinational registered as firms in South Africa, but did not produce their products locally, such as LG. Third, compared to cases in other developing countries, white goods manufacturers in South Africa are lagged behind in managerial techniques.

Multiple factors are accounting for the backwardness in white good manufacturing industry; colonial legacies and race affects both consumption and production. On one hand, race renders an income bifurcation between black and white, and between urban and rural. A large bulk of the rural poor and black cannot afford the prices with limited disposable income. On the other hand, race makes its mark on the form of “an informal wage color bar” and “an upward floating color bar” in the workplace. Such dynamics reduces the incentives for the black to work, and encourages moral hazards for the white. In addition, gas supply and electricity provision are still limited, which makes the market saturation of household appliances still low, especially in the rural areas.

Since its white-goods industry is not well developed, the contribution of household appliances industry to the whole national economy is very limited. For example, the employment in white goods manufacturing industry was shrinking rapidly due to the liquidation of uncompetitive local companies. While the specific employment data is reported separately, such a decrease could be observed from the data on employment under the broader category of electrical machinery sector. The employment of electrical machinery sector decreased rapidly from approximately 68,000 to about 33,000 over the 1990s.

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27 Nichols, T., & Cam, S. (2005)
Policy Tools and Implementation Timeline

Figure 6: Actual Indices of the Production of Household Appliances Major Group Base: 2000 (100 percent)

Source: Statistics South Africa, 2003

In pre-1980s, the manufacturing industry was strictly regulated by the government. To maintain stability and system standardization, government limited the number of manufacturers. Tariffs for the infant industry were excessively high. Figure 6 shows the policy adjustments after 1980s. From 1980 to 1994, the government protection was still significant, but new development strategy had been adopted to abate the dependence on imported components. The economy remained uncritically protected. Electrification program was introduced in this period. New schemes, like General Export Incentive Scheme, were introduced to boost exports. 1994 is the year that government adopted a policy of rapid liberalization, reducing tariffs and dismantling the system of surcharges. Since 1994, the South African economy had undergone substantial high-level restructuring, notably the stabilization of the macro-economy and opening up to world trade. New schemes are also introduced to attract foreign investment in manufacturing, such as Tax Holiday Scheme and Small and Medium Manufacturing Development Program. A more detailed overview over the policies implemented may be found in Appendix 2, Table 8.

Effectiveness of Policy Tools

Electrification Programs

Electrification programs starting from late 1980s were successful. The electrification program in South Africa had brought electricity to about two million households, and thus,
according to the managing director of Defy, the electrification drive accounted for a roughly 20 percent growth in its turnover\textsuperscript{30}.

**Board of Trade and Industries’ Support to Television Manufacturing Industry**

The Board of Trade and Industries used the threat of lower tariffs to force the television industry to increase its use of local components. The initial attempts of the early 1980s, which included rebated on the use of local components and attempted to develop a standardized monochrome chassis, were not successful. The structural adjustment programs, which sought to penalize net foreign exchange usage and encouraged more competitive pricing, has forced less efficient producers to close down and flooded the market with cheap imported sets and kits.

**Policy of Tariff Liberalization**

1994 was the initial year of tariff liberalization. Compared to other industries under the same category of electrical machinery sector, the tariff protection in household appliances industry remained significant. The household appliances had a tariff cut from 16 percent in late 1980s to 13 percent in 2004; while tariff on other electrical machinery was reduced from 25 percent in late 1980s to 7 percent in 2004\textsuperscript{31}. When the tariff cuts began in 1994, the production level of major appliances hit the bottom, then the production level gradually bounced up, but the production level in 2001 only reached the level in 1990\textsuperscript{32}. The trade liberalization invited imports, rather than benefiting domestic manufacturers. The imports of consumer appliances grew very fast at an annual rate of 20 percent during the 1990s\textsuperscript{33}. As a result of intensified competition from imports, several factories were liquidated, including two major players in the South African market, Kelvinator and Master Fridge.

**Tax Holiday Scheme**

Because of lack of implementation effectiveness, the tax holiday scheme only attracted disappointingly few applications, which led to a review of the scheme. Actually, foreign direct investment in South Africa had increased substantially since 1994 to a current total of about USD 5.8 billion, but the increase was largely dependent on government privatizations.

**General Preconditions for Household Appliances Industry Learned from China and South Africa**

Based on the case studies of both China and South Africa, we extracted the following policy recommendations.

1. **Large domestic market or geographical proximity to large markets:** With large domestic markets, developing countries could maximize economies of scale and bring


\textsuperscript{33} Chaponda, T., & Stern, M. (2006).
down the overall costs. Geographical proximity to large markets is also important since transportation costs are significant in the case of white goods.

2. ** Favorable demographic structures and disposable income:** The household appliances industry is affected by changing patterns of marriage, the portion of single households, and the growth rate of population. The demands for household appliances are also correlated to disposable income. Regarding the long life span of household appliances, whenever the real income decreases, people defer their purchase for appliances or opt for cheaper items.

3. **A growing real estate market:** The demand of household appliances is sensitive to the state of housing market and an increase in home purchases triggers the new demand of household goods. In the long run, the replacement demands of these household products are also increasing by the same token.

4. **Infrastructure:** Stable and widely-covered electrical generating and distribution systems are primary for the development of the household appliances industry. Abundant and low-cost gas supply is another crucial factor.

5. **Abundant labor supply:** The household appliances industry consists of three stages, the design stage, the manufacturing stage and the final assembly stage. Most developing countries specialize in the last two stages, which are labor-intensive.

**POLICY RECOMMENDATIONS**

Based on the case studies, we extracted the following policy recommendations. Governments which are interested in investing household appliances industry may find them helpful.

1. **Actively encourage FDI** from foreign white goods manufacturers to keep the domestic market dynamic and competitive. Preferential tax policies offer foreign investors incentives to invest.

2. **Encourage specialization in selected main product areas.** The global trend indicates an increasing product specialization at the national level, and leading countries of white goods specialize more than 40 percent of their national production in one of the four main product areas, refrigerators, air conditioners, cookers/ovens and washing machines. For example, in 2001, China specialized in producing air conditioners, and South Africa specialized mainly in refrigerators and slightly in washing machines.

3. **Encourage an appropriate degree of consolidation within domestic manufacturers.** The global market for household appliances has already been highly consolidated. For developing countries with limited resources, consolidation is even more important to build internationally competitive brands. Consolidation is mostly a natural process, but could also be encouraged by government policies, such as restructuring smaller enterprises into larger groups and encouraging mergers and acquirement.

4. **Promote an international strategic alliance between domestic companies and global manufacturers.** The emerging multinationals, such as Haier in China, leveraged their strategic partnership with other multinationals such as Helicomm to upgrade their production lines through technologies that could be acquired externally through strategic alliances.
6. **Liberalize tariffs at a modest pace under a stable exchange rate regime.** Modest tariff liberalization would buy time for domestic enterprises to grow and meanwhile reduce moral hazards.

7. **Encourage a vertical integration of production network** to offset the lack of consumer markets and to share sunk costs with foreign manufacturers, like what was between China and Southeast Asian countries.

8. **Governmental intervention should be market-oriented.** Government’s role should limited to (1) collecting information; (2) promoting R&D; (3) starting stimulus package during the economic downturn; (4) providing guidelines and setting goals for the industrial development; (5) setting rules for market competition but not intervening directly.
Tea

Overview of Industry

Tea is made from variations of the tea plant Camellia Sinensis. Its different varieties, such as green, white and black, are all made from the same plant yet by different processes. Tea is today the world’s second-most consumed beverage after water\textsuperscript{34}.

Tea production takes place on large plantations or by smallholders; the differentiation between what constitutes which usually is made in terms of size and ownership. Plantations are often run by multinational tea producers. Well-known produces such as Unilever or Tata Tea may be undertaking every step of the value chain from growing the tea to processing to blending, branding and packaging until the end product is delivered to the consumer. Smallholder tea producers, on the other hand, often merely grow and harvest the tea but otherwise are directly served by agricultural cooperatives offering them a range of services, most importantly picking up the unprocessed leaves and delivering them to the processing plant. The cooperative may then sell the processed leaves on the auction market and pay the smallholder a share of the revenue. Cooperatives usually also provide fertilizers, tools and seeds to the planters as well as consult them or undertake marketing on their behalf. The nature of the tea value chain determines what part of it by necessity takes place in the country of origin: beyond the processing of the tea leaves that needs to take place shortly after the leaves are plucked, the value chain often continues beyond national borders, a fact that countries choosing the tea industry need to be aware of.

Tea is a very differentiable product. The price for different sorts of tea can vary substantially. The majority of the raw product, the processed and cut tea leaves, is sold through auctions and the price depends on quality as well as supply and demand. The quality of tea is evaluated for each harvest; sometimes a harvest from the same estate can have varying quality. Quality depends on the climate, the soil and fertilizers used, the age, growth and quality of the plant, the plucking itself and importantly the processing of the tea. Price also depends on the manufacturing method, of which there are two: the orthodox (leaves are withered, rolled, oxidized and dried) and the machine-processed, mass-produced CTC (cut, tear, curl) method.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Production</td>
<td>3,832,650 tons (2008)</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>27 percent in the last 10 years</td>
</tr>
<tr>
<td></td>
<td>110 percent in the last 30 years</td>
</tr>
<tr>
<td>Main Producers with markets shares</td>
<td>China (32.9 percent of world output)</td>
</tr>
<tr>
<td></td>
<td>India (24.1 percent)</td>
</tr>
<tr>
<td></td>
<td>Kenya (9 percent)</td>
</tr>
<tr>
<td></td>
<td>Sri Lanka (7.8 percent)</td>
</tr>
<tr>
<td></td>
<td>(all 2008)</td>
</tr>
</tbody>
</table>

Source: FAOSTAT\textsuperscript{35}

\textsuperscript{35} Food and Agriculture Organization of the United Nations (FAO) Statistical Database.
Tea Industry Demand

The consumption of tea has steadily increased over the last decades from around 1,300 thousand tons in 1970 to 2,900 thousand tons in 2000 (see Figure 7). This is partly due to diversified use but more recently also due to the verified health effects that tea antioxidants are assumed to provide. Because supply has steadily followed (and often exceeded) demand, many varieties of tea have stayed at a low price, ensuring it to be an affordable beverage option for many consumers. The consumption of tea continues to be widely different according to region. Whereas in China almost exclusively high-quality orthodox loose green tea is consumed and quality tea can come at high prices, Western Europe and the U.S. still on average prefer black, bagged CTC tea at lower prices and often indistinguishable quality. The quantity consumed also varies significantly; for example, Turkish citizens consume three times as much tea per capita as Indian citizens or roughly ten times as much as US citizens. Nevertheless, the specialty tea (or upper segment) is also expanding in the markets of Western Europe and North America. In the US, this market segment has quadrupled over the last fifteen years to a value of 6.8 billion US in 2008. In particular, the markets for organic and fair-trade tea have seen strong increases in demand.

Tea Industry Supply

Tea can only be effectively grown in certain geographic areas combining characteristics like specific soil, climate and altitude. Globally, tea has not reached its maximum production capacity on suitable land and the majority of supply comes from countries with a traditionally strong domestic demand base (China, India, Sri Lanka). Other large suppliers (Kenya) produce with a strong export orientation. Because tea does not stay in the market for long and the product is sold mainly through the auction process, supply and demand of tea are naturally closely correlated in any given year.

Tea suppliers have three basic ways of expanding their production: by expanding acreage (a long-term option), planting high-yield seedlings (often clones) or by increasing yield by fertilizers (a short-run option). As Figure 7 shows, the increase in global production over time can be attributed to different developments in yields and acreage. Producers have reacted to good prices by increasing their yield and expanding acreage, resulting in a successive expansion of supply and subsequently depressed prices in the medium term. No truly successful international effort to curb production in order to raise profitability has so far been undertaken, a result also of the great diversity of players in the industry.

