THE IMPACT OF CAPITAL GAINS TAXATION ON THE PRICES OF ORDINARY SHARES OF SELECTED ENTERPRISES IN THE NAIROBI STOCK EXCHANGE

BY
NICHOLAS MATE RUNYENJE

A Management Project submitted in Partial Fulfilment of the requirement for the Degree of Master of Business and Administration of the University of Nairobi

JUNE 1985

This Project is my original work and has not been presented for a Degree in any other University.

NICHOLAS MATE RUNYENJE

This Research Project Report has been submitted for examination with my approval as University Supervisor.

DR. NZELE D. NZOMO
SENIOR LECTURER,
DEPARTMENT OF ACOUNTING

ACKNOWLEDGEMENT

The completion of this study is the result of direct and indirect contribution of many people, some knowingly, others unknowingly. Specifically, I am grateful to my parents, Mate Runyenje and Muthanje Mate whose efforts towards my education have brought me to a level of having to do a study such as this.

I am greatly indebted to my supervisor, Dr. Nzele Nzomo, Senior Lecturer, Department of Accounting for his most valuable guidance without which this study would have been difficult to complete, Mr. Kirimi Mwarania, Lecturer in Taxation for his stimulating discussions and useful suggestions, and Dr. J.H. Kimura who gave me much inspiration to the field of Accounting.

Special thanks also go to Mr. Nelson G. Thongoro of Ngenye Kariuki & Co. and Mrs. Sevany of Africa Registrars Ltd. for their co-operation in providing the information I required, Mr. John Njeru Nyaga of Nyaga Securities for this initial encouragement in the study, staff members and my colleagues in the faculty of commerce for creating a suitable academic atmosphere and from whom I learned alot. Mrs. Joyce G. Ng'anga typed the manuscript with speed. To her, I am grateful.

Any errors of omission, judgement or fact are of course my sole responsibility.

Nicholas Mate Runyenje
June 1985

A B S T R A C T

This study aimed at determining whether the introduction of capital gains tax had any impact on the prices of ordinary shares on the Nairobi Stock Exchange. It also aimed at establishing the trend if any, of prices on the Nairobi Stock Exchange from 1973 to 1983, a period characterised by different economic situations in the country.

The study was of interest because of the resentment which faced capital gains tax since its introduction in Kenya on the allegations that it disturbedthe Stock Exchange Market.

Indices of ordinary share prices were computed and were analysed as a time series through tabular and graphic methods on annual, monthly and weekly basis.

It was found that ordinary share prices on the Nairobi Stock Exchange exhibited a significant trend between 1973 and 1983 which was downward between 1973 - 1975, upward between 1970 - 1978 and downward again from 1979 - 1983. The prices reached their highest levels in 1978 and their lowest in 1975.

Regarding the impact of capital gains tax on the price index, it was found that in 1975 the introduction of the tax had an adverse impact with the index dropping to zero immediately on the announcement of this new tax. A favourable impact was noted in 1978 when the index rose immediately on reduction of the taxable amount by half. There was no impact on the reductions of rates in 1982 and 1983. Both the disturbance in 1975 and the boost of 1978 lasted for only a short time and was not permanent.

The study shows that the effect of capital gains taxation as far as it relates to prices of ordinary shares in the Nairobi Stock Exchange has been grossly exaggerated by the opponents of the tax.

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CHAPTER ONE
INTRODUCTION

1.1 Statement of the Problem

The decision to subject gains arising from transfer, or disposal of shares to taxation has been a subject of much opposition in Kenya. When the legislation requiring that these gains be taxed was enacted on 13th June 1975, business on the Nairobi Stock Exchange came to standstill.[1] Quotations were suspended, so was the daily call over.[2] The Chairman of the Exchange complained that dealings could not go on because of the tax, as clients did not want to pay tax on transactions.

Ever since, although business resumed later, there have even been calls for a total withdrawal of the practice of taxing these gains. Such calls include those of some Members of Parliament.[3] A similar call came from a Prominent Nairobi accountant,[4] while the Kenya Law Society in its memorandum to the Minister for Finance in June 1978 called for the removal of the tax and in its place recommended doubling stamp duty on all documents.[5] And as recently as 1984, the former Chairman of the Nairobi Stock Exchange reiterated his call for the scrapping of the "Capital Gains Tax".[6]

The foregoing citations testify to the fact that taxing gains from transfer of shares has indeed received opposition in Kenya.

Opposition to the taxation of this type of gains is not evidenced in Kenya alone, but also in some other countries. Notable examples are the United Kingdom, where the James Tucker Committee to "Inquire into technical issues arising in connection with computation of taxable profits" recommended, in 1949, a Capital Gains Tax. A similar recommendation was made by the Radcliffe Committee in 1954.[7] These recommendations excited alot of unpopularity and it was not until 1965 that the taxation came into force in the U.K. An attempt to introduce a legislation in Malysia in 1965 was abortive.[8]

A similar move was shelved by the Cabinet in Australia in 1974.[9]

As far as the tax is imposed on transactions carried out on the Nairobi Stock Exchange, criticism and attack from businessmen, Lawyers, Members of Parliament and academicians is based on the allegation that the tax has interfered with the Stock Market in Kenya. It is alleged that the tax serves as a disincentive to investment in shares in that potential investors get discouraged from buying shares so as to avoid paying tax when they eventually dispose off their shares. Those already owning shares are unwilling to sell them in order to avoid being taxed. Such an unwillingness to buy and sell shares would be reflected in low or declining share prices. On the other had a willingness to buy and sell shares would mean prices hike upwards. Kariuki[10] observes that the Stock Market is a strange place which is affected by considerations far beyond the affairs of individual companies. The value of shares can decline simply because the market as a whole is affected by an outside influence. An investigation of this phenomena with capital gains tax as an outside influence is the substance of this study.

1.2 Brief History of Capital Gains Taxation in Kenya

The earliest evidence of an indication that Capital Gains Tax would be introduced in Kenya is found in the Sessional Paper No.10 of 1965[11] which stipulated that among the major changes in Kenya's Fiscal System would be the introduction of Capital Gains Tax as one of the methods of facilitating distribution of income and wealth in the country. This was a major departure from the policy adopted when the first ever Income Tax Statute, the Income Tax Ordinance, was enacted in 1920 which stipulated the non-taxability of capital gains. This policy was followed consistently for over fifty years until June 1975 when a definite decision to introduce a tax on capital gains was reached, although the Sessional Paper No. 10 had recommended it 20 years earlier. The introduction of the tax was hence announced in the Budget Speech on June 13 1975. However, two years earlier on June 14 1973, the Finance Minister had indicated that this tax was on the way. He had indicated that he was being pressed by some Members of Parliament to introduce a tax on capital gains, but felt that it would be unreasonable to burden the income tax department with a new form of taxation at a time when the country was implementing its own new Income Tax Act following the closure of the East African Income Tax department under which the East African Income Tax Management Act was being implemented. However, he put it that there was considerable merits in such a tax and "would certainly not exclude its introduction sometime in the future".[12] When, therefore, that tax was introduced two years later in 1975, it came as no major surprise.

The tax was introduced through Finance Act No. 13 of 1975 and it was administered under the Capital Gains Tax Act, 1975. It affected gains on transactions of Houses, Land and Shares, and was retrospective to 1st January 1975 for companies and took effect from 13th June 1975 for individuals.

Only a year later the Capital Gains Tax Act 1975 was repealed by the Income Tax (Amendment) Act, 1976 which incroporated taxation of capital gains under the Income Tax Act, 1973 by adding to it the Eighth Schedule. It was felt that capital gains are essentially income and it was only fair that they be administered under the same department with other incomes.

The original rates were 45% for companies and a maximum of 35% for individuals. These were first changed in 1978. Under the 1978 amendment, only 50% of the gain for individuals was to be taxed. The rates were again changed in 1981 when only 50% of gain by companies was to be taxed. Withholding tax on gross consideration was reduced from 10% to 5% while on investment shares it was reduced from 35% to 15%. Another amendment in June 1982 reduced the amount of taxable gain by another half for both companies and individuals. At the time this study began, effective rates were 11¼% (45% x 25%) for companies and 8¾% (35% x 25%) for individuals. Withholding tax also had gone down by half making it 7½% for investment shares and 2½% for other capital transactions.

Looking at the frequency at which these rates have been revised, one could assert that they had reached their barest minimum. As this study was being finalised, a measure suspending Capital Gains Tax was announced in the Budget Speech on June 13 1985 (See Appendix Q).

1.3 Share Price Index as an Indicator of Stock Market Condition.

The Share Price Index can be viewed as a barometer that measures the confidence of the market participants in the market situation. When the participants, both buyers and sellers have confidence in the market, there is a general willingness among buyers to bid high prices for shares and for sellers to ask high prices for the shares they wish to sell. This raises the general prices of shares in the market and the Price Index which is computed on the basis of share prices in the market will also go up. A loss of confidence in the market or shaking of such confidence among the participants brings a general unwillingness to buy shares. Bid and offer prices fall and so will the Share Price Index. Cootner[13] found that security prices are typically very sensitive and responsive to all events, both real and imagined. Hence, when the market is favourable, the index rises and declines when an unfavourable situation arises or is perceived. Consequently in a case such as that of the Nairobi Stock Exchange where the volume of share transactions is not always recorded, the Share Price Index serves as an important indicator of changing market conditions and influences. As Eiteman et al[14] observe, Share Price Index facilitates the measurement of changes that may have occured since an earlier period.

1.4 Objectives of the Study

The objectives of the study are:

1. To present indices of ordinary share prices in order to indicate their general trend and changes from 1973 to 1983.
2. To analyse the trend of the price indices for ordinary shares in order to establish whether introduction of Capital Gains Tax had any impact on them.
3. To establish from the trend of indices whether there has been any impact on them by the various reductions of the Capital Gains Tax rates.

1.5 Importance of the Study

This study is expected to be of benefit to the following groups:

1.5.1 Income tax Department

As the department charged with the administration of the Income Tax Act, it is interested in knowing the effects of various tax legislations in various sectors of the Kenyan Economy. This study will therefore bring to light the effect on the stock market of taxation of gains from investment shares, thereby helping to determine whether it is appropriate or not.

