

**STATISTICAL ANALYSIS OF THE  
PRODUCTIVITY AND LONG TERM IMPACT OF  
ENFORCEMENT AUDITS IN INLAND REVENUE  
DEPARTMENT**

**by**

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**Thesis submitted to the University of Sri Jayewardenepura for the  
award of the M. Sc. Degree in Applied Statistics on 2009.**

## **Declaration**

The work described in this thesis was carried out by me under the supervision of Mr. P. Dias and a report on this has not been submitted whole or in part to any university or any other institution for another Degree/Diploma.

  
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## Declaration

I/~~We~~ certify that the above statement made by the candidate true and that thesis is suitable for submission to the university for the purpose of evaluation.

..... *P. Dias* / *20/11/2009* .....

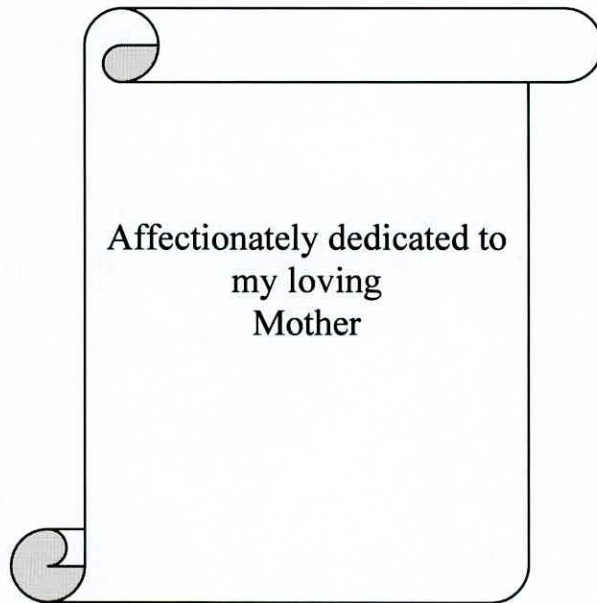
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# DEDICATION



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## **ABSTRACT**

Taxation is comprised with several strategies to increase the compliance of taxpayers. But there are ongoing debates about the impact of enforcement methods such as audits. Many studies done in several countries about this aspect and they have shown positive and negative effects of enforcements while some studies have shown mixed results which may defer based on the social and economical environments of the country. This project was conducted in Inland Revenue Department of Sri Lanka and main objective is to explore the effect of enforcement methods in local context.

Relevant data were collected from individual tax payers by using stratified random sampling method and selected tax files were arranged. Data were analyzed using SPSS and MINITAB statistical software and applied standard statistical methods to generate results.

Among the results of the study, a significant positive trend was identified in the amount of tax paid by non-audited taxpayers over the time. Also the audited taxpayers' shows positive trend of the amount paid before the audits while changed into negative trend after they were exposed to audits. Another important finding was the changes of tax payment patterns in relation to the changes made in tax systems by the Inland Revenue Department of the country.

In conclusion, the study has found that the existing audit system of the Inland Revenue Department change the tax payment pattern of taxpayers and it has negative effect over the tax payers' compliance.

*Chapter 1*

*Introduction*

# INTRODUCTION

## 1.1 Background

### 1.1.1 Inland Revenue Department

The Department of Inland Revenue (IRD) established as far back 1932, has been entrusted with over the years, the administration of a variety of revenue measures and has from time to time, undergone several organizational changes. The mission and strategic goals of the IRD is,

#### **Mission of the IRD**

Mission of the IRD is “To collect taxes in-terms of relevant tax and other related laws, by encouraging voluntary compliance, while deterring tax evasion and tax avoidance; and to enhance public confidence in the tax system administered by the Department of Inland Revenue by administering relevant tax and other related laws in a fair, friendly and expeditious manner and thereby facilitate a beneficial tax culture.”