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36 FAOSTAT database.
Figure 7: Global Production of Tea, Acreage and Average Yield

Source: FAOSTAT

Case Study – Sri Lanka
Introduction and Competitive Analysis of Tea in Sri Lanka

Sri Lanka has been producing tea since 1867, when the British planter James Taylor started its production on former coffee plantations that had been devastated by disease. Once the world’s largest exporter of tea, Sri Lanka experienced stagnating production in the 1970s and 1980s and lost its position as export champion to Kenya in the 1990s. Despite a surge in production in these years Sri Lanka could not regain its position. From 1970 to 1990 Sri Lanka’s share in world output dropped from 28 to 18 percent. The stagnating output and yield in the 1970s and 1980s were closely related to government policies that sought to extract revenue from the tea industry, one of the main sources of export earnings in Sri Lanka, and also had the goal of creating employment. After many of the policy mistakes of these two lost decades were reversed in the early 1990s and macroeconomic reform restored profitability to the tea industry; output, yield and export prices rapidly recovered. In fact, because of the high quality of the produced tea
the average price of Sri Lanka’s exports was higher than for instance India from the mid-1990s on.

Figure 8: Production and Yield Trends in Sri Lanka with Main Government Policies

![Figure 8](image)

Source: FAOSTAT

Policy Tools and Implementation Timeline

In the 1970s, domestic political developments created an impetus for land reform in the wider context of the goal of a socialist society. Nationalization and redistribution of tea plantations and continuing high taxation met policy objectives of government revenue and employment creation. A more liberal government after 1977 was able to initiate a series of pilot projects financed by foreign aid that continued in the 1980s and gradually lowered export taxes. However, there was still a high tax burden and the government did not muster the strength to initiate deeper reforms. In the 1990s, a deep reform program took place, including transfers of state-owned plantations to private management, significant tax reductions, and macroeconomic reform in pursuit of export competitiveness. State-owned plantations were privatized from 1995 to 1997. A more detailed overview over the policies can be found in Appendix 3, Table 9.

Effectiveness of Policy Tools

Taxation Policy

The single most impactful policy was taxation. The mix of ad-valorem, tea cess, corporate income and other taxes left tea production unprofitable, except for times of extraordinarily high prices in the world markets. Figure 9 shows the average profitability from

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40 Cess is a kind of tax, specifically here a tax levied on tea producers to finance certain government services to the industry.
1970 to 1984: in most years profits were either extremely low or losses were made. The exceptions are 1977 and 1983/1984, when world prices were, due to a number of factors, extraordinarily high.

Figure 9: Profitability of Sri Lankan Tea Producers

![Profitability of Sri Lankan Tea Producers](chart)

Source: Central Bank of Ceylon

The link between profitability and investment is strong as investment in plants, fertilizers and other factors of production in the tea industry is usually undertaken drawing on retained surplus, in particular when financial institutions are inadequate. Therefore in these years of low profitability the tea industry stagnated as investment in production capacity is crucial for output and yield.

As the tax burden was gradually lowered over time through mainly a lowering of the export duty (except in the late 80s when it temporarily increased again), a slight recovery in production occurred as higher world prices and reduced export taxes increased profits to some extent. Finally the 1992 removal of export and ad-valorem tax on the tea industry restored profitability and led to a surge in production, yield and prices above world averages as seen in Figure 11, after a catastrophic 1992 which saw an extraordinary fall in production due to a draught.

Government Ownership/Management

State-run plantations consistently underperformed compared to their private smallholder peers. In addition to being plagued by high taxes, state-run farms had significantly lower yields (in some cases only yields half of those by comparative smallholders), lower intake per plucker, and used more labor per hectare. The last two factors are linked to the labor policy of Sri Lanka’s government (which on state-run farms unsurprisingly was closely enforced) of employment guarantees, state-mandated pay increases, minimum employment days, restrictions on relocation and layoffs, labor quotas leading to over-employment in some plantations, too few incentives for productivity, and a general erosion of management authority by the labor courts.

Part of the reason for state-run plantations’ underperformance is suboptimal management. An illustration may be the reaction to profit opportunities illustrated in Figure 10. In 1983 and
1984 due to high world prices profitability spiked. Whereas the private smallholder producers rapidly expanded their use of fertilizers as an effective way of increasing their short-term production in order to increase their profits, state-run plantations JEDB and SLSPC barely reacted and missed an extraordinary opportunity.

The transfer of state-owned plantations to state corporations did not yield the desired improvement for the first two years due to a number of constraining factors that were eventually removed with the privatization starting in 1995. Labor policy continued to be dictated by government (wages and other employment terms). Ambiguous property rights meant government retained responsibility for development and maintenance finance, leaving private management with a lack of access to development capital. With privatization from 1995 to 1997 these ambiguities were removed and companies transferred to private ownership have been flourishing.

**Figure 10: Fertilizer Use Responsiveness to Profitability: Private vs. State-Run**

![Fertilizer Use Responsiveness to Profitability](image)

Source: Central Bank of Ceylon

**Macroeconomic Environment**

The macroeconomic environment of the tea industry was also improved in the 1990s. The devaluation of the Sri Lankan rupee by over 25 percent between 1989 and 1994 increased the competitiveness of Sri Lankan tea on world markets. The average price of Sri Lanka’s tea in the London auction has, thanks to this devaluation, steadily declined compared to Indian and Kenyan tea.\(^1\)

**Overall Effectiveness**

After two lost decades for the industry from the 1970s to 1992, in which yields stayed below the global benchmark and production stagnated, the reversal in policies in 1992 revitalized the industry resulting in production and yield increases and high market prices (see Figure 11). In 1984, tea production in Sri Lanka accounted for only 2.7 percent of GDP yet for 42.2 percent of

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the entire export earnings of Sri Lanka and to 13.3 percent of government tax revenue\textsuperscript{42}. The contribution to export earnings fell rapidly thereafter, to 26 percent in 1987 and 12.6 percent in 1995, reflecting a falling relative not absolute contribution of tea \textsuperscript{43}. The direct and indirect employment in the tea sector was estimated in 1984 to be 550,000 in total, exceeding any other sector in employment. Direct employment under state management increased from 220,000 to 390,000 employees from 1985 to 1991. After state plantations were handed to private management the total direct employment fell again to 310 000 in 1994\textsuperscript{44}, reflecting more efficient use of labor. The contribution of tea to government revenue has also decreased after tax reform in the 1990s.

\textbf{Figure 11: Sri Lanka’s Key Performance Indicators}

\begin{itemize}
  \item \textbf{Sri Lanka yield in kg/ha}
  \item \textbf{average world yield in kg/ha}
  \item \textbf{Sri Lanka average export price in 1000 USD/ton}
  \item \textbf{Sri Lanka share in world exports in %}
\end{itemize}

Source: FAOSTAT

\section*{Case Study – Kenya
Introduction and Competitive Analysis of Tea in Kenya}

Kenya started producing tea under British rule and has increased its production rapidly since the Second World War, surpassing traditional tea exporters such as China, India and Sri Lanka as the world’s biggest exporter of tea. In the last 40 years Kenya has increased its production sevenfold and its world export share from a little over 5 to 22 percent, the result of good production


conditions in Kenya combined with a conducive macroeconomic environment and consistent support to smallholders.

Kenya mainly focuses on CTC black tea of lower quality, which explains an average export price achieved that is lower than that of other producers. Because Kenya’s producers have been focusing on productivity in ideal climatic conditions and Kenya’s tea plants are on average younger than in the more established tea-producing countries, the yield in Kenya is very high and has consistently outperformed that in other countries. The sector is made up of roughly 60 percent smallholders that are organized in the Kenya Tea Development Authority (KTDA), the rest being large plantations with many multinational producers like Unilever owning sizable plantations. Tea continues to be responsible for the largest part of Kenya’s export earnings, and in 1995 it accounted for 19 percent of export value.

**Figure 12: Production and Yield Trends in Kenya with Main Government Policies**

![Graph showing production and yield trends in Kenya](image)

Source: FAOSTAT

**Policy Tools and Implementation Timeline**

Kenya has, mindful of the needs of smallholder tea planters, run a consistent policy of support to smallholders through the KTDA. Some programs provide farmers with inputs, effectively acting as indirect subsidies. Kenya has generally ensured the profitability of the industry by refraining from excessive taxation and by running a macroeconomic policy supporting the competitiveness of its tea in world markets. The large multinationals that have extensive tea plantations in Kenya were accommodated and little regulatory interference in their operations undertaken. In the 1990s, a significant devaluation at the beginning of the decade boosted the tea sector’s international competitiveness further. After 1992, Kenya liberalized the
tea market by overturning existing price controls and other government interventions. A more detailed overview can be found in Appendix 3, Table 10.

**Effectiveness of Policy Tools**

**Taxation Policy**

Figure 12 (above) shows the continued increase in production between 1982 and 2000. This continued performance as the tea-producing country with the highest productivity illustrates the effectiveness of Kenya’s policy to concentrate its support on smallholders and otherwise keep interference with the industry to a minimum. At the core of this favorable performance throughout time is that Kenya’s tea production has been consistently profitable, leaving scope for reinvestment in high-yielding tea plants, fertilizers and expansion of acreage (vast areas of Kenya suitable to planting tea remain). In 1993, a typical profit margin was 16.7 percent. In contrast to Sri Lanka, which levied high taxes on its exporters, Kenya has for a long time merely charged tea cess to its producers and only in 1982 introduced a moderate and progressive export tax. Figure 13 shows the vast difference of taxation on tea exports compared to Sri Lanka

**Figure 13: Kenya’s and Sri Lanka’s Tax Burden**

![Graph showing tax burden comparison between Kenya and Sri Lanka](image)

Source: Betz (1987) quoting an unidentified World Bank source

**Non-interference with Large Plantations**

Large plantations run by foreign multinationals were able to produce at exceptionally high yield and without much interference with the government. Certain policies like the requirement to sell ten percent of production to Kenya Tea Packers (KETEPA) for domestic marketing or price controls were not particularly distressing to large plantations.

**Consistent Support to Smallholders**

Contrary to the large plantations, smallholders received a lot of attention. The government support to smallholders through the KTDA is often cited as an incremental part to its emergence as the foremost exporter of tea in the world. The KTDA, which oversaw over 60 percent of national production coming from smallholders, supported them in a number of ways. A fertilizer credit scheme ensured that all farmers were at all times able to apply recommended amounts of fertilizer. Fertilizers drive yield, part of why the average yield was continually high.

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The KTDA as a state-institution had access to guaranteed loans, which it also extended to the smallholders. Through many programs such as an infilling program, the supply of high-yielding clones, the teaching of crop management and many more, Kenyan tea growers were well suited for competitive production. This excellent support by the KTDA may also be credited to a governance structure in which tea producers were able to assume a significant stake.

**Market Liberalization**

The liberalization of the market and unshackling of prices in early 1992 initially caused a slowdown in the smallholder industry due to the poor regulatory framework. In the longer run, however, this step boosted industry’s performance as the sector was freed from government price control and now reacts in response to international market prices.

**Infrastructure**

The KTDA failed to provide or lobby for the provision of adequate infrastructure. The roads and ports infrastructure in tea-growing areas were often inadequate and resulted in leaf losses and quality losses because of time lags between leaf harvest and processing. The processing plants also proved to be inadequate both in their capacity and in their ability to process the leaves to the highest quality standards.

**Labor**

This quality problem was aggravated by a persistent problem in the availability and quality of workers that only the smallholders experienced due to an exclusive reliance on seasonal labor. Smallholders competed with large estates for seasonal labor and with coffee planters because they were able to offer higher wages. This then resulted not only in lower productivity (yield) but also in plucking of inferior quality because workers were not trained adequately. Thus, the prices Kenyan tea could command were low compared to many of its competitors. Nevertheless lower prices did not mean that Kenyan tea producers were unprofitable because other factors such as moderate taxation weighted far more heavily.

**Overall Effectiveness**

The Kenyan tea industry continually grew in production and productivity. Despite never being able to compete in the upper, high-quality market segment because of quality problems (Figure 14 shows average export prices), the profitability in the lower segment was sufficient to attract an expansion of acreage and increase in production throughout, making it the world’s largest exporter of tea today.
Figure 14: Kenya Key Performance Indicators

Source: FAOSTAT
GENERAL PRECONDITIONS FOR TEA PRODUCTION INDUSTRY LEARNED FROM SRI LANKA AND KENYA

Based on both case studies, we deem these factors to be preconditions for success. Governments interested in investing in the tea industry should have these preconditions in place or command the ability to create them.