1.5.2 Members of Nairobi Stock Exchange

Dealings in shares of quoted companies are handled by the stock brokers who form the Nairobi Stock Exchange. They are also required by the Act to deduct some tax at the time of share transfer. They also serve as advisers to their clients about different aspects of the stock market. This study should therefore be of interest to them by bringing to light the nature of the trend of share prices and the effect of the legislation on their business.

1.5.3 Shareholders and Potential Investors in Shares

Shareholders and potential share buyers are particularly interested in the trend of share prices. Price trends form a basis by which shareholders and potential investors can base their forecasting of prices. In an emerging stock market like the Kenyan one, some people have looked upon their ability to predict future share prices as a pathway to riches.

They are also interested in knowing the impact of any tax legislation on the stock market since they are the potential payers of the tax when they dispose their shares.

1.5.4 The Institute of Certified Public Accountants of Kenya

The Institute is involved in formulation of Accounting standards in Kenya. This study could form a basis of suggesting issues requiring standardization in this area.

1.5.5 Tax and Business Consultants

To their clients, they owe the duty of offering proper professional advice. The study could prove appropriate in providing information to clients relating to this form of taxation and on the share prices and state of stock market.

1.5.6 Treasury

Matters of taxation orginate mostly from the treasury. Results of this study could indicate areas requiring reform in the tax structure.

It will also tell the department whether all the "noise" made against the tax on gains from investment shares is supported by empirical evidence.

1.5.7 Members of Parliament

As law makers, they are interested in knowing the effects of the laws they make. The study will show whether the law requiring taxation of gains from shares has had undesirable effects or not, hence making changes in the law where necessary.

1.5.8 Academicians

The study is expected to stimulate discussion among academics and form a basis of further research in this area.

1.6 Research Methodology

1.6.1 Data Collection

The study relied on time series price data of ordinary shares from 1973 to 1983. Ordinary shares of 20 companies considered to be the most actively traded (in that they were dealt in any particular week) and representing the various industrial groups were selected by a scan of the weekly call-over sheets kept by the Nairobi Stock Exchange. The market prices of each share at different times in the study period were gathered from the weekly call-over lists supplied by one of the stock brokers of the Nairobi Stock Exchange. The prices were those recorded in the last call-over of every month (i.e. every 4th week) each year. But for 1975, 1978, 1981 and 1982, prices were gathered on weekly basis. All Stock Brokers keep identical information on share prices. The table used to collect this data appears as appendix A.

1.6.2 Data Analysis

Share price data collected as explained in 1.6.1 above were aggregated and used for computation of share price indices which formed the basis of analysis. Panel design was utilized. Time series data conforms very well to this type of design. Tables and graphs were the principle tools of analysis. They were used to reveal the movement of share price indices in general. Further, observations were made on nature of the trend on weekly basis before the tax was introduced and compared with the observed trend after it was introduced. Observations were also made before and after a particular change in the legislation regarding the tax rates.

A detailed discussion of data collection and analysis is given in chapter three.

1.7 Limitations of the Study

1. The study focused only on shares traded on the Nairobi Stock Exchange. These are very few compared to the large number of shares changing hands throughout the republic. One cannot therefore generalize the conclusions of the study to cover other shares.

2. Only ordinary shares of companies were used. Preference shares, government and Municipal Securities were not used. Generalization, therefore, cannot be extended to these securities.

3. Out of the ordinary shares of 55 companies quoted on the Exchange, only 20 were selected. Generalization cannot, therefore, be extended to the remaining ones.

4. The aggregation of prices of the ordinary shares of the 20 companies selected resulted in a broad average of the prices of these shares. The movement of the price of a specific individual share should not be construed to be in the same direction as the aggregate price. The design and objectives of the study do not allow us to trace the trend of the price of a specific security.

1.8 The Nairobi Stock Exchange in Perspective

1.8.1 Background:

The Nairobi Stock Exchange was inaugurated in 1954 for the purpose of facilitating investment of funds by local investors in companies whose shares were to be made available to the public. It also enabled the government and Local Authorities to float their securities to the public. It was, and still remains a voluntary organization of Stock Brokers. Today, the Nairobi Stock Exchange is reputed as one of the most active capital markets in independent Africa.[15] Having been constitutionalised at the time of British colonialism in Kenya, the Nairobi Stock Exchange is predictably organised along British traditions.

Before the inauguration of the Stock Exchange, shares and securities were traded through professionals such as Accountants, Lawyers, Estate Agents and Auctioneers mostly as a "by the side" business. Today, the Nairobi Stock Exchange is made up of six full time Stock Brokers. These are:

(i) Chadulal Shah
(ii) Dyer & Blair Ltd
(iii) Francis Drummond & Co. Ltd.
(iv) Francis Thuo & Partners Ltd
(v) Ngenye Kariuki & Co.
(vi) Nyaga Securities

Africa Registrars limited serve as secretaries to the Exchange.

Since all the brokers are stationed in Nairobi, they are represented outside by agents mainly banks and Insurance Brokers.

At the moment, there are 55 companies whose shares are listed on the Stock Exchange as compared to 45 in 1954, a growth of only 10 listings in 30 years. Government and City Council Stocks number 42. Except for government and Municipal Stocks, funds invested through the Exchange are risk capital. Certain strict conditions set out in the Stock Exchange regulations must, therefore, be fulfilled by a company requiring a listing.

In the Pre-Independence days, the clients of the Stock Exchange were mainly Europeans as Africans and Asians were not allowed to deal in Securities.[16] Africans became participants in the Stock Market only after independence. It is, therefore, hardly surprising that most Kenyans know little about the Stock Exchange and tend to view it as a kind of an outfit entity for gambling.

1.8.2 Functions of the Exchange

The functions of the Nairobi Stock Exchange can broadly be summarised as:

(i) A media of mobilising domestic savings to bring about a reallocation of financial resources from dormant to active agents.

(ii) Facilitates the transfer of securities and shares from current holders to potential buyers.

(iii) Facilitates the participation of indegenous Kenyans in the equity of Companies.

(iv) Enables companies to raise extra finance from the public when required.

(v) A link between enterprises and the investors.

The Nairobi Stock Exchange like any other Stock Exchange, therefore, provides an organised market for trading in securities.

1.8.3 Workings of the Exchange

The Nairobi Stock Exchange controls the transaction of business conducted by the member brokers discussed in 1.8.1 above. It is through these brokers that the investor buys and sells shares in a free market. The brokers also serve as financial advisers to their clients.

Nairobi Stock Exchange is basically a telephone market as it has no physical trading floor where sellers and buyers can go to sell and buy shares. Potential customers and sellers contact stock brokers either by telephone, mail, personal visits or through registered agents and give their buying or selling orders. The brokers then accept the orders and wait for customers if there are none at the time of orders. Brokers also contact each other to enquire about the presence of buyers or sellers. Once a price acceptable to both seller and buyer is struck, the deal is contracted and the shares subsequently transfered. One, therefore, notes that price levels of shares are basically dictated by supply and demand.

There is a call-over session everyday at which brokers register price changes. For each security, the highest order to buy and lowest order to sell are recorded on the daily call-over sheet (See Appendix B) and then recorded daily in the newspapers. Only actively traded shares are called daily.

Every week, there is a main call-over which takes place on Thursday at 10.30am. In this session, bid, offer, and actual price at which transactions have taken place during the week are recorded in the main weekly call-over sheets (See Appendix C). This information is also passed over for publication in the Financial and Business Columns in the newspapers.

Since a broker is aware only of the information involving deals to which he was a party, the weekly call-over helps to give all brokers information on the manner in which transactions have taken place and give them an idea of the turnover in the whole market in the week.

1.9 Meaning of Capital Gain in Kenyan Law

In general, a capital gain is the profit made from sale of capital assets such as investments and property. The profit arises when a capital asset is disposed of and the proceeds of disposition exceed the cost (or adjusted cost) of the capital property.[17] Definitions given by Ngotho (P.196), Butt (P.140), Ochumbo (P.2) and Seltzer (P.3) are in line with this one. In the context of Kenyan Law, "the gain which accrues to a person on transfer of property is the amount by which the transfer value of the property exceeds the adjusted cost of the property."[18] For shares, it "is the amount by which the transfer value of investment shares transferred by a person who is an individual exceeds the adjusted cost of those shares"[19]. The terms used in this definition are explained as follows:[20].

(a) "Investment Shares" means shares of companies, Municipal or Government authorities or a body created by those authorities listed and traded on the Nairobi Stock Exchange.

(b) "Transfer Value" means the amount or value of the consideration for the transfer of investment shares (less any incidental costs of transfer)

(c) "Adjusted Cost"

(i) for shares acquired 13th June 1975 is the market price they would have commanded on the Nairobi Stock Exchange immediately before the close of business on 12th June 1975.

(ii) for shares acquired on or after 13th June 1975 is the amount of value or consideration for the acquisition of shares.

It is this gain arising in the manner described in the above paragraph which is taxed under section 3

(2) (f) and section 34(1A) of the Income Tax Act in Kenya from June 1975. A review of the Law relating to taxation of gains from investment shares is given in section 2.2.3

1.10 Operating Terminology

1. Shares: Ordinary shares issued by companies quoted on the Nairobi Stock Exchange.

2. Share Prices: The aggregate Ordinary Share Prices of the 20 companies used in this study gathered as explained in section 1.6 above.

3. Share Price Index: The index of ordinary Share Price computed for this study in the manner explained in Chapter 3 section 3.2

4. Capital gain: The excess of the transfer value of investment shares or other capital property over its cost of acquisition.

5. Impact: Movement of the Share Price Index attributable to capital gains Taxation.

1.11 Overview of the Paper

This paper is made up of four chapters. Chapter one delineates the problem and an overview of the operations of the Nairobi Stock Exchange. Chapter two is the literature review and presents a review of general literature and empirical studies. Chapter three is empirical analysis. It gives a description of the Research Methodology. It presents a discussion of the manner in which the study was conducted and how data analysis was done. Analysis of data and the results of the study are also presented in this chapter. Chapter four is a summary and conclusion of the study and also indicates possible areas of further research.