Source – Inland Revenue performance report - 2007

#### **Strategic goals of the IRD**

The strategic goals of the IRD are,

- 1) To improve voluntary compliance by taxpayers with the tax laws through programmes which encourage and assist that and detect those who do not comply and, where necessary take appropriated corrective action.
- 2) To improve the effectiveness of the department by; the applications of efficient work methods, technology and better utilization of available resources.
- 3) To enhance the productivity and professionalism of the staff through management and technical training, work experience, and thereby to enable them to contribute more effectively towards the fulfillment, by the department, of its mission.

Source – Inland Revenue performance report - 2007

The administration structure of the IRD is based on the above mission and strategic goals. Moreover administration of the IRD aims to reach the above mission and strategic goals by creating a taxpayer friendly environment.

### 1.1.2 Revenue

In the year 2007, the total revenue collection of the department reached 308.2 billion, while contributing a total of 54.54% to government revenue. IRD has a significant contribution over total government revenue. Also the revenue of IRD was increased in past few years, and increased thus its contribution further. The contribution of tax revenues towards total government revenue is shown in the table 1.1 given below.

Table 1.1: Government revenue - annual (1990-2007)

Year	Tax Revenue			Non-Tax Revenue	Total Revenue	Direct tax / Total Tax (%)	Indirect tax / Total Tax (%)	Total Tax / Total Revenue (%)	Non tax / Total Revenue (%)
	Direct Tax	Indirect Tax	Total						
1990	7,337	53,869	<b>61,206</b>	6,758	67,964	12.0	88.0	<b>90.1</b>	9.9
1991	9,722	58,435	<b>68,157</b>	8,022	76,179	14.3	85.7	<b>89.5</b>	10.5
1992	10,967	65,386	<b>76,353</b>	9,428	85,781	14.4	85.6	<b>89.0</b>	11.0
1993	12,543	73,348	<b>85,891</b>	12,448	98,339	14.6	85.4	<b>87.3</b>	12.7
1994	15,277	84,140	<b>99,417</b>	10,621	110,038	15.4	84.6	<b>90.3</b>	9.7
1995	17,161	101,382	<b>118,543</b>	17,715	136,258	14.5	85.5	<b>87.0</b>	13.0
1996	20,751	109,451	<b>130,202</b>	16,077	146,279	15.9	84.1	<b>89.0</b>	11.0
1997	21,548	120,964	<b>142,512</b>	22,524	165,036	15.1	84.9	<b>86.4</b>	13.6
1998	20,429	126,939	<b>147,368</b>	27,664	175,032	13.9	86.1	<b>84.2</b>	15.8
1999	28,228	137,801	<b>166,029</b>	29,877	195,906	17.0	83.0	<b>84.7</b>	15.3
2000	27,457	154,935	<b>182,391</b>	28,890	211,282	15.1	84.9	<b>86.3</b>	13.7
2001	34,636	171,204	<b>205,840</b>	28,456	234,296	16.8	83.2	<b>87.9</b>	12.1
2002	37,437	184,400	<b>221,837</b>	40,050	261,887	16.9	83.1	<b>84.7</b>	15.3
2003	39,397	192,251	<b>231,648</b>	44,868	276,516	17.0	83.0	<b>83.8</b>	16.2
2004	41,373	240,178	<b>281,552</b>	29,921	311,473	14.7	85.3	<b>90.4</b>	9.6
2005	52,535	248,293	<b>336,829</b>	42,919	379,746	15.6	73.7	<b>88.7</b>	11.3
2006	80,483	347,895	<b>428,378</b>	48,956	477,334	18.8	81.2	<b>89.7</b>	10.3
2007	107,168	401,779	<b>508,947</b>	56,104	565,051	21.1	78.9	<b>90.1</b>	9.9

Source: Central Bank of Sri Lanka (Annual Report- 2007)

Above facts clearly show the significant contribution of tax collection, towards net government revenue. Therefore, it is evident that taxation has higher priority in economic policies and strategies of any government. However, tax administration and strategies are frequently revised, depending on various factors such as economy, political environment etc.

The contribution of the Inland Revenue Department (IRD) to the government revenue and the Gross Domestic Product (GDP) in 2007, and its trends in the last 6 years is shown in table 1.2 given below. In chart 1.1 below, the above contributions and the clear increase of the IRD collection of revenue is given.