1. **Climate and soil**: the sheer ability to grow tea at comparable quality and cost requires a rain-intensive climate coupled with moderate temperature and leached (acid) soils. In equatorial regions tea is planted at high altitudes and optimal altitude drops as the distance from the equator increases. Some existing areas of tea production are today considered at risk from changing conditions due to climate change. In equatorial regions tea is planted at high altitudes and optimal altitude drops as the distance from the equator increases. Some existing areas of tea production are today considered at risk from changing conditions due to climate change. 46

2. **Infrastructure**: minimum transport infrastructure, such as roads and ports, is needed to transport harvest to processing factory in a short time frame and then to the market.

3. **Available finance**: financing is required because the time lag between planting tea trees and the earliest harvest is roughly five years; it is also necessary to bridge bad years.

4. **Abundant low-cost labor**: for typical tea producers, labor makes up to over 60 percent of their costs, hence the availability of low-cost labor is crucial to their ability to compete.

5. **Support system for smallholders**: large plantations may establish the entire overhead structure (processing plant, transportation etc); smallholders need industry associations to provide essential services to them.

POLICY RECOMMENDATIONS

Based on the case studies, we extracted the following policy recommendations. Governments which are interested in investing in the tea industry may find them helpful.

1. **Build and maintain supporting infrastructure**: quality in many countries continues to suffer under insufficient roads and processing plants; especially for high-quality segment industries this can be an insurmountable hurdle. Kenya’s case is one where quality problems did not impact the industry’s profitability because the industry fared well in specializing in the low-cost segment. This however reflected a cost structure that made it exceptionally competitive, leaving a comfortable profit. For other countries with dissimilar conditions, quality production that can reap high prices in specialty tea segments is the only way to make costly production pay off.

2. **Keep tax burden in check so as to allow reinvestment**: excessive taxation will lead to insufficient reinvestment in factors of production and will hurt the long-run prospects of the industry. Sri Lanka’s stagnation from the 1970s to 1992 tells this story: overly high taxation left an industry with few profits that could be reinvested into production.

3. **Provide loans to farmers and agricultural companies**: availability of capital is crucial to success in an industry with fluctuating profits.

4. **Expansion of the domestic value chain should not be forced**: beyond the processing plant, private industry needs to decide whether there is a rationale for expanding the value

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Attempts to force an expansion of the domestic value-chain as in Sri Lanka have been shown to be counterproductive. Sri Lanka’s ignorance of the market trend for CTC tea is partly a result of the forced domestic value-chain expansion.

5. **Consistent subsidy policy helps to bolster industry:** subsidizing replantation with high-yielding clones or fertilizers and other subsidies has been effective in raising productivity. Data for periods in both Kenya and Sri Lanka in which certain clones or fertilizers were subsidized showed that their usage was boosted, which subsequently benefitted the producers. Producers should themselves be rationally choosing these means of production, yet this may be a case where industry associations or other government agencies are more forward-looking or have better information than smallholders with little information to make a rational decision.
ECOTOURISM
Overview of Industry

Tourism:

The UN World Trade Organization claims that tourism is an important tool that can contribute to “international understanding, peace, prosperity, and universal respect for and observance of human rights and fundamental freedom for all.” 47 The tourism sector has long been seen as one of the most effective ways to redistribute the wealth from the North to the South, because while tourists who travel internationally are still mainly from the developed or industrialized countries, there is a shift in the favored destinations of those tourists.

The world is seeking more locations in developing countries as tourist destinations, which will allow developing countries to fully utilize their potentials in the tourism sector.48 As portrayed in Figure 15, the increases in the number of tourists that arrive to low, middle, and high income49 countries vary significantly, with a large gap between the growths of tourist arrival of five percent in high income countries from 2006 to 2007, compared to a 25 percent increase in low income countries. Furthermore, traditional tourism is also thought to provide employment opportunities for the locals and diversify the economies of countries or regions that may have a poorly performing single-sector economy.50 Most importantly and promisingly, the international tourism sector is a continually and steadily growing sector, with international tourism expenditures topping $1 trillion in 2008, approximately 35 percent increase from the $764 billion in the year 2005.

Figure 15: International Tourism Arrivals (percent increase)

Source: World Bank Group, Databank

49 As defined by the World Bank Group’s Databank.
While the growth in revenue has been consistent, it is also important to note that many of the world’s poorest and developing countries depend heavily on the receipts from their tourism sectors to provide a sizeable portion of their revenue. Figure 16 demonstrates that countries with low-income level have attributed approximately 12 to 13 percent of their total exports to the revenue raised from their tourism sector. This shows that developing countries may be able to benefit tremendously from a well-developed tourism sector, which they already depend on heavily for so much of their exports.

**Figure 16: International Tourism Receipts (percent of exports)**

![Chart showing international tourism receipts as a percentage of exports for low, middle, and high-income countries from 1995 to 2008. The chart shows a generally increasing trend in tourism receipts as a percentage of exports for low-income countries and a more stable trend for middle and high-income countries.](source: World Bank Group, Databank)

Ecotourism:

Out of the various types of tourism that is available in the world market today, we have chosen ecotourism, or sustainable tourism, as the specific sector for this analysis. Ecotourism, is defined by The International Ecotourism Society as “responsible travel to natural areas that conserves the environment and improves the well-being of local people.”\(^{51}\) With the world market being saturated for typical “sun and sand resort tourism,” the tourist population is turning to various types of “adventure tourism,” of which ecotourism is a part.\(^{52}\) While there is a large range of what can be considered as “ecotourism,” Martha Honey, author of *Ecotourism and Sustainable Development*, defines seven characteristics that can be used to identify “true” ecotourism:

1) Consists of travel to nature-related destination
2) Minimizes the negative impact and damage on the environment
3) Provides environmental education
4) Gives financial benefits for the conservation of biodiversity
5) Creates financial opportunities and benefits for the locals
6) Exercises understanding and respect for the local culture
7) Supports human rights and democratic movements

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Because this project is concerned with the use of specific industries by governments to enhance their development agenda, the economic impact of the ecotourism sector will be the primary facet of ecotourism examined within this report.

**Table 4: Ecotourism Industry Key Indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Gross Domestic Product</td>
<td>2005: 6 percent (11.4 percent of all consumer spending)</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>1990s growth rate: 10-34 percent</td>
</tr>
<tr>
<td></td>
<td>2005 annual growth rate: 5 percent (the fastest-growing tourism sector)</td>
</tr>
<tr>
<td>Main Producers with Market Shares</td>
<td>Some examples of famous ecotourism locations are Kenya, Galapagos, Tanzania, Costa Rica, Zanzibar, and South Africa</td>
</tr>
</tbody>
</table>


**Ecotourism Industry Demand**

The heightened interest in green, or environmentally conscious, options for all of the world’s industry has left the tourism sector also seeking green methods to satisfy the growing number of environment-conscious tourists. In North America, 20 to 30 percent of travelers understood the need to exercise sustainable tourism, and 10 to 20 percent commented that they were seeking more green options. In 2002 in Germany, 42 percent of travelers stated that it was important for them to find lodging that practiced environmental caution and preservation. Surveys conducted by the Center on Ecotourism and Sustainable Development in 2005 show that over 30 percent of American and British travelers stated that they were willing to pay more for environmentally cautious hotels, and over 70 percent of both groups of visitors noted on the importance of minimizing damage of tourism to the tourist destinations. Globally, ecotourism was considered to be growing at a rate of five percent per year in 2005, and accounted for 6 percent of the world's GDP.

**Ecotourism Industry Supply**

Because ecotourism, by definition, means travel to a natural destination, there is an abundant potential supply of ecotourism. The world’s approximate 7,000 national parks according to the International Union for Conservation of Nature (IUCN), and each of these parks have a potential of becoming a successful ecotourism destination. In addition to national parks, the countless number of private parks and reserves also serve to be excellent ecotourism destinations for those looking for a biodiversity-centered travel. However, because of the world’s dwindle natural resources and rich biodiversity, it could also be seen as a decrease in supply for the industry.

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CASE STUDY – COSTA RICA
Introduction and Competitive Analysis of Ecotourism in Costa Rica

Ecotourism development in Costa Rica can be characterized as having steady and continuous growth, where policies to protect and preserve the environment, along with aggressive tourism investment-friendly policies, have brought Costa Rica to the forefront of ecotourism destinations.

In Costa Rica, there was already a substantial amount of domestic tourism, as well as tourists from other Central American countries due to heavy development of resorts, clubs, and parks by Costa Rican entrepreneurs before 1980. By 1980, the tourism sector provided to be the third greatest foreign exchange earner, and by 1993, it was the largest source of foreign exchange, holding approximately 20 percent of the share to this day.\(^56\) Tourism made up about seven to eight percent of Costa Rica’s GDP in 2005, and the 1.9 million visitors to Costa Rica in 2007 contributed to eight percent of its GNP and 13 percent of Costa Rica’s employment.\(^57\) Traditionally, tourism in Costa Rica was centered on the capital, San Jose, but the focus has been shifted from the city, which could not compete with other globally famous metropolitan cities for museums, commercial areas, and entertainment, to the rich biodiversity of Costa Rica.\(^58\)

Costa Rica is especially blessed with many ideal conditions for a flourishing ecotourism sector; it has an extensive national park system, with approximately 25 percent of its territory under some level of protection, a strong democracy with political stability, universal public education system with government-supported universities, and the highest literacy rate in all of Latin America. This enhanced level of education in Costa Rica also gives rise to an abundant number of scientists and conservationists. Furthermore, Costa Rica has an extensive system of paved roads and electricity, which are all commodities that are crucial for a successful tourism sector.\(^59\)

While compared internationally, Costa Rica received only about 0.2 percent of the world’s tourist arrivals and the same percentage of tourism receipts (2008),\(^60\) within Latin America Costa Rica is the eighth most popular destination as well as being the eighth largest international tourism receipt earner. Costa Rica’s tourism receipts totaled to be approximately $2.5 billion in 2008, accounting for almost 4 percent of the entire Latin American receipt total. Likewise, about three percent of the visitors to Latin America choose Costa Rica as their destination. In expenditures per visitor, Costa Rica ranks 6th (behind Brazil only by $0.51), which shows the ability of Costa Rica to draw maximum benefits from the visitors that it receives. Also, amongst all the tourists, about 61 percent (2005) visited National Parks during their stay in Costa Rica,\(^61\) which provides evidence that the ecotourism subsector plays an important role in Costa Rican tourism.

### Table 5: Tourism in Latin America: Top 17 Receipt Earners (2008)

<table>
<thead>
<tr>
<th>Country</th>
<th>Tourism Receipts ($USD millions)</th>
<th>Arrivals (thousands)</th>
<th>Percentage of Latin American Tourism Receipts</th>
<th>Percentage of Latin American Tourist Arrivals</th>
<th>Expenditures per visitor ($USD)</th>
</tr>
</thead>
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<td>Mexico</td>
<td>14,647</td>
<td>22,637</td>
<td>22</td>
<td>32</td>
<td>647</td>
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<td>Brazil</td>
<td>6,109</td>
<td>5,050</td>
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<td>Argentina</td>
<td>5,308</td>
<td>4,665</td>
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<td>1138</td>
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<td>Dominican Republic</td>
<td>4,176</td>
<td>3,980</td>
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<td>6</td>
<td>1049</td>
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<tr>
<td>Puerto Rico</td>
<td>3,645</td>
<td>3,894</td>
<td>6</td>
<td>6</td>
<td>936</td>
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<tr>
<td>Chile</td>
<td>2,632</td>
<td>2,699</td>
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<td>4</td>
<td>975</td>
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<tr>
<td>Cuba</td>
<td>2,548</td>
<td>2,316</td>
<td>4</td>
<td>3</td>
<td>1100</td>
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<tr>
<td>Colombia</td>
<td>2,499</td>
<td>1,222</td>
<td>4</td>
<td>2</td>
<td>2045</td>
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<tr>
<td>Costa Rica</td>
<td>2,526</td>
<td>2,089</td>
<td>4</td>
<td>3</td>
<td>1209</td>
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<td>Peru</td>
<td>2,396</td>
<td>2,058</td>
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<td>2,223</td>
<td>1,293</td>
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<td>Jamaica</td>
<td>2,222</td>
<td>1,767</td>
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<td>2</td>
<td>1258</td>
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<td>Bahamas, The</td>
<td>2,164</td>
<td>1,463</td>
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<td>2</td>
<td>1479</td>
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<tr>
<td>Netherlands Antilles</td>
<td>1,568</td>
<td>982</td>
<td>2</td>
<td>1</td>
<td>1597</td>
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<tr>
<td>El Salvador</td>
<td>1,180</td>
<td>1,385</td>
<td>2</td>
<td>2</td>
<td>852</td>
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<tr>
<td>Uruguay</td>
<td>1,180</td>
<td>1,938</td>
<td>2</td>
<td>3</td>
<td>609</td>
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<tr>
<td>Guatemala</td>
<td>1,068</td>
<td>1,715</td>
<td>2</td>
<td>2</td>
<td>623</td>
</tr>
<tr>
<td>Other*</td>
<td>8,376</td>
<td>9,256</td>
<td>12</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>66,467</strong></td>
<td><strong>70,409</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>1,796</strong></td>
<td><strong>1,760</strong></td>
<td></td>
<td></td>
<td><strong>1154</strong></td>
</tr>
</tbody>
</table>

* The “other” category consists of 22 Latin American countries not listed on this table.