CHAPTER ONE

FOOTNOTES

1. The Daily Nation: "New Tax on Stock is Death Blow to Market" June 14 1975, P.3

2. The Daily Nation: "Share Quotations Suspended", June 18 1975, P.9

3. See Kenya National Assembly Official Reports, June 1975

4. The Standard: "Budget day view", June 13 1978, P.3

5. The Standard: "Lawyers want Capital Gains Tax Removed", June 14 1978 P.8

6. The Daily Nation: "Tax should have gone - M.P.", June 15 1984, P.3

7. Toby, Richard A: The Theory and Practice of Income Tax, P.70

8. Prest, A.R: Public Finance in Developing Countries, 2nd Edition, P.34

9. Greenwood, J.M: "Taxation Notes", The Chartered Secretaries, January - March 1975, P.31

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11. Republic of Kenya: African Socialism and its Application to planning in Kenya, P.33

12. Kibaki, Mwai, Budget Speech, June 14 1973 P.9

13. Cootner, Paul H. The Random Character of Stock Market Prices, Revised Edition, P.1

14. Eiteman, W.J., C.A. Dice and D.K. Eiteman: The Stock Market, Fourth Edition, P. 175

15. Kariuki, Op. Cit. P.2

16. Kariuki, I.N: "How the Nairobi Stock Exchange Works", <u>Ngenye Kariuki & Co. Newsletter</u>, August 1981 P.1

17. Colley, G.M. and E.J. Newman, <u>Tax Principles to Remember</u>, Para 9-01

18. Republic of Kenya, <u>The Income Tax Act (Revised 1982)</u>, Eighth Schedule, Part I Para 4 (1)

19. Ibid, Part II, Para 15

20. Ibid, Para 14

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on capital gains taxation in general and the empirical studies on capital gains taxation. It covers rationale for taxing capital gains, general arguments advanced against taxing such gains and a review of the law relating to taxation of gains from investment shares in Kenya.

Studies reviewed are those of Lomas (1961), Sprinkel (1962), Isbister (1968), Haugen (1973), Dyl (1977), and Slemrod (1982).

2.2 General Literature

2.2.1 Rationale for Taxing Capital Gains

The most commonly advanced rationale for taxing capital gains is based on the definition of capital gains as income and the other is on the grounds of equity.

2.2.1.1 Capital Gains as Income

Having defined capital gains as profit from sale of capital property, then a person who has made such profits has clearly added some amount to his stock of wealth, that is, he has earned income. If income earned in other ways is taxable, then one may argue that capital gains should be taxed as well. It is from the acceptance that capital gains are income, that the 1975 Capital Gains Tax Act was repealed in April 1976 and taxation of such gains incorporated in the Income Tax Act (1973).

That profits should be taxable income is not a matter of dispute. The problem in this area is whether such gains constitute income. If income, it should be taxed but if capital, it should not.

The question of how income should be measured is a matter which has not gained universal acceptance since the earliest development of accounting and economic theory. The economists' approach is a utilitarian one and it views income as the maximum amount an individual can consume in a period and still be as well off at the end of the period as he was in the beginning. The accountant on the other hand departs from the economist by placing a distinction between income arising from ordinary course of business in a regular manner and that which occurs in an irregular manner and not in the normal course of the business. The former is operating income and the latter capital gain. As Edwards and Bell point out, "the problem of income measurement has been especially perplexing, in part because economists have approached it with essentially subjective concepts derived from expectations concerning future events, while accountants have insisted on objectivity and the measurement of actual, unfortunately often historic, events."[1]

It is therefore hardly surprising that even among countries where the taxability of capital gains has been legislated, there is a wide variation in the way each particular one treats the gains. As an example, countries like Guyana and Puerto Rico have sophisticated arrangements of taxing capital gains at different rates according to the length of time an asset is held. In Britain, gains on transfer of shares are taxed at differnet rates depending on whether the shares are sold within one year, two years or three years and are tax free if sold after three years. India has moved closer to including capital gains and income parting with British traditions of regarding capital gains as separate from income.[2] When Canada legislated the taxation of capital gains in January 1972, it was included in income. In doing so, the Minister for Finance conceded that he recognized that "this would be a major and controversial step." [3] And here in Kenya, capital gains were first taxed under a different system under the capital gains tax Act 1975, and later in April 1976 they became taxable under the Income Tax Act (1973).

All these are indications of uncertainty which exists in this area. But despite the uncertainty there is a growing indication that a tax on capital gains is becoming more and more acceptable as a legitimate and essential form of taxation.[4]

2.2.1.2 The Concept of Equity

The other most oftenly quoted rationale for taxing capital gains is based on the principle of equity. The tax catches the profits of the rich in society who are the ones who own capital. It is them, as opposed to the poor who obtain returns from their invested capital in the form of capital appreciation.

One notes that capital gains do not come from any special efforts of theproperty owners, but value in property arises from general causes such as population growth, favourable economic conditions and other factors. And to these, the non-property owners or the poor also have a contribution. Mill[5] argues that the increase in wealth of an economically progressive society tends at all times to augment the income of landlords which gives them greater amount and porportion of the community's wealth independently of any trouble or outlay incurred by themselves. Therefore, he asserts, they have no claim, on the general principle of social justice for accession to riches in this manner.

A tax on capital gains removes inequity between those who are able to obtain returns from investment as capital gain and those who obtain such returns as interest or dividend. Such inequity is unfair between individuals and distorts the pattern of savings and investment. For a tax to have social validity, it must be fair and equitable. Allocation of the burden should be accepted as fair, otherwise as Grover puts it, "the social and political fabric of a country may be weakened and destroyed". (P.12). Therefore, there appears to be a strong case on the grounds of equity for taxing capital gains.

Equity is generally accepted in tax literature as the principle of treating people in the same situation similarly mainly on the ethical need for fairness and the practical need to avoid consequences of the nature mentioned in the paragraph above. Two classes of equity are recognised. Horizontal equity and vertical equity. Horizontal equity describes equal treatment of equal people. It assumes homogeneity among persons. Vertical equity describes unequal treatment by the tax system of unequal persons with some appropriate degree of inequality. There is a practical difficulty in gauging the similarity between persons or even determining what constitutes inequality. Isbister[6] observes that "equity is simply a normative statement about incidence." (P.332). To discover whether a particular tax is equitable or the extent to which it is discriminatory is a complex task. For instance, Isbister, argues that inequity may occur if when the tax is imposed, market prices do not fully reflect the impending change in the structure of the economy. As an example, if the price of shares falls immediately by say 50% when a tax is announced, a shareholder who sells out will lose, relative to his colleagues. One may wonder whether this inequity is chargeable to the tax itself or to the lack of wisdom of the shareholder.

Tax writers have tended to accept personal income as the best practical standard to judge equity.

Another problem on the issue of equity is on legal complexity. Taxation of capital gains is considered to be a complicated measure. Hence, in an attempt to achieve equity, legal and administrative complexity is bound to occur. "Making a tax system more equitable may necessitate increased complexity in the tax law. This greater complexity may mean that fewer individuals know and understand the law so that individual rights and liberties are jeopardized." (Grover, P.12).[7]

Inspite of the complexities associated with the principle of equity, it has been quoted as the key reason in virtually all cases where capital gains taxation has been introduced.

The Radcliffe Commitee (1954) recommended the tax in the U.K. on the grounds of "bringing greater degree of income distribution" (Toby, P.70). The measure was necessary to prevent avoidance of tax through transformation of income receipts to capital receipts. This avoidance is particularly possible where the capital market is highly developed. Here there are opportunities for an individual to organize his affairs in such a manner that his benefits arising from property ownership is in the form of capital rather than taxable income (Kay, P.56). Taxing capital gains puts the gains in the tax net and catches the tax avoiders. By arresting tax avoidance, equity is attained.

Introducing a tax on short term speculative gains in Britain in 1962, Lloyd Selwyn, chancellor of exchequer based his decision on equity. He argued that although the main function of any tax system should be to bring revenue, it should produce a feeling of broad equity of treatment between taxpayers. "Yield is not my main purpose, but a greater equal treatment between taxpayers" (Wheatcroft, P.3).

Callaghan on his part when introducing a full fledged capital gains tax in 1965 almost echoed his predecessor. He conceded that the failure to tax capital gains was not only widely regarded as the greatest blot in the British Tax System, but it was unfair to the wage and salary earner who was fully taxed on earnings more hardly won than a recipient of capital gains who went tax free. "This new tax will provide a background of equity and fair play". (Wheatcroft P.5).

Similar arguments were advanced in Kenya. The Sessional Paper No.10 of 1965 on African socialism, as mentioned in chapter one, recommended a reform on our tax system by introducing among others, a tax on capital gains as a major means for effecting a more equitable distribution of income and wealth.

Introducing the tax in 1975, the then Minister for Finance noted that some people had made substantial capital profits on property or shares which were not subject to tax and that others had become rich through evasion and avoidance of tax. He saw tax on capital profits more as a solution to this problem rather than as a source of revenue. "The principle of equity in our society is more important than the revenue to be gained from a particular measure.[8] Our taxation system will be a fairer one once (this measure is enacted)"[9]

The discussion in this section has shown that the desire to achieve equity in taxation is a fundamental motive and a key rationale for subjecting capital gains to tax. Whether they are taxed separately or as ordinary income appears to be a matter of minor importance. The complicating factor is that questions of equity are more a matter of belief than fact. The circumstances which should be recognized will vary with particular environments and societies.

2.2.2 General arguments against taxation of Capital Gains

2.2.2.1 Inflation and Capital Gains as illusory Income

A major argument which has gathered a lot of momentum in the area of capital gains taxation centres on the relationship of those gains and inflation. Inflation, a term which describes the general rise in price level has been a disturbing phenomenon in recent years world over.

Capital gains, unlike ordinary income, accrue over a longer period of time and involve comparative values from the time ownership of an asset was acquired to the time of its disposal. They are therefore much more seriously affected by inflation. Gains arising from general price level changes may not represent an addition to the flow of goods and services to the real stock of wealth, or an increase in the scale of living, or consumer satisfaction. (Groves, P.165). For example, value of a building may rise for no other reason other than that the yardstick of measurement has changed, i.e., the value of money has fallen. In such a case, the owner of the building has gained nothing in terms of economic power. A person transferring such an asset pays tax on a gain measured in money terms. The true gain will have been reduced by inflation, sometimes even turned into loss. Such gains, therefore, tend to be illusory and a tax on them turns out to be a tax on wealth. It is " sometimes a savage levy on capital itself" (Wheatcroft P.4). On this, Shoup argues,that "the government should never lay such taxes as will inevitably fall on capital, since by so doing, they impair the funds maintenance of labour and thereby diminish the future production of the country." (P.46).