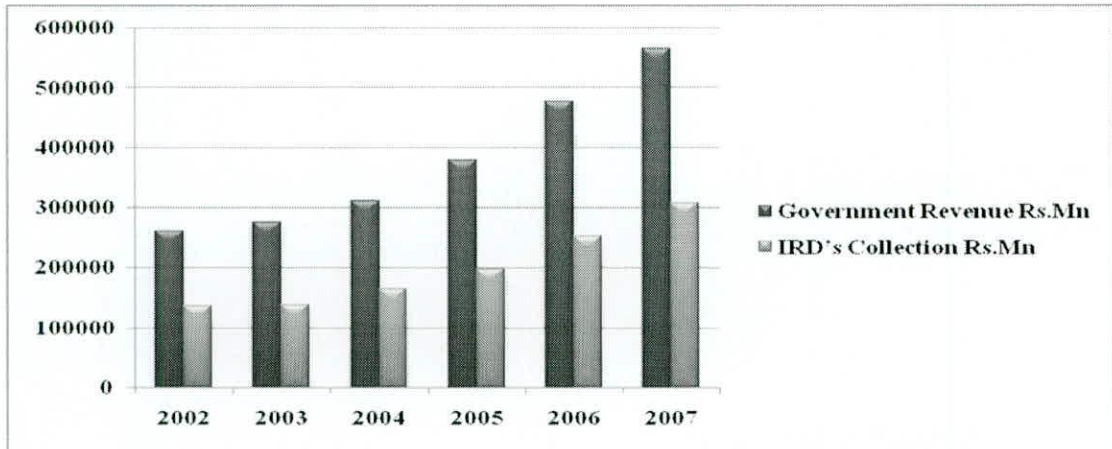
Total government revenue in 2007 has increased to 308.2 Billion as per the annual report of Central Bank of Sri Lanka – 2007, while the ratio of the total Inland Revenue collection to the government revenue, continued its increasing trend and reached 54.54% in the year 2007. The ratio of the IRD's collection to GDP is in the increasing direction.

Table 1.2: Contribution of the Inland Revenue Department to the government revenue

Year	Government Revenue Rs.Million	IRD's Collection Rs.Million	% of IRD's collection to Govt. Revenue.	GDP at Current Factor Prices Rs.Million	% of IRD's collection to GDP.
2002	261887	137609	52.55%	1403286	8.68%
2003	276465	139044	50.29%	1562737	7.63%
2004	311473	164803	52.91%	1800750	7.88%
2005	379747	198301	52.22%	2098323	8.08%
2006	477334	253319	53.07%	2484191	8.62%
2007	565051	308205	54.54%	3577438	8.61%

Source – Central Bank of Sri Lanka (annual report - 2007)

Chart 1.1: Government revenue and IRD collection



Source – Inland Revenue performance report - 2007

Raising revenue is the main objective of taxation, and therefore, the success or failure of the Department of Inland Revenue being the main contributor to the government's revenue, is principally determined by the quantum of its tax requirements of the government, keeping in the line with the statement of mission of the department.

### 1.1.3 Active Tax Files Composition and Tax Categories

Revenue of IRD depends on number of active tax files in the department. An analysis of tax files handled by the department during the last year is shown in the table 1.3.

Table 1.3: File composition of the Inland Revenue Department

<b>Income Tax</b>	
* Resident companies	24,132
* Non – Resident companies	523
* State cooperation, Statutory Boards and State owned institution	195
* Individuals	163,438
* Partnership	15,373
* Bodies of Persons etc.	1,932
* Employees paying income tax under <b>PAYE</b> (Pay-As-You-Earn ) scheme	324,268
<b>Total income tax file</b>	<b>529,861</b>
<b>Employers Registered under PAYE scheme</b>	13,236
Persons and partnership registered for <b>Economy Service Charge (ESC)</b>	8,910
Persons registered for <b>Value Added Tax (VAT)</b>	29,573
Persons registered for <b>Debits Tax</b>	854
<b>Betting Levy files</b>	964
<b>Gaming Levy files</b>	4
Total number of files	<b>583,365</b>

Source – Inland Revenue performance report - 2007