Source: World Bank, Databank

**Policy Tools and Implementation Timeline**

Costa Rica’s turn to international tourism as a major export industry started around the 1980s. Before that time, Costa Rica has always had a consistent and stable domestic tourism industry, but the desire to attract international tourists and consequently investment in order to boost the tourism industry had not been existent. From the 1930s, the primary visitors and travelers to Costa Rica were either domestic or from other parts of Latin America, and the National Park system took off in the 1970s with the creation of the first National Park. All throughout the 1980s, aid from USAID, the World Bank, and the IMF causes the Costa Rican government to turn to investment-friendly policies and privatization for its tourism industry, while at the same time cutting funds for its ICT and National Parks. The 1990s was marked by significant efforts to fund the national park system as the government of Costa Rica no longer became eligible for foreign aid due to its high standard of living and seemingly sufficient system of national parks. By 2000, the ecotourism sector of Costa Rica is well-developed and only 10 percent of the National Park land needs to be purchased by the government. The Parks struggle to raise enough...
revenue to maintain and enhance the Park system. A more detailed overview over the policies may be found in Appendix 4, Table 11.

Effectiveness of Policy Tools

Investment-friendly policies
While the development of luxurious tourism early in Costa Rica’s tourism industry history was definitely not ecotourism and undoubtedly had an impact on its natural resources, the investment-inviting approach of the Costa Rican government provided to be a valuable asset for ecotourism once Costa Rica turned to more environmentally sustainable forms of tourism. Costa Rica had long provided exemption from property taxes and import duties for construction or remodeling, as well as tax exemptions for vehicles like vans, cars, boats, and golf carts. Facilities with 20 or more room were qualified for these incentives. Because investors saw Costa Rica as a consistent and safe environment to invest in and coupled with the rising demand for a greener travel industry, ecotourism was able to grow quickly without heavy government spending or expenditures.

Differentiated fees for parks
While initially this plan was rejected by many tourist agencies and tourists who had visited Costa Rica, because of the rising demand of Costa Rican parks, the differentiated entrance fees eventually allowed Costa Rica to raise enough revenue to self-fund its national park system. Although the park has been facing difficulties because of the austerity budget until 2005, along with the $20 million loan mentioned above and the increase in park entrance fee revenue, Costa Rica’s parks are hoping to enhance and strengthen its infrastructure.

Debt-for-nature swaps
Debt-for-nature swaps were originally intended to raise revenue for park maintenance and support, but as indicated in Figure 17, it is visible that the steep rise in international tourist arrivals seriously took off in the late 1980s. This is most likely due to the fact that while raising money for the parks, the debt-for-nature swaps also allowed foreign investors to initiate projects in conservation or environmental education, and allowing a higher quality of ecotourism to become available for the tourists to Costa Rica.

Purchase of land for the national parks
Compared to other countries which have often treated the locals and indigenous who dwell in the national parks and reserves unfairly, Costa Rica has been relatively fair in paying a proper price in order to purchase those lands from the locals and indigenous. This has also proven to be a costly and time-consuming procedure, but has allowed Costa Rica to avoid high levels of conflict and disagreement with the local population in the efforts to expand protected areas.

Lack of preparation for large volumes of tourists at parks
Costa Rica’s parks were not originally constructed to handle high volumes of tourism. Because the parks originally began as simply preservation and protection programs rather than geared towards tourism, infrastructure to accommodate tourists is often missing. Some lack visitors centers or adequate rangers or guides to provide the necessary information and

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environmental education, and others have faced problems of waste management. This issue has often been addressed in an ad hoc manner, and because of the continually lacking funding for the parks, the national parks have not been able to sufficiently address all of these concerns. However, with the termination of the austerity budget that the Costa Rican government had implemented from 1998 to 2005 to reduce their national deficit, and a $20 million IDB loan in 2006, the future of the park system looks hopeful.

**Overall effectiveness**

By examining how Costa Rica has grown in both the number of visitors that have come to Costa Rica and the raise in revenues generated from tourism (see Figure 17), it is clear that the tourism sector has had a significant impact in contributing to Costa Rica’s economy. Aside from the short dip in revenues between 2000 and 2002 resulting from a world trend, in great part due to the September 11th attacks that stalled international tourism worldwide, Costa Rica has enjoyed a consistent growth in its tourism sector. The size the tourism industry has come to be makes tourism, and consequently ecotourism, an indispensable part of Costa Rica’s economy. However, the negative impacts and challenges for Costa Rica cannot be overlooked when examining Costa Rica’s journey to becoming a globally competitive country in the ecotourism industry. The primary lessons that should be learned from Costa Rica is that its investment friendly policies, along with perceived domestic stability (political and social), have been the primary causes of Costa Rica’s successful pursuit of ecotourism. Challenges that Costa Rica remains to face is to disperse the economic benefits amongst the local population and to maintain a relatively manageable level of visitors to its national parks so that Costa Rica will not end up destroying what is currently a very promising sector.

**Figure 17: Tourism Arrivals and Receipts, Costa Rica**

CASE STUDY – TANZANIA
Introduction and Competitive Analysis of Ecotourism in Tanzania

The development of tourism in Tanzania differs significantly from Costa Rica. While Tanzania has just as valuable and rich biodiversity that is worthy of a booming ecotourism sector like Costa Rica, Tanzania’s parks originate from its colonial days. Tanzania’s original national parks were meant as gaming parks for hunting. Furthermore, hunting licenses in these parks, often habitats of lions, leopards, and other animals considered to be a threat to the local farm, were often limited to the rich Europeans. Africans not only did not have the money to afford a license and were prohibited from owning rifles. With the traditional Africans used hunting as a means to obtain food and necessary commodities, the new gaming parks under colonial rule disregarded the traditional and cultural practices of the African natives.

However, today tourism has grown to be the number one foreign exchange earner in Tanzania, and accounts for about 15 percent of Tanzania’s economy. Tanzania has also seen a 282 percent increase in visitors to its national parks. Wildlife has long been considered the mode in which Tanzania will be able to pull out of poverty, because of the view that in comparison to the tremendous value of world-famous parks like the Serengeti, infrastructure development for nature tourism may be less costly for Tanzania. Tanzania’s growth has been especially more visible in the last two decades as it has become one of the premier locations in Africa for nature travel. Tanzania’s tourism is almost entirely dependent upon its natural resources and biodiversity, which means that ecotourism is the main national strategy to tourism in Tanzania. The National Tourism Policy of Tanzania emphasizes the same values of ecotourism, commenting on the need to involve the local people and create a sustainable form of tourism, as well as using tourism as an economic stimulus for the poverty stricken nation. Finally, Tanzania’s tourism sector made up approximately 13 percent of its GDP in 2001, and projects 18 percent contribution by 2012. In 2009, 13 percent of the population was employed in hotels and restaurants, and actual percentage of those employed in the tourism sector would be much greater, with jobs ranging from chefs, rangers, guides, drivers, and translators.

Tanzania has suffered under various factors that hinder its tourism development rather than help it to grow. While the biodiversity and the national park system may be admirable and one-of-a-kind, what Tanzania offers in its nature tourism is very similar to Kenya, its key competitor. Furthermore, previous socialist policies have hindered private investment from entering into the Tanzanian market early on in Tanzania’s tourism development. Tanzania has suffered a crash in its tourism industry in the late 1970s, and the lack of foreign investment was the primary cause of this downfall.

Tanzania’s continued poverty has also been a hindering factor to Tanzanian tourism development. Because the majority of the issues that plague the Tanzanian government often concern the provision of basic commodities, such as education, health, and roads, Tanzania has a difficult time creating a tourism industry on these poor public infrastructures.

Within Africa, Tanzania is the fourth largest revenue earner, with tourism receipt revenue totaling over $900 million in 2006 and revenue per tourist of approximately $1500. Between the top five total tourism receipts revenue earners, Tanzania ranks third in per tourist revenue.

However, Tanzania’s tourist arrivals account for about 2.5 percent of Africa’s total tourist arrivals. In comparison to Africa’s top tourism receipts earner, South Africa, which earns approximately $1068 per visitor but has 47 percent of Africa’s visitors, Tanzania’s tourism can be seen as extremely efficient and well-developed. Tanzania is the 13th most popular tourist destination in Africa, with about 622,000 visitors in 2006. If Tanzania were to be able to move up in popularity while maintaining its efficiency in tourism revenue, Tanzania has much more potential than Kenya, its primary competitor, to have a well-developed tourism sector. Kenya offers a very similar type of tourism opportunities as Tanzania, and previously Kenya had always overshadowed Tanzania, but with revenue per tourist totaling only about $700 per visitor with more than six percent of Africa’s tourist visits, it can be considered as much less effective in terms of raising revenue through its tourism sector.

Table 6: Tourism in Africa: Top 15 Receipt Earners (2006)

<table>
<thead>
<tr>
<th></th>
<th>Tourism Receipts (SUSD millions)</th>
<th>Arrivals (thousands)</th>
<th>Percentage of African Tourism Receipts</th>
<th>Percentage of African Tourist Arrivals</th>
<th>Expenditures per visitor (SUSD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>8,967</td>
<td>8,396</td>
<td>47</td>
<td>33</td>
<td>1068</td>
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<td>Mauritius</td>
<td>1,302</td>
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<td>3</td>
<td>1652</td>
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<td>Kenya</td>
<td>1,181</td>
<td>1,644</td>
<td>6</td>
<td>6</td>
<td>718</td>
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<td>Tanzania</td>
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<td>Namibia</td>
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<td>Zimbabwe</td>
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<td>Senegal</td>
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<td>3</td>
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<td>Cape Verde</td>
<td>280</td>
<td>242</td>
<td>1</td>
<td>1</td>
<td>1157</td>
</tr>
<tr>
<td>Cameroon</td>
<td>231</td>
<td>185</td>
<td>1</td>
<td>1</td>
<td>1249</td>
</tr>
<tr>
<td>Other</td>
<td>1,656</td>
<td>6,752</td>
<td>9</td>
<td>26</td>
<td>245</td>
</tr>
<tr>
<td>Total</td>
<td>18,887</td>
<td>25,820</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>484</td>
<td>679</td>
<td></td>
<td></td>
<td>445</td>
</tr>
</tbody>
</table>

* The “other” category consists of 39 African countries not listed on this table

Source: World Bank, Databank

Policy Tools and Implementation Timeline

Ever since its independence in 1961, Tanzania has pursued a wide range of policies in order to help its tourism sector. The phases for Tanzania’s tourism can be divided in two: before the tourism crash in 1977 where international visitors to Tanzania drops more than 50 percent,
and after the crash. These policy tools will reveal why Tanzania’s government-run tourism sector crashed in the 70s, and how Tanzania was able to overcome its failures and rise to be a globally competitive ecotourism destination. The 1970s were the preliminary years in the formation of Tanzania’s tourism industry. Immediately following its independence, Tanzania chooses a socialist one-party system of government, nationalizing many of its industries including tourism. The TTC, Tanzania Tourism Corporation, is the primary actor in all tourism affairs, and a heavy portion of Tanzania’s expenditures is spent on building infrastructure or importing construction material for buildings. The collapse of the EAC and the consequent border closure between Tanzania and Kenya causes a collapse of the tourism sector in Tanzania. Tanzania turns to liberalize its economy by the mid-1980s and abandons its socialist policies and sees an influx of foreign investment, which helps its tourism sector to recover and grow. After liberalization, there has not been a great change in Tanzania’s tourism approach, although conflicts with the local population have been the center of Tanzania’s tourism concern in the 21st century. A more detailed overview over the policies may be found in Appendix 4, Table 12.