Given the inflationary tendencies of world economies, time has come when inflation should be accepted as an economic fact rather than a problem.

2.2.2.2 Administrative difficulties in Capital Gains Taxation

It is acknowledged by various writers that taxation of capital gains is administratively complicated and burdensum. It is ".....a fine example of a tax, the complications of which seem numerous..." (Muten P.146). The determination of the gain only on realization rather than accrual basis brings difficulties in assessment. Absurdity arises where numerous minor transactions are involved and are difficult to trace. In streamlining the tax law, legislation becomes complex, a problem which the Minister for Finance when introducing the tax in Kenya acknowledged, "....how the capital gains tax will work with respect to qualified investment accounts is somewhat complicated..."[10]

2.2.2.3. Locked - in - Effect of Taxing Capital Gains

Locked - in - effect refers to that situation where people abstain from selling their property because of fear of ultimately paying tax. The consquence of this is a tendency for a continous capital accumlation rather than income consumption. This effect is found best in the study by Harris and Associates.[11] They studied, the investor buying and selling patterns of the New York Stock Exchange where they found that the amount of capital available in the market moved inversely with the movement in tax rate. But as Ochumbo observes, the importance of this argument depends on the importance a particular society attaches to capital appreciation, which is not necessarily undersirable. But in a country like Kenya where there is an established government policy to indegenize the economy, such a locked - in - effect may work against this policy as foreigners postpone sale of capital assets to avoid tax thereby continuing to effectively control the economy.

2.2.2.4 Capital Gains Tax and Savings

Capital gains tax is said to militate against saving, genuine investment and hence economic growth. (Wheatcroft P.3). Taxing income from savings amounts to subjecting savings to additional taxation since the capital sum had already been taxed. It is deferred spending power. Clark laments, "why penalize a man who does not consume maximum of his income each period?" (P. 589). This centres on the tax efficiency criterion of neutrality, a concept which describes the extent to which a tax avoids distorting the workings of the market mechanism. On the Stock Exchange, it has been asserted that "...investors are discouraged from purchasing shares on the stock market because after such a purchase, they would (later) need to sell their shares..., whatever their profits were would be eroded by the capital gains tax" (Ochumbo P.7).

2.2.2.5 Certainty

Certainty of how much tax is payable, and when, is important in tax planning by government. Capital gains tax suffers lack of quality of certainty because the gains arise in an irregular manner and are realized only once (on disposal of the capital asset) although they have accrued over a long period of time. The disposal, and hence the tax liability is at the discretion of the asset owner. Capital gains tax therefore violates this criterion of a good tax system.

2.2.3 The Law relating to taxation of gains from shares

A background of the introduction of capital gains taxation was discussed in chapter one. It was indicated that the tax was first introduced in Kenya through the Capital Gains Tax Act, 1975 under a separate administration from the Income Tax department. Later in 1976, the Act was repealed and placed as the Eighth schedule of the Income Tax Act (1973), thereby placing the administration of the tax under the Income Tax Department. It was noted in chapter one that in the budget speech of June 13 1985, as this study was being finalised, capital gains taxation was suspended. The law reviewed here will, therefore, have to be amended accordingly.

The taxability of capital gains is established by Section 3 sub-section (2) (f) and section 34 (1A) of the

Income Tax Act, Cap 470, Laws of Kenya, (Revised 1982). Section 3 sub-section (2) (f) provides that income in respect of "gains accruing in the circumstances prescribed in and computed in accordance with the Eighth schedule" shall be chargeable to Income Tax. Section 34 (lA) establishes that Income for an individual "includes a capital gain". In a strict legal sense, one can say that what we have in Kenya is not a capital gains tax, but income tax on capital gains.

The Eighth schedule is made up of three parts. Part I deals with accrual and computation of gains from property and other investment shares transfered by individuals; Part II deals with Accrual and Computation of gains from investment shares, and Part III deals with reduction of chargeable gains in respect of property acquired before lst January 1975 and transferred before lst Janury 1985. It is part II which is the subject of discussion in this section.

The meaning of investment shares is given by Para 14 (b). It is "shares of companies, Municipal or Government authorities or a body created by those authorities that are listed on the Nairobi Stock Exchange". However, in case of individuals only, the shares in stocks or funds of the government or local authority are exempt from tax under the First Schedule; (para. 36). The gain subject to tax is the amount by which the transfer value of investment shares transferred by a person who is an individual exceeds the adjusted cost of those shares. (para. 15). Where the adjusted cost exceeds the transfer value, a loss is realised and a deduction is allowed in accordance with the provisions of section 39.

When a gain is ascertained to have been realised, the stock broker who conducts the transfer of investment shares on behalf of the transferor is required to deduct tax at the rate of 7½%, as from June 1982. The rates were

35% in 1975 until 1981 when they were revised down to 15% before being revised again to 7½ in 1982. The tax so deducted by the broker must be remitted to the commissioner. (para. 18). Failure to deduct and/or remit such a tax (commonly known as withholding tax) in accordance with the requirements of section 35 makes the broker jointly and severally liable with the transferor of the shares for payment of the tax. (Para. 20).

2.3 Empirical Studies

This section reviews literature on some of the empirical studies in the area of capital gains taxation and its effects and influences on different aspects of stock markets. Specifically, the works reviewed are those of Lomas[12] Sprinkel and West[13], Haugen and Wichen[14], Dyl[15] and Slemrod.[16] Research techniques used by these researchers vary. The analyses have, however, used statistical techniques. Some have used simulation as an abstraction of real world situation where actual data was difficult to get. A look at some of these studies will indicate the direction of research in this area of capital gains taxation.

The closest work to this study both in proximity and Methodology is that of Lomas. He carried out a study on the indices of ordinary share prices on the Nairobi Stock Exchange. The objective was to indicate the general trend and magnitude of changes from 1955 to 1961 and to measure the effects upon share prices of the "politically induced depression that came about when the implication of decisions taken at the Lancaster House conference in January/February 1960 became appreciated" (P.76). He calculated weighted price indices on monthly basis using the prices recorded at the first call-over in every month. The weighting was based on the amount of ordinary capital issued by the 40 selected companies.

Using tabular analysis, the conclusions were:

(a) From 1956, the trend of ordinary share price had been downwards, and on the average, ordinary shares lost over half their value between 1956 and July 1961.

(b) Between 1956 and the Lancaster House Conference in January/February 1960, ordinary shares lost on average approximately one quarter of their value, mainly due to issue by many companies of bonus shares.

(c) From the Lancaster House conference in January/February 1960, ordinary share prices had fallen much more rapidly than in the preceding years and by July 1961, they had lost over one-third of their value in January 1960.

Sprinkel and West set out to develop a simple method of estimating the role which is played by contingently payable capital gains taxes in investment decisions. They considered two alternatives of the effects of capital gains taxation. One, the sale of a security with the intention of purchasing alternative investment expected to have a superior price over a given interval of time ("switch" decisions.) They adopted a numerical approach by taking alternative possibilities in investment decisions and a constant (non-changing) capital gains tax rate. They concluded that capital gains taxes clearly reduced the investor's flexibility in taking advantage of security price fluctuations and switching to alternative investments, but that investors frequently overestimate the extent of the "lock-in" effect. This was based on the finding that a stock-price needed not necessarily decline by a percentage equal to the capital gains tax rate for a sale and repurchase to be profitable. The investor frequently will forget that a contingent tax liability exists whether a capital gain is actually realised or not. The tax must eventually be paid unless the security is held until death. (Fortunately, estate duty was abolished in Kenya in 1982). Hence they asserted that the impact of capital gains taxes on investment decisions has been grossly exaggerated in the minds of many investors.

A comprehensive study was done by Haugen and Wichern to investigate the effects of capital gains tax on the stability of security prices in the New York Stock Exchange. They measured the effect of the tax on the security prices through differential calculus to determine the change in the gain with respect to the tax rate for both non-dividend paying and dividend paying shares. The assumption was that capital gains tax rates were usually accompanied by changes in the tax rate on dividends so that tax rate on dividends can be treated as a function of the capital gains tax rate. They further employed a computer simulation to determine the mangnitude and direction of the tax in order to account for the consequent changes in the stockholders base price through time. Periods simulated were 150, giving a price history which could be observed for the tax, and the experiment repeated 750 times.

The results showed that a consistent pattern emerged. They concluded that under idealized conditions, the capital gains tax acts to stabilize stock prices for a stock that pays dividends but was distabilizing for a special case of non-dividend paying stock, conceding that this was a rather surprising conclusion in light of the "accepted doctrine".

Dyl studied the relationship between capital gains taxation and year end stock market behaviour. The primary objective of the study was to examine the validity of the assumption that capital gains tax has a significant influence on investors' market behaviour because capital gains taxes give investors an incentive to realize capital losses and defer realization of capital gains.

A random sample of 100 common shares was selected whose information was available from 1948 to 1970, and obtained monthly volume data for each of the stocks from January 1959 to February 1970. He measured the extent to which each security exhibited unrealized profit or loss to the owner towards the end of the year. Dividends were omitted for the reason that they did not have a direct effect on the investor's year end decision to realise a capital gain or loss. He also recorded the volume of trading each month and isolated the normal trading volume through a linear regression equation to eliminate other market influences.

The results showed that there was substantial support for the hypothesis that capital taxes affected year-end investment decisions and that these decisions were in turn reflected in the trading volume of common stocks in December. In contrast, in January there was neither a major sell-off of appreciated stocks nor substantial repurchasing of depreciated stocks sold of for tax purposes occurs after the end of the year. In particular, the findings showed that there was abnormally low trading volume for ordinary shares that had appreciated during the year presumably reflecting year end capital gains tax lock-in-effects and an abnormally high trading voloume of ordinary shares whose price had declined during the year, presumably reflecting year end tax selling.

A similar hypothesis was tested by Slemrod. Data was collected on stock sold, and the month of sale from the return forms filed with the treasury some of which showed capital losses and others capital gains. Data was for 1973 and 1962. He then analysed the monthly variation in stocks sales which resulted in losses and those which resulted in gains and developed equations for value of losses and value of gains relative to total value of sales for each of the 12 months in order to come up with relative indices.