**Effectiveness of Policy Tools**

**Investment-friendly Policies to Draw Foreign Investment**

As soon as Tanzania declared a more investment friendly approach by following IMF’s structural adjustment to opening its doors to becoming more accessible to foreign investors, as well as lifting political barriers such as sanctions to South Africa, numerous firms applied to invest in Tanzania, recognizing the potential of the nation’s nature-related tourism. When Tanzania withdrew its sanctions from South Africa, South African tourism operators became actively involved in privatizing Tanzania’s poorly run government tourism projects. The private sector was better equipped to construct and to train personnel which Tanzania lacked the capital for, and Tanzania gained by these investors because its tourism sector was able to re-flourish.

**Focus on Conservation Issues and Formulating Investment-inviting Strategies**

The disbanding of TTC and the creation of TTB and TAHI shows the Tanzanian government’s switch from attempting to control all aspects of the tourism industry to mainly being concerned with regulating and managing foreign investment, and through maintaining the national parks that it had through TANAPA. The government’s role was best fit when it played an overseeing role rather than being involved in the detailed endeavors of every branch of the tourism sector. This shifting in focus allowed the Tanzanian government to invest its resources more efficiently while also allowing its tourism sector to grow.

**Heavily Nationalized Tourism Sector**

The impact of investment friendly policies is even more evident in Tanzania’s case, because of the visible dip in the arrivals of tourists to Tanzania after 1976. While a large portion of the tourists were prevented from coming into Tanzania because of the border closure with Kenya, the greater reason for this collapse was the inability of the Tanzanian government to sustain all parts of its tourism sector as it had tried to manage despite its limited resources. The government-run TTC was overburdened with too many aspects of tourism that could have been managed better by the private sector, and this caused the ultimate infrastructural failure of the Tanzanian tourism sector.
Seeming Political Instability

The socialist policies that Tanzania pursued also hindered from foreign investment entering into Tanzania’s tourism market. While it may have been a stable government, a socialist regime was not attractive to capitalists who were looking to invest into countries that could be considered capital-safe. Additionally, political conflict with its bordering countries and South Africa also cost Tanzania a heavy volume of potential investors and tourists.

Figure 18: Tourism Arrivals and Receipts: Tanzania


General Preconditions for Ecotourism Industry Learned from Costa Rica and Tanzania

A wide range of policies and conditions impacted both Costa Rica’s and Tanzania’s ecotourism sectors. However, by examining the characteristics that were in place before both countries’ ecotourism sector took off, there are some general pre-conditions that needed to be in place before any policies were implemented. The preconditions derived from the two case studies are as follows:

1. Rich Biodiversity: Costa Rica, with only 0.0035 percent of the world’s terrain, contains 5 percent of the world’s biodiversity within its territory, and Tanzania boasted one of the largest parks in Africa, the Serengeti. Ecotourism by definition means tourism that is centered on the nature and biodiversity of a specific region or country, and it is not possible in locations where abundant nature is not easily accessible.
2. **Infrastructural capacity to plan and execute tourism strategy and environmental protection**: While many countries can advertise their rich biodiversity as reasons for visiting, if the environment cannot be protected and there is no proper infrastructure to regulate and guide the flow of tourists, the location for tourism will be wasted away. It is important to note that many times, ecotourism is mainly carried out by the private sector; however, since the type of ecotourism that we are concerned with is about sustainable tourism, government intervention and investment will be crucial from attracting investors to setting rules and regulations to maintain their natural resources. These infrastructural capabilities were demonstrated by the TTB in Tanzania and ICT in Costa Rica.

3. **Well-functioning democracy and perceived stability**: For example, in Costa Rica, a revolution in Nicaragua in 1979 brought down tourist arrivals in Costa Rica by more than 20,000 people. Additionally the socialist policies of Tanzania hindered foreign investment from becoming actively engaged in tourism in Tanzania, essentially pushing back Tanzania tourism growth back a few years.

4. **National Park system**: It is true that there could be a mix of private parks along with national parks for tourist destinations. However, since private firms are often overseas or foreign firms, the preservation of the natural environment may not be the primary interest of these private parks. Therefore, it is crucial that a national park system exists to ensure sustainability in all parks throughout the country, as well as providing educational training for rangers and guides to provide visitors with the environment education that is crucial as a portion of ecotourism.

**POLICY RECOMMENDATIONS**

After the mentioned pre-conditions have been met, policymakers who wish to pursue governmental role in developing ecotourism should take into consideration the following policy recommendations.

1. **Encourage foreign investment**: The government should create and promote investment-friendly policies for private firms to enter into the domestic tourism market. Rather than heavy government involvement into the tourism industry, it is better for the government to invite foreign and domestic investors to develop various tourism projects. Instead of being concerned about constructing a hotel, the government should seek to invite investors who will want to build hotels, accommodations, and other tourism-related projects within the country.

2. **Empower the National Board of tourism**: The National Board of Tourism should be used as a means to provide the necessary rules and guidelines, as well as being in charge of infrastructural development. Infrastructure in this case refers to the basic public infrastructure that was mentioned in the preconditions. While private investors can build hotels and establish private parks, it is the job of the government to ensure that the country has proper transportation systems and paved roads, as well as proper sewage and disposal systems throughout the country to allow the tourism destinations to function at full capacity without damaging the environment. Of course, the National Board of tourism cannot accomplish this alone. However, the Board of Tourism can examine what

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infrastructural developments could be made that would greatly enhance the tourists’ experience, and work with other branches of governments to bring those public infrastructures into place. Additionally, the Board of Tourism would provide guidelines for educational programs for tour guides and rangers in parks, sustainability requirements, and investment regulation and management.

3. **Strengthen the National Park System**: The national parks are the backbone of the ecotourism sector and for countries to succeed in ecotourism it is crucial that the national park management system is fully capable of self-funding and self-operating. The Board of Tourism is concerned with the tourism sector in general; the national park management system could oversee national parks directly, making sure that the needs are being met and that the necessary personnel is being supplied to ensure both environmental protection and environmental education.
V. CONCLUSION

Our case studies show not only the disastrous consequences of not considering the private sector, but also the benefits of considering it. On the case studies research stream, we examined three specific industries: household appliances, tea and ecotourism. From these cases, we found that both market failure and government failure are impediments to rapid growth. Government serves as the primary player to create some preconditions for the industry to grow, for example, by improving infrastructure and protecting property rights. However, the government cannot identify with much precision how the industry should grow. Governments often create market-unfriendly policies that lead to failure in spurring industrial growth, which is a failure to consider private sector interests.

This study does not draw a general conclusion on whether industrial policy is good or not. Our motivation is based on our belief that, when applied properly, effective industrial policy can remove market distortions and reduce poverty in the world.
APPENDIX 1: DETAILED METHODOLOGY SECTION

1) Step 1: selecting industries to analyze

The purpose of this step is to generate an initial hypothesis on the set of industries that could be attractive and, therefore, will be explored. We recommend that such selection use three analyses: past industry performance, benchmarks with other countries, and industry insight. Past industry performance explores historical growth, size per industry, and its barriers in the country of analysis. Industries that failed because of natural market selection should not be explored without identifying structural market changes. Instead, the analysts should select industries where growth has been hampered by barriers that the government can influence.

The benchmark analysis is a comparison of industry size with other countries’ industries. Benchmarks help to expose underdeveloped industries. To make the benchmark meaningful, countries’ characteristics must be comparable. First, non-mobile industries should not be benchmarked because they depend on fixed resources. The exception is when all benchmarked countries have equivalent natural endowments for non-mobile industries; for example, if all countries have comparable availability of copper. Second, the benchmarked countries should have similar conditions for the industry compared. Third, when appropriate analysts can use ratios that make the industry size comparable. For instance, since population limits the size of the retail industry, the appropriate comparison of retail industries would be GDP PPP per capita, as opposed to sheer GDP PPP. We recommend that analysts benchmark with group averages to avoid a direct comparison with an outlier.

Industry insight is the use of industry information generated by other sources such as research, reports and experts. These sources show industry trends and, therefore, expose future opportunities. The selection of the initial hypothesis of industries must combine all of these techniques. Each technique provides different information that complements the analyses.

In Figure 19 we show a benchmark example. We assume that the country wants to identify potential in high-level industries, such as tourism and light manufacturing. Therefore, the analysts will benchmark such industries with other countries. The analysts selected five other countries for each industry, and will use their average in order to avoid outliers. The countries per industry vary to make each case comparable to the country in question. All industries are compared in a per capita basis. This assumes that the potential of the industry is proportional to the population in these cases.

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65 Industries in which the investment cannot be made anywhere, because they depend on local conditions and resources.
In this example, tourism and manufacturing are the most underdeveloped sectors when compared to the five benchmarked countries. It is important to mention that underdevelopment of a sector does not guarantee opportunity; it is a heuristic to signal opportunities. Benchmarks provide a hint about which high-level industries to explore, but they are not definitive. Therefore, it must be complemented with the other analyses: past industry performance and industry insight.

An important consideration is that the definition of the selected industries needs to be precise enough for the final products to be identified. The reason is that the following steps will require very concrete information of each industry. For instance, choosing manufacturing or tourism is insufficient. Rather, the industry should be at the specific level of e.g. refrigerators manufacturing or ecotourism.

2) Step 2: private sector analysis

2.a) Choose a target market and identify substitutes

For each industry selected, the analysts must identify the target market and its competitors. Identifying the target market and competitors lays the foundation to estimate variables such as the sales price, transportation costs and import taxes. The target market where the product or service will be sold must be selected due to its current size or potential; it is possible that the target market is the domestic one. If multiple markets exist, such as various countries or small regions, all of them will be used in further calculations. Some signs of an attractive target market are low barriers, high price and large market size.
Within the target markets, the analysts now identify the players in each industry. These players will become competitors of the country at question in case of pursuing that industry. A very important point is that quality among products or services must be comparable (i.e. perfect substitutes), and the price will be the main source of differentiation.

2.b) Estimate risk and return

The second step in the private sector analysis is to estimate risk and return based on the selected target markets. We use mean-variance portfolio theory for this estimation, which states that the single most important factor for private sector investment decisions is the return on investment. Since the return is uncertain, estimating the probability distribution of the return is critical. The mean and the standard deviation are a practical and useful way to characterize the probability distribution.

Since investing in developing a competitive industry represents a multiyear investment with variable cash flows, the analysis must cover a multiyear period of time. Consequently, the cash flows need to be discounted to make them comparable. This raises the need to determine the rate of discount and time horizon.

We suggest that the analysts use two discount rates depending on whether the government or the private sector owns the cash flow since the cost of accessing funding is different for such sectors. On one hand, if the cash flow belongs to the private sector, the rate of discount should be the cost of money to such sector. On the other hand, if the cash flow belongs to the government it should use the cost of money to the public sector. Risk-free rate is commonly used as the public sector rate of discount; yet, this practice implies that the government has access to that money at no risk, which may not always be true.

To determine the time horizon the analysts could estimate the time in which the cash flows become irrelevant. For instance, in year 20 with a 15 percent discount rate any amount will only be worth 6 percent of its value before discounting. The time horizon must be the same for the public and private sector analyses because the two will be integrated. Thus, the analysts must use the lower discount rate for the time when the cash flow becomes irrelevant. The time-horizon of the analysis must be the starting year until the discount rate makes the cash flow irrelevant or the investor’s time horizon is met.\textsuperscript{66}

Estimating the risk and return of an industry that does not exist is not a trivial task. We propose simulating the most important profit drivers to compute risk and return. We are specifically suggesting Montecarlo simulation, which has been used in this context\textsuperscript{67}.

Determine the variables

The first step is to identify which variables affect profits. These variables must have a mathematical relationship with profit. We recommend disaggregating profit into revenues and

\textsuperscript{66} The foundation of this suggestion is that every cashflow discounted with a rate greater than zero will tend to zero over a large number of periods. Our approach is just a simplification that suggests to find a year where the cashflow, even when is not zero, it becomes negligible to the project.