Results showed that there was substantial year end manipulation of stock sales for tax reasons. This was strongest for extra-ordinary loss taking behaviour in December than it is for postponement of gain taking from one year to the next. The measure of the indices were considered statistically significant. Other factors constant, the ratio of losses to sales in December was 114% higher than average in 1973 and 130% higher than average in 1962. Gain realization was 32% lower than average.

Slemrod, like Dyl, concluded that there was strong evidence for existence of substantial extra-ordinary selling of losses at the end of a tax year. There was evidence to support the hypothesis that sales with gains are postponed to subsequent years but it was not conclusive that these gains were realised in the subsequent (next) tax year. Hence, capital gains taxation had substantial impact on the pattern of year end stock market behaviour.

2.4 Conslusion

This chapter reviewed the general literature on capital gains taxation which focused on explaining the rationale for taxing capital gains, arguments against the practice, and the law relating to taxation of gains from shares.

A section was devoted to a review of relevant studies on the capital gains tax and the stock market. The study by Lomas, though not on capital gains tax, helps to throw light on how external factors, of which capital gains taxation is one, can affect stock market prices. These studies show that the effects of capital gains taxation on the stock market has occupied the minds of researchers for quite sometime. One, however, notes that research has focused on more developed stock markets such as the New York Stock Exchange. This is an indicator that researchers in Kenya should focus on the Nairobi Stock Exchange to find out how the tax affects different aspects of the Kenyan Stock Market.

CHAPTER TWO

FOOTNOTES

1. Edwards, Edgar and Philip W. Bell, The Theory and Measurement of Business Income, P. viii

2. Prest A.R., Public Finance in Developing Countries, 2nd Edition, P.34

3. Grover, Warren and F. Iacobucci, Materials on Canadian Income Tax, Second Edition P. 475

4. Toby, Richard A, The Theory and Practice of Income Tax, P. 70

5. Mill, J.S., Principles of Political Economy, Ashley Edition, P. 818

6. Isbister, John: "On the Theory of Equitable Taxation", National Tax Journal, Vol. XXI No. 3, September, 1968. P. 332

7. For a comprehensive discussion on the Equity Theory, see: Ibid P. 332 - 339 and Ochumbo, Agnes: An Analysis of Selected Amendments in the Income Tax Act in Kenya in the light of Tax Efficiency Criterion of Equity, MBA Project, University of Nairobi, 1982, P. 23 - 34.

8. Revenue estimated from the new tax was only K£ 1 million.

9. Kibaki, Mwai Budget Speech, June 13 1975 P. 9

10. Ibid

11. Reported in:
    Sprinkel, Beryl W and B. Keneth West: "The Effects of Capital Gains Taxes on Investment Decisions", Journal of Business, Vol.XXXV, April 1962, No. 2, P. 122

12. Lomas P.K. "The Nairobi Stock Exchange and the Trend of Ordinary Share Prices since 1955, "East Africa Economic Review, December 1961 PP. 74 - 78

13. Sprinkel, Beryl W. and B. Kenneth West: "The Effects of Capital Gains Taxes on investment Decisions" <u>Journal of Business</u>, Vol.XXXV, Chicago, April 1962 No. PP. 122 - 134

14. Haugen, Robert A. and Dean W. Wichern: "The Diametric effects of capital Gains Tax on the stability of stock prices", <u>Journal of Finance</u>, Vol. XXVIII, September 1973 No. 4 PP. 987 - 997

15. Dyl, Edward A. : "Capital Gains Taxation and Year - End Stock Market Behaviour", Vol. XXXV No. 1, March 1982 PP. 69 - 77

16. Slemrod, Joel: "The Effect of Capital Gains Taxation on Year end Stock Market Behaviour", <u>National Tax Journal</u>, Vol.XXXV No. 1, March, 1982 PP. 69 - 77

CHAPTER THREE
EMPIRICAL ANALYSIS

3.1 Introduction

This chapter describes the research methodology used in the study, starting with the procedure used in data collection. This is followed by a description of data treatment and analysis. The results of the study as well as the inferences which are drawn from the results are also presented. The main analytical tools were tables and graphs.

3.2 Research Methodology

3.2.1 Data Collection Procedures

The study focused on the Naïrobi Stock Exchange. It is from here that data on share prices was sought. These prices were those of ordinary shares and were used in the construction of share price indices.

There are 55 companies listed on the Nairobi Stock Exchange; Of these, only about half have their shares actively traded. Twenty most actively traded companies were selected. An attempt was also made to represent as much as possible the various industrial groups. Appendix D shows these companies and their industrial groupings.

For each of these companies, the highest sales price for their ordinary shares in the week were extracted from the files of the weekly call-over sheet. This was done every 4th week (which coincided with the last call-over of each month), for the years 1973 - 1983. For 1975, 1978, 1981 and 1982, prices were taken on a weekly basis. The highest sales price recorded in the main weekly call-over done on Thursdays was taken. This was necessary because 1975 is the year capital gains tax was introduced in Kenya, while important changes in rates of tax on gains from shares were made in 1978, 1981 and 1982, and this would aid analysis on weekly basis for these years. Data was collected for each of the years from 1973 to 1983 to observe the market price situation before and after the introduction of the tax on gains from shares. The data would also reveal the trend of share prices for the past 11 years.

The bulk of the data were gathered from Ngenye Kariuki and Company, one of the six stock brokers in the Nairobi Stock Exchange. Part of the data are from Africa Registrars Limited, the Secretaries to the Stock Exchange. The brokers keep identical information on stock prices. Ngenye Kariuki and Company were considered most appropriate because the proprietor is the current chairman of the Nairobi Stock Exchange. Clarifications necessary would be sought easily.

3.2.2 Data Treatment

Share prices in each week were added up to produce an aggregate. For computational convenience, this aggregate was scaled down by 20, the number of companies sampled. The weekly aggregate was further summed up to produce an annual aggregate. (Appendix E and F) the objective of gathering the share price data was to compute share price indices. An index at every 4th week (designated monthly index), another at every week for 1975, 1978, 1981 and 1982, and an annual index for each of the years 1973 to 1983 were computed. The importance of share Price Index is already discussed in Section 1.3. Two types of indices were computed; An unweighted index and a weighted index.

(i) **Unweighted Aggregative Price Index**

The method of computation was adapted from the Dow-Jones share price index[1] published by Dow, Jones & Co. Inc, New York in The Wall Street Journal and utilized the formula:

$$\text{Index in Period } i = 100 \left(\frac{\Sigma P_i / n}{\Sigma P_o / n} \right)$$

where Pc is the Individual Share Price Currently
Po is the Individual Share Price in the base period.
n is the Scaling Factor (number of Companies)

APPENDIX G and H shows the results of this computation.

(ii) Weighted aggregative Share Price Index

Aggregate Prices were weighted by the total number of outstanding shares for all sampled companies. This type of index was adapted from Securities and Exchange Commission (S.E.C) Stock Price Index[2] published in S.E.C's <u>Statistical Bulletin</u>. The formula utilized was:

$$\text{Index in Period } i = 100 \left(\frac{\left(\frac{\Sigma P_c}{n}\right) S_c}{\left(\frac{\Sigma P_o}{n}\right) S_o} \right)$$

where P_c = Individual Share Price Currently
S_c = Total number of shares outstanding Currently
P_o = Individual Share Price in the base Period
S_o = Total number of shares outstanding in the base period.

APPENDIX I shows the results of this computation.
APPENDIX J shows the total number of shares outstanding which were used for weighting.

The purpose of computing the two types of indices was camparison, to find out whether there would be a difference in the basic conclusion depending on which index was used.

(iii) The Index Computed by Nairobi Stock Exchange

Nairobi Stock Exchange computes a weekly ordinary share price index. This is done by Dyer and Blair, a firm member of the Stock Exchange. The base year is 1966. The annual indices between 1973 and 1982 were extracted from the relevant Nairobi Stock Exchange year-books. They were then spliced to bring the base year to 1973 common with the study. (Appendix L). They were superimposed against those computed for this study, for the purpose of comparison. For details of how the Nairobi Stock Exchange Index is computed, See Appendix M.

3.2.3 Data Analysis

3.2.3.1 Analytical Design

The experimental design used was panel design. Panel design looks at data as a time series. It is a single - subject design. It involves taking a series of measurements and then an experimental variable is introduced at one or more points in the series. Hence, one will have measurements both before and after the experimental variable is introduced. It is therefore very similar to the "before - after" experiments. The "before" measurement(s) act as the experimental control. Boyd et al[3] observe that it is important to predict in advance the expected trend were the experimental treatment not introduced. The prediction affords additional control against which the "after" measurement is compared. The trend was predicted for 1975 using a trend equation derived through the method of least squares. (Appendix P).

The principal tool of analysis and which is consistent with time series studies is graphs. Indices computed as discussed in Section 3.2.2 were ploted on graphs. One for the index of every 4th week (Monthly), (1973 to 1983), a second type on weekly basis for 1975, 1978, 1981 and 1982, and a third for annual indices.

3.2.3.2 **Testing the hypothesis of randomness**

To be able to observe the effects of any experimental variable on a time series, it is necessary first to establish that there is a trend in the series and that the measurements are not merely random. A one sample runs test for randomness in the share price indices was tested at a significance level of $\alpha = 0.05$ (Appendix N). This level was chosen because in a decision about securities, investment is involved. It was, therefore, considered more serious to reject the hypothesis of randomness in the series when it is true, than to accept it when it is false. A 95% level of confidence is substantially high.

3.2.3.3 **Control of Experimental History**

History is explained in research methodology literature[4] as the collection of other experiences or events that take place during the Pretest - Post-test Interval. Whether or not post-test scores are affected by the treatment, they may be affected by other factors.[5] In this study, key factors which can be identified to influence security prices are the general economic outlook and state, and the profitability of a particular company. Dominowski[6] observed that, if the pretest - posttest interval is short, history is less likely to confound the results, but as this interval gets longer, the possibility of the results being confounded by outside influences becomes more serious .

To reduce or eliminate the problem of history, the analysis was done on the trend of weekly indices for each of the critical years; namely, 1975 when the tax was introduced, 1978, 1981 and 1982 when the taxation rates were reduced. The first 23 weeks in each year served as the "before" measurement, and subsequent weeks as the "after" measurements. Tax decisions were announced in week 24 each year. A trend line using the method of least squares was computed for 1975 using data for the first 23 weeks. The line was extended to predict how the trend could have been expected to move. Deviations from the trend line were observed and analysed.

By reducing the analysis to trace weekly price movements, the economic outlook in the country and the profitability of a company can be considered fairly constant or uniform in any 52 week period. They can, therefore, be ruled out as the causes of the fluctuation of the index (if any) at a particular week independent of the other weeks. The effect of an "external stimuli" introduced in a particular week, in this case taxation of gains from shares, can be observed. This analysis is also consistent with the findings of Cootner[7] that "security prices are typically very sensitive, responsive to all events, both real and imagined that cast light into a murky future." The effect of a tax on the price index would therefore be expected to be immediate rather than delayed. This can best be revealed by a weekly analysis. In a similar line of argument, Eiteman[8] identifies two groups of conditions that are always present in the stock market to affect prices. The first relates to the adjustment of prices to the economic conditions, and is referred to as the <u>fundamental condition</u>. The general trend of stock market prices (upward trend or downward trend) reflects the fundamental factors. The second relates to the monetary structure of the market and is referred to as the <u>technical condition</u>. They are represented by deviations above and below the trend represented by the fundamental condition.

In this study the introduction of, and change in capital gains tax rates at an instance of time can properly be classified as a technical factor whose effects can be observed in relationship to the fundamental trend.

Here, it can be observed that 1975 fell within the period of "Economic instability" arising from the effects of the 1973 oil crisis; 1978 in the period of the "famous coffee boom", while 1981 and 1982 fell in a period of world economic recession.

3.3 Analysis of Observations and Results

3.3.1 Comparison of the Share Price Indices

An indication was given in Section 3.2.2 that two indices were computed, namely on unweighted index (Dow - Jones Method) and a Weighted Index (Securities and Exchange Commission Method). The purpose of this was to compare the movement of the two and, hence, determine whether the conclusions might be influenced by the index used. Figure I and 2 show that the two indices tend to move in the same direction. The weighted index, however, has tended to be higher than the unweighted one. The magnitude of the difference is, however, not necessarily uniform at all points. This behaviour can be explained by the fact that the weighting factor i.e. total number of shares outstanding has been increasing from year to year. They increased from 94,403,801 in 1973 to 185,139,972 in 1983, almost double. (Appendix J). Therefore, it would not matter what Index is used in the analysis. The unweighted index was chosen. Hence, all the analysis has proceeded on the unweighted index. For the purpose of analysis, the magnitude of the index per se was not important. What was important was how the index moved and changed. If conclusions arrived at would be the same with or without weighting, then weighting is not necessary.

Figure 2 also shows a plotting of the index computed by the Nairobi Stock Exchange. It is interesting to notice that the Index moves in more or less the same direction as those computed for this study, at times even overlapping. One reason for this behaviour is that, of the 17 companies whose share prices were used in computation of Nairobi Stock Exchange Index, 12 were used in this study.

One can say that the behaviour of the indices would be reasonably similar.

3.3.2 Results of test of the Hypothesis of Randomness

The results of the hypothesis tested to establish whether the movement of share prices was random, or exhibited a trend, showed that the movement of share prices was not random. Appendix N shows details of how this test was done. This meant that there was a significant trend in the movement of share prices. The nature of the trend is discussed in section 3.3.4. As noted in section 3.2.3.2. , the presence of a trend in share price movement was critically important in the analysis based on time series data. It was, therefore, particularly important to do this as a pre-requisite for further analysis once the basic data was gathered.

3.3.3 Graphs of the Share Price Indices

The results shown on appendix G and I are presented in graph form in figure 1 while those in Appendix H are presented in figures 3,4,5 and 6. The annual indices are ploted on figure 2. The Nairobi Stock Exchange Share Price Index as shown in Appendix I has been superimposed on the indices computed for this study in figure 2. The Nairobi Stock Exchange Share Price Index is computed with January 1966 as the base year. The index was therefore spliced as mentioned earlier, to bring the base year to 1973 common with the study.

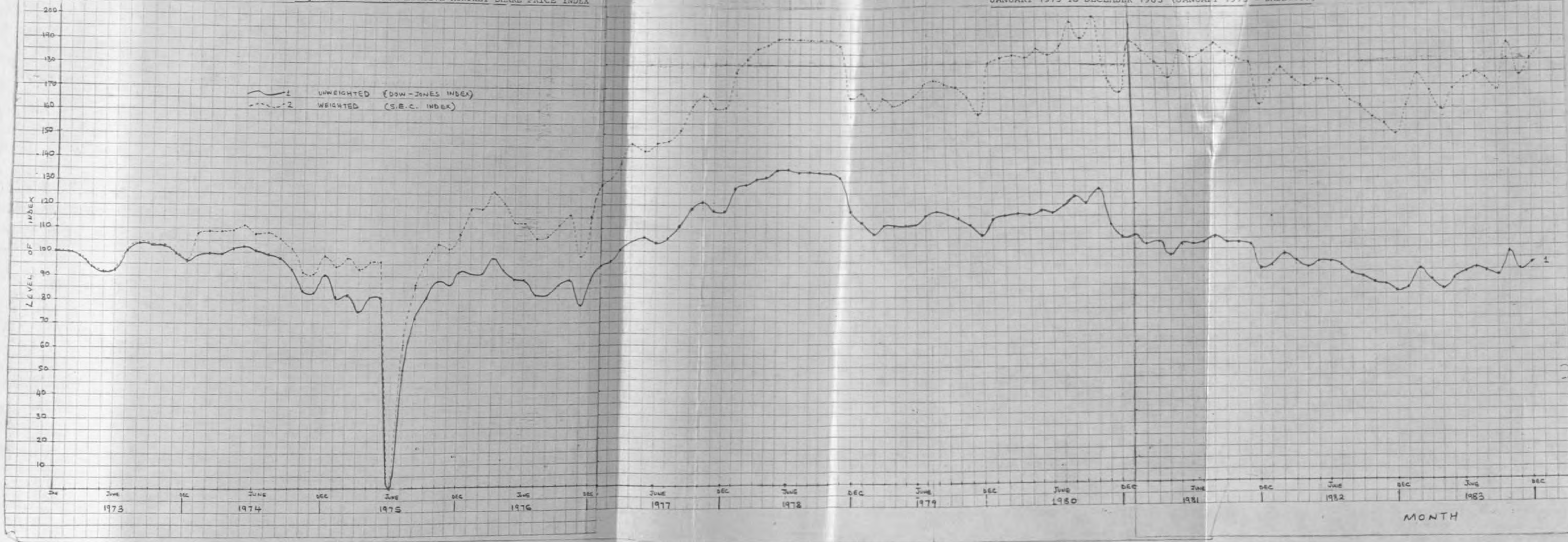


Figure 1 AGGREGATIVE MONTHLY SHARE PRICE INDEX JANUARY 1973 TO DECEMBER 1983 (JANUARY 1973 = BASE=100)