\textsuperscript{67} Sam L. Savage, professor at Stanford University, suggests Montecarlo simulations as a way to deal with future uncertainty, including in the context of profits.
cost and then, disaggregate revenues and cost individually. There are multiple ways to disaggregate revenues and cost; the optimal way depends on the industry practices and availability of information. For instance, in the banking industry the interest income is so important that it is reported independently, whereas companies in other industries report it as part of “Other Income”. Therefore, if analysts were considering a bank they might want to keep interest income as a variable. Figure 20 shows three different ways of disaggregating revenues and costs.

**Figure 20: Examples of Ways to Disaggregate Revenues and Costs**

![Graph showing examples of ways to disaggregate revenues and costs]

After disaggregating revenues and cost we suggest that variables be classified as endogenous or exogenous. Variables that are in great part dependent upon another variable in the model are endogenous. These relationships are specific to the situation. For example, in some industries the administrative costs can be considered exogenous. However, in other industries administrative costs can be considered dependent on the number of sales. This type of insight requires expertise in the industry, and must be provided by the private sector analysts. Therefore, the private sector analyst should be familiar with the industry dynamics and cost structure. Figure 21 shows examples of variable classification and relationship identification among different variables.
Specify the variables’ behavior

For the exogenous variables the analysts must determine whether they are constant or stochastic\(^{68}\), and their parameters. The only parameter in a constant variable is its value. Stochastic variables require a probability distribution with specific numbers for its defining attributes (e.g. mean and variance).

Endogenous variables are defined by their relationship with the variables that influence them, determined by a function and, if necessary, a stochastic term. The function is the relationship expressed in a mathematical equation. The stochastic term represents random variations that cannot be explained by the functions. For instance, in some types of manufacturing the cost of good sold can be considered a function of the sales. More products sold translate into more raw materials, extra labor hours, and more expenditure in utilities. Yet, some components in the cost of good sold do not depend on sales such as changes in prices in utilities and raw materials. The latter is what the stochastic term attempts to capture.

Consider that the cost of good sold has a minimum value of 5 million USD (fixed cost), but each unit produced has an additional cost of 5 USD (marginal cost). Then the relationship between cost of goods sold and sales can be described by:

\[
\text{Cost of Goods sold} = 5,000,000 \text{ USD} + (\text{Number of units sold}) \times 5 \text{ USD}
\]

\(^{68}\) Stochastic is a statistical term that refers to a random variable.
More often than not, no function fits the relationship between the variables perfectly. Therefore, there is some unexplained variance that we will describe with a stochastic term. For this example suppose that a normal distribution can describe the variance:

\[ \text{Cost of Goods sold} = 5,000,000 \text{ USD} + (\text{Number of units sold}) \times (5 \text{ USD}) + N(0,500,000) \]

The stochastic term in the equation is a normal distribution with mean zero and a standard deviation of five hundred thousand. Normal distributions need to be used with caution. A normal distribution can take possible values from minus infinity to infinity. Consequently, the formula above may result in a negative cost, which would imply the generation of profit out of cost. Of course, that is not possible since costs do not generate revenues. Thus, normal distributions should be artificially limited to a reasonable interval, and some analysts prefer Beta distribution since it is naturally limited to an interval. Figure 22 shows examples of exogenous and endogenous functions.

**Figure 22: Exogenous and Endogenous Functions**

Determining the specific parameters of the variables requires significant industry insight or data. The analysts must deeply understand the variables. Some techniques that could be of aid are regression analysis, histograms and basic statistics. In addition, interviewing people who understand the costs, such as a factory manager, can be a great source of insight.

**Perform the simulation**

Finally, all the variables are put together in a model that calculates the profit, through Montecarlo simulation. Multiple scenarios, maybe thousands, are created and the outcomes of the scenarios start describing the probability distribution of the profit. With that information, the mean return and the standard deviation are calculated.
Figure 23 shows an example with five input variables. Four of them – revenues, cost of sales, marketing expenses and administrative expenses – are endogenous. As shown in Figure 5, the revenues variable is dependent on time, whereas all other endogenous variables are dependent on revenues. Capital investment is an exogenous variable with a normal distribution. Total operational cost is an intermediate variable that sums up cost of sales, marketing expenses and administrative expenses. Return on investment is calculated based on the variables’ outcome.

**Figure 23: Simulation Example**

**Intuition when dealing with challenges**

Dealing with probability distributions can be confusing. In this part, we want to explain how to deal with some of the common challenges that can appear while modeling and show that most challenges in modeling can be solved by changing parameters. A summary is found in Figure 24.

- How to include in the model the possibility that the competitor will have a major breakthrough: adjust the probability distribution of the revenues until it represents the risk of the event. The adjustment should be an increase in the probability that the revenues will be significantly smaller. The adjustment size depends on the probability that the competitor will realize the breakthrough, which could be based on historical observations and expert’s opinion. This risk will be very high in some industries, such as technology, whereas in others, such as commodities, it will be very low.
- How to represent the possibility that the firm will have a positive R&D breakthrough: a possible solution is to adjust the probability distribution of the revenues, so that the probability of large sales is higher. Again, whether this possibility should be seriously considered depends on the specific situation.
• How to reflect the time to market, in other words, the time that it takes to ramp up product sales: make sales dependent on time. In the first few years, the sales function should take small values, but as time increases the sales function should also increase.

**Figure 24: Proposed Solutions to Modeling Challenges**

<table>
<thead>
<tr>
<th>Model challenge</th>
<th>Answer</th>
<th>Graphical representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitor’s breakthroughs</td>
<td>• Allocate more probability to negative outcomes in the revenues probability distribution</td>
<td><img src="image1" alt="Graph" /></td>
</tr>
<tr>
<td>Own breakthroughs</td>
<td>• Allocate more probability to a positive outcome in the revenues probability distribution</td>
<td><img src="image2" alt="Graph" /></td>
</tr>
<tr>
<td>A variable that changes over time</td>
<td>• Create a relationship between the variable and time</td>
<td><img src="image3" alt="Graph" /></td>
</tr>
</tbody>
</table>

Source: Team analysis

**2.c) Plot industries according to estimated risk and return**

The analysts now plot the risk and return in one matrix so that industries can be compared in terms of how much they are expected to deliver to the private sector. Figure 25 shows an example using three industries. Industry 2 dominates Industry 3, because Industry 2 offers a higher return at a lower risk. There is no clear decision between Industry 1 and Industry 2 since the latter has higher return but at a higher risk, so in this case the choice is a matter of risk preference.
The information this figure provides is sufficient for the private sector to make its decision. Yet, because the country is considering government support, we also investigate the public sector’s preferences and the industry’s estimated impact on society.

3) Step 3: public sector analysis

The public sector analysis centers on cost-benefit analysis with the aim of obtaining the greatest benefit out of every unit of currency spent by the public sector. Costs are characterized by their expected value, as opposed to the mean and variance approach used in the private sector analysis. The two approaches to benefit calculation are valuation, calculating benefits from a societal point of view, and utility, calculating benefits in terms of government utility. The three steps for the public sector analysis are: 1) Define public incentives or policies; 2) Estimate costs to the government; and 3) Calculate total benefit.

3.a) Define public incentives or policies

The first step is to discuss the policies the government could adopt to support each of the three industries, and create a policy portfolio. Revising the cost structure of the private sector to understand its needs would be very helpful, because the elements that represent a high cost to the private sector are opportunities for the public sector to help. For instance, if the analysis indicates that a significant amount of the cost comes from capital investment, the government could diminish that cost by giving a land grant, granting a low interest loan, or subsidizing part of the capital investment. In Figure 26 we contrast the cost structure of two different industries,
exposing their different needs. In the first cost structure, capital is the most important factor, whereas in industry number two labor and raw materials are the most significant.

**Figure 26: Reviewing the Private Sector Cost Structure**

Cost structure of industry 1

<table>
<thead>
<tr>
<th>Million USD</th>
<th>Capital</th>
<th>Labor</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>65</td>
<td>20</td>
<td>15</td>
<td>100</td>
</tr>
</tbody>
</table>

- Policies to reduce capital
  - Land grant
  - Subsidies
  - Loan

Cost structure of industry 2

<table>
<thead>
<tr>
<th>Million USD</th>
<th>Labor</th>
<th>Raw materials</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>60</td>
<td>40</td>
<td>170</td>
</tr>
</tbody>
</table>

- Policies to reduce the cost of labor
  - Reduce the income tax
- Policies to reduce raw materials costs
  - Reduce tax on imported raw materials

Source: Team analysis

Once a few initial options for policies have been selected, the analysts will estimate their impact on the private sector. In turn, the results in the private sector analysis will give feedback on the effectiveness of the policy. Other policies can then be tested to determine which one is the most effective. This creates an iterative process between the public and private sector analyses, as shown in Figure 27. The dark blue steps are interdependent across sectors.
3.b) Estimate costs to the government

The government costs in this case include economic or financial costs borne directly by the government, such as the amount of revenues foregone when reducing taxes. Externalities, while they may represent a cost to society, are not borne by the government. Therefore, externalities will be considered in the benefit calculation as a reduction in total benefit.

Calculating these costs should be similar to the model built in the private sector analysis. The analysts change the parameters of the model, such as the tax rate, and simulate scenarios for both situations. Then, the costs of both situations are compared. For instance, if the analysts changed the tax rate, the reduction in tax revenues is the cost incurred by the government. In the case that the government provides a land grant, the cost will be the market value of the land. Figure 28 shows both examples.
3.c) Calculate total benefit

The two approaches to calculating benefits from policies are valuation of societal benefits and estimation of government’s utility. The first aims to place a monetary value to all the benefits obtained with that industry. This approach is objective, since it measures benefits to the whole society, but it does not necessarily represent the government’s real preferences. On the other hand, the government utility approach measures the government’s desirability of the outcomes, and ranks them in order of the decision-maker’s preferences.

It is important to mention that this section does not estimate the benefits in absolute numbers, but rather it estimates the change in benefits relative to a scenario with no policies to increase industry competitiveness. The benefit calculation accounts for the increases in benefits as well as reductions. Therefore, the benefit number, regardless of the approach used, represents the net change in benefit and not just the sum of benefits.

Valuation approach

The valuation approach should be used when the focus of the government is to bring the maximum benefit to the people. This might be almost always theoretically true, but not always in practice. Excluding profit, which is considered in the private sector analysis, all possible effects of the policy that might benefit the society should be included.

When dealing with benefits, market prices may not always provide a good indication of the value or costs, especially in the cases of public goods, or when an externality or monopoly power is present. The prices in these markets are not a result of perfect competition and therefore do not reflect the actual costs and benefits. When observed prices fail to reflect the social value, analysts can use an approach called shadow pricing, in which they find implicit values “in the shadows” to adjust the price. For example, establishing a manufacturing free zone will increase

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the amount of production in the area, which will increase air pollution. The pollution will be considered a reduction in the total benefit to society. The analysts will take the pollution externality into account, and adjust the market price of the goods produced in the free zone to reflect external costs to production as well.

To valuate benefits we suggest the following possible techniques

1) Valuing impacts from observed behavior: experiments and quasi experiments

The program or policy that is subject to the cost-benefit analysis is compared to the counterfactual situation that would exist without the program, and impacts are measured as differences in outcomes between the two situations.

2) Valuing impacts from observed behavior: direct estimation of demand curves

Changes in social surplus are estimated, which can be done when we can closely estimate the shapes and positions of the supply and demand curves in the relevant primary market, before and after the policy change.

3) Valuing impacts from observed behavior: indirect market methods

This is the same shadow pricing method explained in step 3b. When a market failure leads to a divergence between market price and marginal social cost, analysts obtain estimates of what the market price would be if the relevant good were traded in a market where the demand curve measured marginal social benefits and the supply curve measured marginal social costs. When a market for the good of interest does not exist, analysts look for its shadow price in the market for a related good.

4) Contingent valuation

This method consists of using surveys to elicit information about costs and benefits. While observed behavior reveals preferences, surveys only elicit statements about preferences, which is why economists are generally more comfortable using the former.

In Appendix 2 we list examples of outcomes that are hard to calculate and common techniques that researchers have used.