FIGURE 2

ANNUAL ORDINARY SHARE PRICE INDEX 1973-83

BASE = 100 = 1973

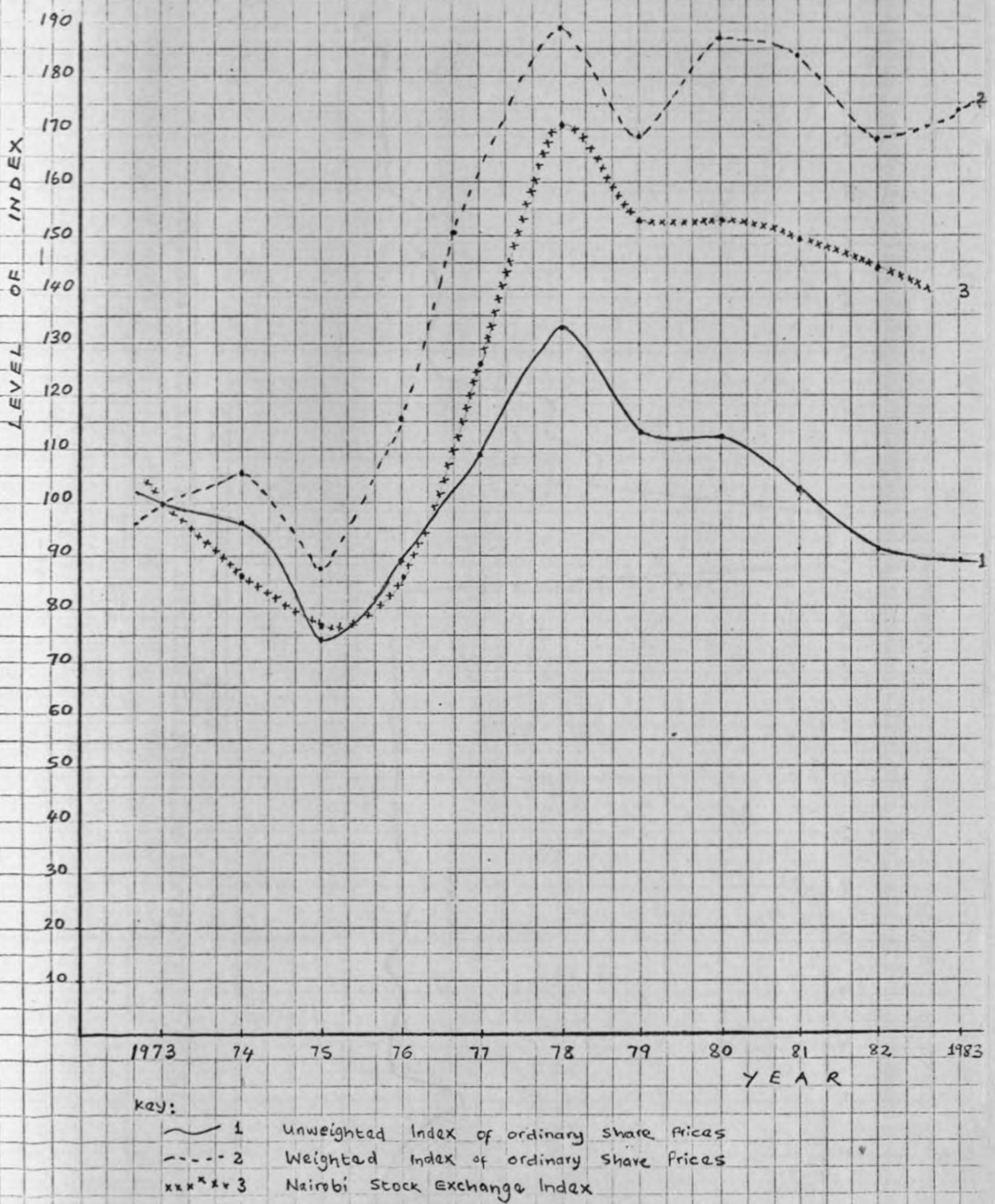


Figure 3

WEEKLY AGGREGATIVE ORDINARY SHARE PRICE INDEX FOR 1975

BASE = 100 = WEEK 4 1973

Figure 4

WEEKLY AGGREGATIVE ORDINARY SHARE PRICE INDEX FOR 1978

BASE = 100 = WEEK 4 1973

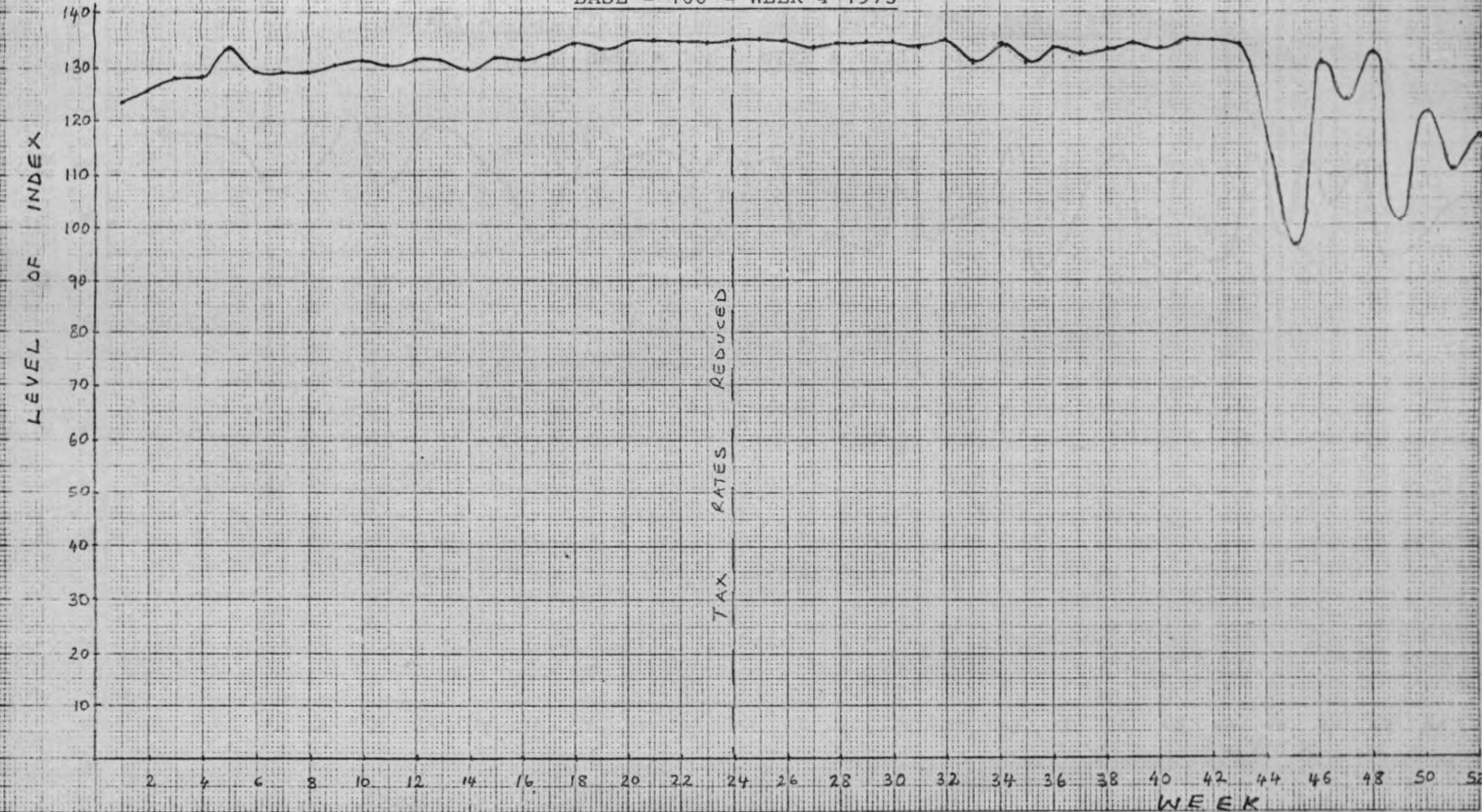


Figure 5

WEEKLY AGGREGATIVE ORDINARY SHARE PRICE INDEX FOR 1981

BASE = 100 = WEEK 4 1973

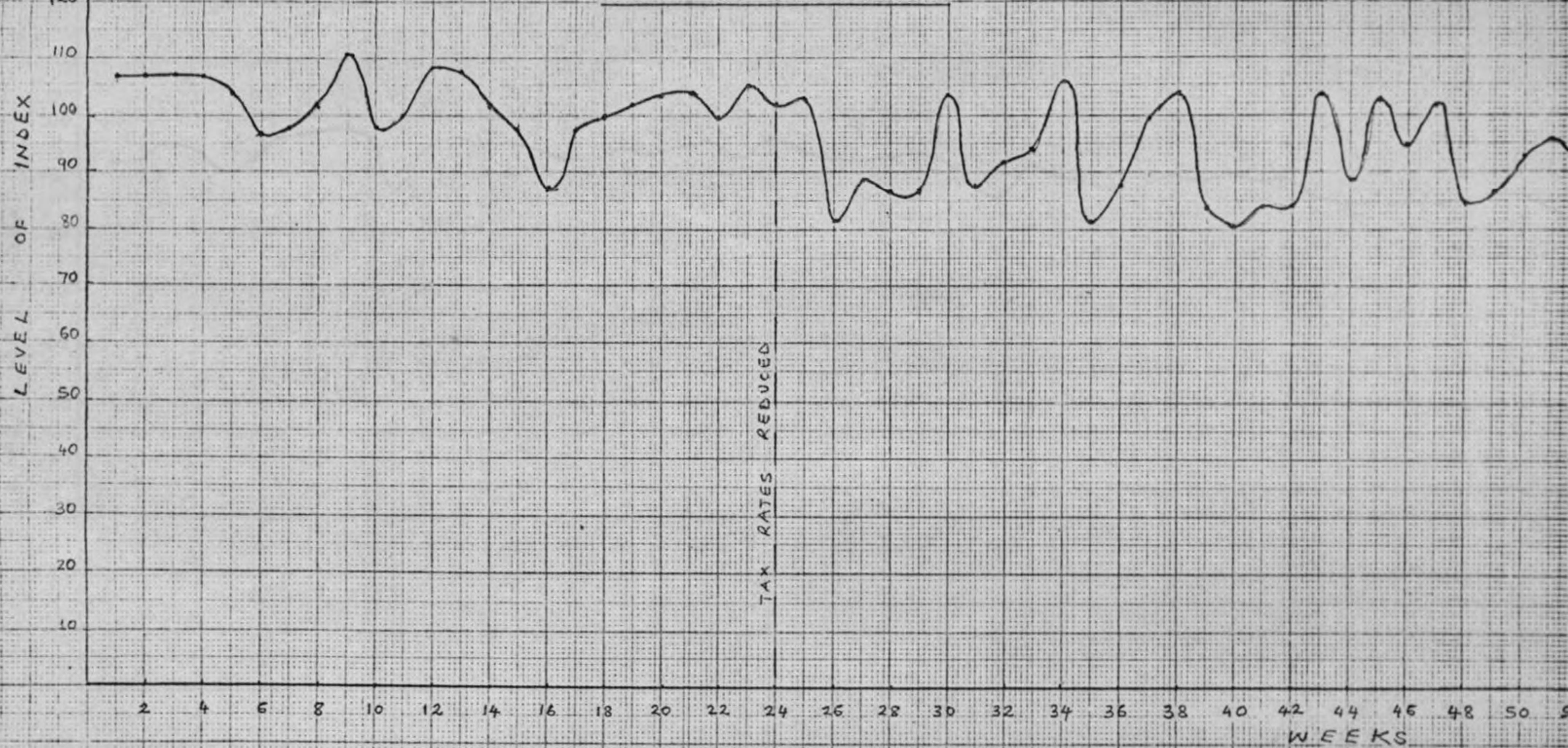
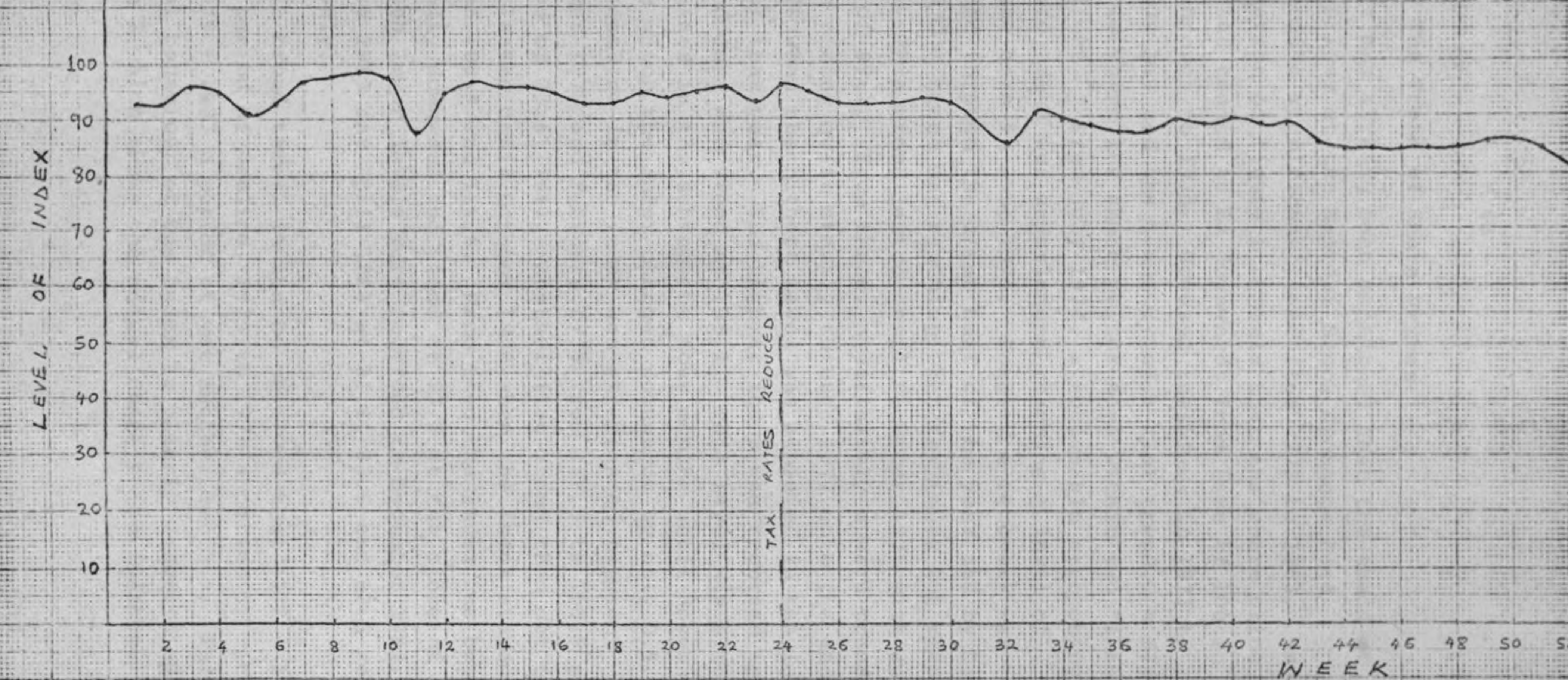