**Utility approach**

The government utility approach can represent the current government’s preferences. Governments may have a specific economic agenda, which is not captured by market value, but by estimating the government’s utility. The proposed procedure scales the alternatives into utility, which is a method commonly used in decision analysis. The first step is to determine the outcomes to be gauged. First, the analysts must list the main desirable outcomes emerging from the policies, such as job creation, demonstration effects and GDP generation. Second, the analysts need to discuss with decision-makers in the government what are the outcomes that provide a direct value for the government. For instance, an African government could have value

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70 Ibid.
for both wildlife and economic growth. However, the government could value wildlife just because it creates tourism, which, in turn, increases the GDP. In this case, the government would have an indirect value for wildlife and a direct value for economic growth.

Figure 29 shows on the left side the list of variables that the government values. On the right side, the diagram shows how some of the variables only provide value because they influence another variable. In other words, some variables provide value indirectly. In this example, demonstration effects lead to foreign investments, which increase GDP. Therefore, demonstration effects and foreign investments are indirect variables, and GDP increase is a direct variable.

**Figure 29: Example of Direct Value Identification**

Source: Team analysis

Once the analysts have identified the direct variables, they will quantify the outcomes for each industry using the analysis performed so far. For instance, if direct variables include jobs creation and fiscal revenues, both of these can be obtained from the private sector analysis. For the other direct variables not included in the private sector analysis, the analysts will need to estimate them. Figure 30 shows the quantified outcomes for the industries in our example.
Once the outcomes have been quantified, the analysts, in conjunction with government decision-makers, must rank the possible impact alternatives from the most to the least desirable. An impact alternative is the combination of all direct values obtained when supporting a specific industry, in this case, number of direct jobs created, annual fiscal revenues, and GDP generation for each industry. Although all of outcomes have a positive impact, some will be more desirable than others. The country from our example has ranked the different alternatives as shown on the left side of Figure 31.
Once the ranking is complete, the best alternative is assumed to have a value of one, and the worst alternative a value of zero. For all the impact alternatives in between one and zero, the analysts will create hypothetical deals to reveal the preferences of the person in charge of the economic agenda of the country. This approach assumes that the person running the economic agenda is the best-suited person to decide on the country’s preferences. If that is not the case, then another person or group of people can determine the country’s preferences.

The deals are established as follows: what is the probability P that will make the decision-maker indifferent between having Option 2 for sure or having a deal with P probability to win the best alternative (Option 1) and 1-P probability of getting the worst alternative (Option 3)? If, for example, the decision-maker says P is 0.8, this means that Option 2 is much closer to Option 1 in terms of desirability. The decision-maker is only willing to give up Option 2 if the deal shows a probability of 0.8 of getting Option 1. This deal is simply an exercise that shows how exactly one option compares to another in terms of the government’s preferences.

The P probabilities are the values in which the alternatives are scaled. The most desirable outcome will be 1 and the least desirable outcome will be 0, and all other alternatives should be in between. In this case, Option 1 would be 1, Option 3 would be 0, and Option 2 would be 0.8. These values can be changed with addition and multiplication as long as the scale among them is maintained. These values are plotted on the x-axis for the public sector matrix, as in Figure 32.

The final product is a matrix with Costs (e.g. subsidies, tax breaks) and government utility (or impact on society, in the case of the valuation approach). The time horizon for these industries must equal the time horizon of the mean-variance portfolio analysis. Costs and benefits need to be discounted, even if the benefits are measured as government utility. The
discounting of impact is based on the assumption that money can be exchanged for impact. Therefore, costs and impact must be discounted at the same rate.

**Figure 32: Value Delivered to the Public Sector**

4) Step 4: Final Decision

At this final stage, the analysts combine the private sector and the public sector analyses in one matrix, as shown in Figure 33. The public sector analysis criteria, i.e. social impact and costs or government utility and costs, merge by dividing utility or social impact by the costs incurred by the government. The expected industry return to the private sector is shown in the y-axis, and risk is represented by standard deviation with the lines above and below each industry. The length of the standard deviation lines shows the household appliances industry to be riskier than textiles.

Industries in the lower left quadrant are not attractive to either sector. Industries in the top left quadrant are profitable to the private sector but do not deliver a high value to the public sector. Industries in the bottom right quadrant are efficient in terms of public sector investment but not profitable. The analysts can keep investigating whether the government can help these industries – in this case, household appliances – become more profitable. The analysts can test different policies and see their effects on expected profitability. Industries on the top right quadrant are highly efficient and profitable, and as long as they meet the risk tolerance of decision makers, should be prioritized for government support.

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Weinstein et al. in “Recommendations of the Panel on Cost-Effectiveness in Health and Medicine” (1991) explains the logic of discounting health benefits such as years of life.
Figure 33: Value Delivered to Both Public and Private Sectors

Source: Team analysis
## APPENDIX 2: HOUSEHOLD APPLIANCES

### Table 7: China: Policy Implementation Details

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-1980s</strong></td>
<td><em>The light industry, the category to which the household appliances belong, was targeted. Government granted long-term priorities to consumer goods.</em></td>
</tr>
<tr>
<td>1979</td>
<td>“The Report on Shifting the Emphasis from Heavy Industry to Light Industry” proposed by Ministry of Light Industry was published.</td>
</tr>
<tr>
<td>1980-1984</td>
<td>This period was characterized by an increasing demand for household appliances as the per capita income grew. Assembly lines imported, new factories built, central and local governments laid great emphasis on developing this industry. In this period, imports were not focused on core technology and key equipment, and thus the industry relied heavily on foreign components and raw materials.</td>
</tr>
<tr>
<td>Early 1980s</td>
<td>In the sixth Five Year Plan (FYP6), Ministry of Light Industry put great emphasis on importing assembly lines and household appliances. Five refrigerators factories with an annual output of 400,000 units each were planned to build, locating in Beijing, Guangzhou, Suzhou, Shanghai and Tianjin. Several air conditioner factories were also planned to build.</td>
</tr>
<tr>
<td>Early 1980s</td>
<td>Under the strategy of “Cutting the excess and making up the shortfall”, the Ministry of Defense Industry helped military enterprises to shift to producing civilian durables.</td>
</tr>
<tr>
<td>Early 1980s</td>
<td>Local governments invested massively in household appliances industry and regarded it as “pillar industry”.</td>
</tr>
<tr>
<td>1984-1992</td>
<td><em>Because of the explosive investment in imported assembly lines during the prior periods, the central government faced extreme shortage of foreign exchange, production permits was issued by the central government to abate such pressure and to relieve surplus capability.</em></td>
</tr>
<tr>
<td>1985</td>
<td>Ministry of Light Industry adopted the “fixed production base system” and granted production permits to approved factories only. Import contracts with a value over US$5 million should be submitted to the State Planning Commission for approval.</td>
</tr>
<tr>
<td>Mid-1980s</td>
<td>None of the local governments and administrative agencies had the authority to offer tax holidays to refrigerator enterprises.</td>
</tr>
<tr>
<td>1986-1990</td>
<td>In the seventh Five Year Plan (FYP7), Ministry of Light Industry decided to stop importing final assembly lines. Rather, the imports should be focused on importing production lines and introducing technology for core components, such as compressors and evaporators.</td>
</tr>
<tr>
<td>Prior to 1992</td>
<td>The industry was strongly protected by the government. Government was (1) carefully monitoring FDI, (2) imposing strict regulations on foreign ownership, (3) controlling import licenses for machinery and electronic products, (4) imposing import tariffs as high as 100 percent on final products and 80 percent on core parts and components.</td>
</tr>
<tr>
<td>1992-2002</td>
<td><em>This period was characterized by wide-scale institutional changes and trade</em></td>
</tr>
</tbody>
</table>

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72

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>Light Industry Bureau was established to replace the Ministry of Light Industry, signaling the relaxation of government control over the industry.</td>
</tr>
<tr>
<td>1992</td>
<td>Electronics and machinery were targeted as “pillar industry”, a signal to commercial banks to ease the credits for household appliances enterprises.</td>
</tr>
<tr>
<td>Mid-1990s</td>
<td>Government collecting and pooling patents from own agencies and from foreign and domestic companies. Universities and research institutes formed a foundation for domestic high-tech industry.</td>
</tr>
<tr>
<td>1995</td>
<td>Government started to target specific enterprises rather than the industry in general, under the strategy of “picking the winners” or “grasping the big and letting go the small.”</td>
</tr>
<tr>
<td>1999</td>
<td>Government established standards that varied from dominant global standard allowing reduction of royalty payments of domestic firms, prefer domestic producers by this form of nontariff measure.</td>
</tr>
<tr>
<td>1999</td>
<td>The industry was targeted as export-oriented industry.</td>
</tr>
<tr>
<td>2000</td>
<td>Government helped strong enterprises to engage in international operations.</td>
</tr>
<tr>
<td>2002-2009</td>
<td>In this period, leading Chinese companies accelerated the process of internalization. Domestic capital was encouraged to pour into the industry. And government successfully maintained the growth of the industry through stimulus programs during the economic downturn.</td>
</tr>
<tr>
<td>2003</td>
<td>The policy of “promoting the reform of state-owned enterprises and strategic cooperation with foreign and private capital” was adopted. A growing portion of domestically sourced capital was poured into this industry.</td>
</tr>
<tr>
<td>2008</td>
<td>Government stimulus plan in order to stimulate demand growth in the countryside -“household appliances going to rural area scheme”: subsidies equal to 13 percent of the price of about 20,000 designated types appliances.</td>
</tr>
<tr>
<td>2009</td>
<td>Government stimulus plan in order to stimulate urban demand-“Swapping old for new” subsidy program: allocate two billion Yuan to encourage home appliance upgrades.</td>
</tr>
<tr>
<td>2009</td>
<td>Providing energy-saving subsidies to meet the requirements for reducing emission of carbon dioxide.</td>
</tr>
</tbody>
</table>

Table 8: South Africa: Policy Implementation Details

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre 1980s</td>
<td>The whole manufacturing industry was strictly regulated by the government. To maintain stability and system standardization, government limited the number of manufacturers. Tariffs for the infant industry were excessively high.</td>
</tr>
<tr>
<td>1971</td>
<td>Government set out the “Ground rules” and limited the number of manufacturers within and Southern African Customs Union to four, in the interests of stability and system standardization.</td>
</tr>
<tr>
<td>Early 1972</td>
<td>Proposals of tariff protection for the infant industry were implemented. The Board of Trade and Industries (BTI) had set high nominal levels of protection, in excess of 100 percent. Subsequently, an extra 35 percent ad valorem excise duty was imposed.</td>
</tr>
<tr>
<td>Early 1972</td>
<td>BTI recommended several strategies for television industry: (i) an ad valorem duty of 100 percent or R 500 each less the FOB price on TV receivers; (ii) an ad valorem duty of 100 percent or R 250 each on picture tubes to encourage local manufacture of tubes, and (iii) provision for full rebate of these duties at the discretion of the Secretary for Industries.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1980-1994</td>
<td>The government protection was still significant, but new development strategy had been adopted to abate the dependence on imported components. The economy remains inwardly focused and uncritically protected. Electrification program was introduced in this period. New schemes like General Export Incentive Scheme, were introduced to boost exports.</td>
</tr>
<tr>
<td>Late 1980s</td>
<td>Electrification program was initiated which offers chance for household appliances enterprises to penetrate rural market.</td>
</tr>
<tr>
<td>1986</td>
<td>The Standardized Chassis Scheme was recommended by BTI to lessen the dependence on imported components. The scheme includes (i) the ad valorem duty on television receiving sets of a value not exceeding R800 each was reduced from 100 percent to 60 percent; (2) Allow a maximum 7 percent rebate on the value of components used in TV manufacture, plus a rebate of the duty equal to the value of exported components.</td>
</tr>
<tr>
<td>1989</td>
<td>The structural adjustment program, which seeks to penalize net foreign exchange usage, encourage more competitive pricing, was introduced.</td>
</tr>
<tr>
<td>1990</td>
<td>General Export Incentive Scheme (GEIS) was introduced to help firms offset the price disadvantage.</td>
</tr>
<tr>
<td>1994-Present</td>
<td>The South African economy has undergone substantial high-level restructuring since 1994, notably the stabilization of the macro-economy and opening up to world trade. Government adopted a policy of rapid liberalization, reducing tariffs and dismantling the system of surcharges. New schemes were also introduced to attract foreign investment in manufacturing, such as Tax Holiday Scheme and Small and Medium Manufacturing Development Programme.</td>
</tr>
<tr>
<td>1994</td>
<td>The government started to dismantle the system of surcharges and reduce tariffs for a variety of industries.</td>
</tr>
<tr>
<td>From 1994</td>
<td>Tax Holiday Scheme was initiated to introduce new incentives to raise overall levels of manufacturing investment. The tax holiday scheme applies to manufacturers with assets beyond 0.42 USD million. Such a manufacturer can be granted 0 percent tax on taxable income for a maximum of six consecutive years and it must be utilized within 10 years after being granted.</td>
</tr>
<tr>
<td>From 1994</td>
<td>Small and Medium Manufacturing Development Programme (SMMDP) was designed for promoting manufacturing investment. The incentive package provides for an establishment grant payable for three years on qualifying assets and a profit/output incentive payable for an additional one year, the industrialist may however qualify for an additional two years profit/output incentive provided the industrialist can meet or exceed the labor remuneration to value added ratio of 55 percent measured in the fourth financial year.</td>
</tr>
</tbody>
</table>
### Table 9: Sri Lanka: Policy Implementation Details

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970s</td>
<td>Domestic political developments created an impetus for a land reform in the wider context of the goal of a socialist society with distribution equality: Nationalization and redistribution of tea plantations and continuing high taxation. A new government with a more liberal economic stance after 1977 was only able to initiate a series of pilot projects financed by foreign development aid that continued in the 1980s and gradually lowered export taxes but did not muster the strength to initiate deeper reforms.</td>
</tr>
<tr>
<td>1970s</td>
<td>High taxation: a mix of ad-valorem, tea cess, corporate income and other taxes meant an average of 50 percent of pre-tax profits were going to government revenue, on the remainder up to another 50 percent were levied as income tax.</td>
</tr>
<tr>
<td>1971/1975</td>
<td>Land Reform Laws limit private holdings to a maximum of 20 ha. leading to takeover by government of more than 500 tree plant estates (tea, rubber, coconut) from private landowners, effectively dividing the sector into nationalized tea estates and smallholders below 20 ha. (nearly 160 000 individual holdings). The management of the state estates were placed under two state corporations, the Janatha Estate Development Board (JEBD) and the Sri Lanka State Plantation Corporation (SLSPC).</td>
</tr>
<tr>
<td>1978</td>
<td>Start of first tea rehabilitation program: rehabilitation in Maskeliya region of 18 000 ha tea land and 42 processing plants financed by International Development Association (IDA).</td>
</tr>
<tr>
<td>1979</td>
<td>Reduction of export taxes from 15.5 to 10.5 Rs./kg.</td>
</tr>
<tr>
<td>1980s</td>
<td>Government continues to attract funds for development/rehabilitation programs and gradually lowers export taxes in presence of continued high levels of overall taxation.</td>
</tr>
<tr>
<td>1981</td>
<td>Reduction of export tax from 10.5 to 8 Rs./kg.</td>
</tr>
<tr>
<td>1981</td>
<td>IDA-financed tea rehabilitation and diversification project (TRAD) seeking to rehabilitate over 27 000 ha in low altitude tea production, modernizing 125 processing plants and diversification of over 5000 hectares of non-profitable tea land.</td>
</tr>
<tr>
<td>1982</td>
<td>5 year investment plan focused on entirety of state-run plantations to increase productivity, decrease costs, replanting and rehabilitation as well as a social component; a total investment of 211 million USD, partially funded by development aid from different sources (61 percent of expenditure).</td>
</tr>
<tr>
<td>1984</td>
<td>Reduction of export tax from 9 to 7 Rs./kg.</td>
</tr>
</tbody>
</table>
1985 | Medium Term Investment Program (co-financed by International Development Association (IDA) and the Asian Development Bank (ADB) implemented in order to rehabilitate and improve the declining productivity of the public estates.
---|---
1984 | Reduction of export tax from 9 to 7 Rs./kg.
1985 | Medium Term Investment Program (co-financed by International Development Association (IDA) and the Asian Development Bank (ADB) implemented in order to rehabilitate and improve the declining productivity of the public estates.
1989 | Tea Small Holder Development Project, targeted at private sector in pursuit of productivity improvements (ADB financed).
1990s | Deep reform program including transfer of state-owned plantations to private management, tax reduction and macroeconomic reform increasing export competitiveness.
1992 | Abolition of export and ad-valorem tax for tea industry.
1992 | Fourth Tree Crops Project completed aimed at productivity of private estates (ADB financed).
1992 | Transfer of state estates to private management: regional joint stock companies holdings 20-25 estates each were given 99 years lease of the land, management contracted out to 22 private companies under profit-sharing plan.

**Table 10: Kenya: Policy Implementation Details**

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970s to 1990s</td>
<td>Consistent support of smallholders through KTDA, non-interference with large plantations, maintaining a weak KES.</td>
</tr>
<tr>
<td>1982</td>
<td>Introduction of progressive export taxation between 10 and 25 percent.</td>
</tr>
<tr>
<td>1987</td>
<td>Kenya Tea Development Authority (KTDA) autonomy restricted by making ministerial approval of key decisions.</td>
</tr>
<tr>
<td>1990s</td>
<td>The government adopted several policies of liberalization including the removal of price controls in products and input markets, dismantling trade restriction and transfer of commercial function from public to private sector, reduction in government scope in provision of inputs and credit facilities to mainly public goods.</td>
</tr>
</tbody>
</table>
## Table 11: Costa Rica: Policy Implementation Details

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1931</td>
<td>ICT, the National Tourism Board of Costa Rica, is created.</td>
</tr>
<tr>
<td>1970/1971</td>
<td>First four national parks are established.</td>
</tr>
<tr>
<td>1984</td>
<td>Legislation for investment incentives for hotels, air/sea travel, car rental agencies, and travel agencies is passed. The national-airline since the 1940s, LACSA, becomes privately owned by Japanese and Salvadoran investors with government shares dwindling to 3 percent.</td>
</tr>
<tr>
<td>1985</td>
<td>The ICT follows up the previous incentives with the “Tourism Development Incentives Law,” which exempts construction material and vehicles such as cars, boats, jet skis, and golf carts from property taxes and import duties. This project also provided hotel developers, travel agencies, and vehicle rental agencies a “12-year moratorium on taxes in return for investment in new tourism projects.” However, small tour operators cannot qualify since accommodations had to have at least 20 rooms that adhered to a strict standard on the size and furnishing.</td>
</tr>
<tr>
<td>1987</td>
<td>The ICT initiates a campaign to attract foreign investment by signing a incentives agreement with the Coalition for Development Initiatives (later named Costa Rican Investment and Trade Development Board), which starts giving loans to U.S. and Costa Rican investors through private banks in Costa Rica created by USAID in previous years as part of USAID’s structural adjustment program. The downside to this policy is that it was primarily meant for luxury tourism resorts.</td>
</tr>
<tr>
<td>1988</td>
<td>Costa Rica hosts the 17th General Assembly of the World Conservation Union.</td>
</tr>
<tr>
<td>Late 1980s</td>
<td>The Ministry of Natural Resources, Energy, and Mines (MINAE) raises $45 million for the park system of Costa Rica (which suffered financial problems from the economic crisis of the 80s and the demands by IMF, World Bank, and USAID to cut staff and funding) through 5 “debt-for-nature” swaps, where lending countries or institutions cut a portion of Costa Rica’s debt in exchange for conservation projects ranging from reforestation, land purchases, and environmental education programs.</td>
</tr>
<tr>
<td>1992</td>
<td>The national park system expands to being approximately 21 percent of Costa Rica’s territory, comprised of 70 entities.</td>
</tr>
<tr>
<td>1991</td>
<td>7 privately owned protected areas have been established to this date.</td>
</tr>
<tr>
<td>1994</td>
<td>Steep rise in park fees for non-resident foreigners; results in quadruple entrance fee revenue in 1995.</td>
</tr>
<tr>
<td>1994 – 1998</td>
<td>President Figures allocates $15 million for a publicity campaign to bring primarily North American ecotourists, presenting ecotourism as one of the best possible business opportunities in Costa Rica.</td>
</tr>
<tr>
<td>1995</td>
<td>SINAC, the National System of Conservation Areas of Costa Rica, is created to manage and regulate Costa Rica’s national park system.</td>
</tr>
</tbody>
</table>

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1996  CST, the Certification of Sustainable Tourism program, which certifies environmentally responsible and sustainable tourism, is founded.

1996  Park fees that have risen sharply 2 years before go down to quell complaints from international visitors, but is still differentiated between “foreigner” and “resident” fees.

Throughout the 1990s  Higher standard of living, along with political stability in a region of relative instability, contributes to Costa Rica being perceived as the “Switzerland of Central Europe.”

2002  Studies reveal that some of the more popular parks can charge more than the rate set in 1996, and consequently 2 of the most popular parks’ entrance fees are raised to $15 and $10.

2005  Only 10 percent of the national park land remained to be purchased.

2005  Costa Rica requests a $20 million loan from the IDB (Inter-American Development Bank) for infrastructure development projects for its national park system, which has fallen into crises after the austerity budget of 1998 to 2005, with national parks often lacking proper rangers, tour guides, visitor centers, and roads to the parks.

2007  61 hotels are CST certified by this date (out of 2,500).

Table 12: Tanzania: Policy Implementation Details

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>Tanzania National Parks (TANAPA) is created, and the Serengeti is established as Tanzania’s first national park.</td>
</tr>
<tr>
<td>1969</td>
<td>Creation of the Tanzania Tourism Corporation (TTC) which is responsible for a wide range of travel-related projects, from hotels, advertising, duty-free shops, and publicity.</td>
</tr>
<tr>
<td>1977</td>
<td>The East African Community of Kenya, Tanzania, and Uganda, collapses and causes the three countries to close off its borders. Tanzania realizes that many of its tourists were from Kenya and suffer heavy losses in tourist flow. Immediately following the border closure, Tanzania attempts a oversea marketing program, but to no avail. Tourism drops to being the 7th largest foreign exchange earner in Tanzania, while more than 360,000 visitors were going to Kenya and causing tourism to be Kenya’s second highest foreign exchange earner.</td>
</tr>
<tr>
<td>1978</td>
<td>A military excursion between Uganda and Tanzania leaves Tanzania the victor but has cost Tanzania $608 million and $5.12 billion production loss as resources were used to support the military rather than the economy.</td>
</tr>
<tr>
<td>Throughout</td>
<td>While some small firms and companies move into Tanzania to run small hotels,</td>
</tr>
</tbody>
</table>

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76 Ibid, p.228.
77 Ibid.
the early 1970s taxi services, or travel agencies, the number is relatively small. The state-run tourism sector, however, depends heavily on foreign capital and the TTC budgets about $40 million until 1974 on projects for creating tour operations, airports, enhancing the national park system, and building hotels.

1979 TTC’s investment into hotels and accommodations totals about $27 million, but because of the heavy investment by the government, actual gains for Tanzania comes out to be about $1 to $2.5 million in the 70s. Essentially, Tanzania is left with an expensive tourism infrastructure without foreign exchange in order to maintain the program.

1986 Tanzania’s socialist policies are abandoned, and Tanzania takes a structural adjustment loan package from the IMF and turns to more investment friendly policies. Tourism becomes the focus of the newly liberalizing Tanzania.

1991 Sanctions against South Africa are lifted, and South African firms move into Tanzania to hold majority shares in formerly Tanzanian government-owned hotels.

1993 The TTC is dissolved, and Tanzania Tourist Board (TTB) and Tanzania Hotels and Investment (TAHI) are created, both with an emphasis on bringing in foreign capital from firms around the world.

1994 Due to the new investment-friendly policies, 61 investors apply for tourism projects within Tanzania, and 43 of these applications are approved by the government. Also, the World Bank plus 15 additional donors approve a $900 million project to upgrade and enhance transportation and infrastructure for tourism in Tanzania, which also gives Tanzania opportunity to provide better training to its personnel.

1998 Wildlife Management Areas (WMAs) are created to allow residents of these regions can maintain control over the wildlife and keep the revenue from tourism or hunting the wildlife for themselves. However, there is continued controversy as to WMAs are fully taken advantage of by the local communities.

2000 TANAPA’s revenue reaches $20 million, compared to $13 million in 1996.

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