Figure 6

WEEKLY AGGREGATIVE ORDINARY SHARE PRICE INDEX FOR 1982

BASE = 100 = WEEK 4 1973



3.3.4 The Trend of Share Prices

It has already been mentioned that the trend of share prices at the Nairobi Stock Exchange have exhibited a significant trend from 1973 to 1983. An examination of figure 1 reveals that the share price index has tended to be downwards from base of 100 in 1973 through to 1975. However the indices in 1973 to mid 1974 has had the tendency of a flat trend. A flat trend is where the share prices move within two "imaginary" flat lines.[9] From July 1974, a noticeable steepening downward trend was experienced reaching a level of absolute zero in June 1975. However, a recovery was recorded through the later half of the year and by December 1975, a flat trend was resuming when the index was recorded at 92. This trend lasted until December 1976 with an index of 89.1. From there, a definitely upward trend set in rising quite steeply through 1977 upto the end of 1978 when the highest level was achieved in the later half of that year. The highest index was recorded in May and June and stood at 135.1. This level was almost maintained in the subsequent four months until November, within which, the index changed downwards by only 0.9. A steep decline in the index was experienced between November 1978 and February 1979 from 132.5 to 108.9 a decline of 23.6 (19%). Another flat trend then set in which lasted until October 1980 when the index stayed between 108.9 and 126.6. From then the index has been generally downward and stood at 93.2 at the close of 1983, although lower levels were recorded in December 1982, January 1983 and April 1983 at 81.4, 83.5 and 82.3 respectively.

In broad terms, it can be observed that 1973 - 1975 was a period of decline, 1975 to 1978 a period of recovery and 1979 - 1983 a period of yet another decline. This general behaviour of the index is clearly demostrated in figure 2 which shows the annual Share Price Indices. This is the primary trend of the share prices over the period. The monthly indices discussed in the preceding paragraph and demonstrated in figure 1 constitute the secondary trend which makes up the primary trend demonstrated in figure 2.

Another observation which can be made from the data regards the level of the index. The symbolic representation on appendix N reveals that for the period 1973 to 1976 and 1982 - 83, the index was generally below the base i.e. below 100, while it was above the base index of 100 in the period 1977 - 1981.

A general inference which can be drawn here is on the influence of the general economic situation in the country on the share prices. The period 1973 - 1974 was when the effects of the oil crisis were gripping the country, although the effect was heavily felt in 1975. The declining tendency in share prices in this period can, therefore, be seen in this perspective. The 1976 - 78 "coffee boom" had its role in rejuvenating the stock market. The rising trend in share prices from 1973 to its maximum in 1978 is, therefore, reasonably associated with the economic boom of the time. People were willing to invest in shares because of bright economic prospects. They also had the funds to invest. This, therefore, had the natural effect of raising the demand of investment shares and consequently prices shot up.

The period when share price index started declining coincides with the end of the "boom" period. The economy was adjusting itself to normality. Share prices consequently declined. That they continued to do so up to 1983 is a reflection of the world economic recession whose effects are being felt in Kenya as well. Such effects in the economy at large must affect the Stock Market.

One can, therefore, say that in broad terms, the general economic conditions in the country have tended to be reflected in the primary trend of Share Price Index.

Another significant inference which is drawn from the results discussed in this section is one of prediction. The question of the ability to predict future share prices is an issue which has tended to occupy a central position in the minds of investors and potential investors in their attempt to maximize return from their investment in corporate shares. A prediction is possible only if share prices follow an identifiable order rather than chance. That the results of this study show that there is a significant trend in the movement of Share Price in the Nairobi Stock Exchange is an indication that a formula to predict future share prices could be developed for use by investors. However, the development of such a formula is beyond the scope of this study.

3.3.5 Impact of Capital Gains Taxation

Figures 3, 4 5 and 6 show the movement of share price indices on weekly basis for 1975, 1978, 1981 and 1982 respectively. The four graphs were designed to aid in the analysis of the possible impact of capital gains taxation and the effects of reduced rates of taxation in each of the years 1978, 1981 and 1982. A discussion of how the analysis was to proceed and the rationale of using weekly indices is given in section 3.2.3.

(a) 1975

Although figure 2 shows that the general level of the index was lowest in 1975 than any other year, figure 1 reveals that there was a sudden drop in the index to an absolute minimum level of zero in the month of June from 81.1 in May. This was the month the capital gains taxation was introduced. The sudden drop in the index in this month clearly reflects the reaction of the market to this measure. When the tax was introduced, the rate was 35% on the gain on transfer of shares .

The situation becomes clearer by magnifying the analysis to weekly basis for 1975 alone. Figure 3 shows the results of a plotting of weekly indices for 52 weeks in the year. The movement was observed for the first 23 weeks before the tax was introduced and for the subsequent weeks upto 52 after the tax was introduced. The figure shows that the index was quite stable from week 1 to week 23 although there were come minor flactuations, the most noteworthy occuring in week 4. Infact the index was extremely stable for 10 weeks from week 14 to 23 before introduction of the tax in week 24. The difference between the lowest and the highest index was a meagre 1.2. On the introduction of the measure to tax gains from investment shares, the index immediately dropped to zero, a situation which persisted in week 24, 25 and 26. This was because for 3 weeks, there was no trading in shares. There were no sellers neither were there biders, a situation which forced suspension of business at the Nairobi Stock Exchange. When business resumed on June 30th, only 7 securities were traded in. This made the index to shoot from zero in week 26 to 44.3 in week 27. The index continued to pick-up from week to week and it is not until week 38 that one can say the index had attained its former general level when it attained a level of 82.7. The index continued in a rising trend week after week and by week 52, it stood at 92, the highest in the year.

Figure 3 clearly demonstrates the move to tax gains from investment shares had a distabilizing effect which caused considerable disturbance in the stock market. The sudden drop in the index from 81.0 to zero in the week the tax was introduced, and when the trend line[10] fitted using 23 week data shows that the index in that week would have been about 81.5 can hardly be said to be a coincidence, neither can it be said to be a random flactuation. . One cannot but conclude that this is the impact of the taxation move.

The trend line shows that had the disturbance not occured, the index would have continued to rise and at a level above 80. The line coincides with the observed indices in week 38 to 50. Since the trend line is a representation of what ought to have been the level of the index in the weeks when the disturbance was felt, one concludes that the share price index fully recovered from the disturbance in week 38. An inference is consequently drawn that the tax had what can be termed a temporary impact on the stock market. The initial impact was strong. So much so that it was noticeably reflected in the monthly price movement as demonstrated in figure 1. In June 1975, there was a sudden drop in the level of index from 81.1 to zero. It however picked up in the subsequent months with July (51.5), August (73.4), September (82.7) and October (88.6).

(b) 1978

In 1978, the system of taxing capital gains was changed so that only half of the capital gain realized by individuals became chargeable to tax. Figure 4 shows the movement of share index for 52 weeks in 1978. This is meant to aid in observing whether the change had any impact on share prices. The change was made in week 24.

It is observed that the prices were quite stable for most of the year from week 1 to 43. Between week 1 and week 21, the trend was generally on the rise with minimal flactuations between the weeks. In week 24, 25 and 26, the index rose by 0.4 to a consistent level of 135 after showing a decline of 0.4 previously from week 21 to 22 a level maintained in week 23. The outcome of the indices for the weeks immediatley following the tax measure is striking. A "neat" pattern emerges for these weeks which is also among the highest in the year. This is not a chance pattern. This behaviour supports the conclusion that the decision to tax only half of the gain had the effect of boosting share prices in the stock exchange. But this boost persisted for only a short time for in week 27, the index dropped by 1.7 to 133.3 and maintained a generally flat trend until week 43. After this, until week 52, there was a disturbance in the stock market. Share prices in these weeks followed no recognisable pattern. This can hardly be associated with the tax measure because as explained in section 3.2.3.3; such a measure would bring immediate rather than delayed reaction if at all.

A plausible explanation for the apparent random fluactuation in the index movement is that share prices were readjusting to new and lower levels. This is very clear in Figure 1. Week 44 1978 falls in the month of November. From this month, the index fell from its former general level and continued to fall until February 1979 and then stabilized to another general level which lasted until October 1980. An important economic event at this time which is attributable to this behaviour is that this period actually marked the end of the economic hey-day in the country brought about by the famous coffee boom. It is also the time when the government swerved in to clampdown smuggling and black marketering or magendo as is now popularly known in Kenya. The easy money which used to float in the country at the time suddenly disappeared from the market. Of necessity, the effects of these two events was felt in the stock market and is reflected in the movement of the index at that time.

Hence, the tax measure of 1978 did not have any significant impact on stock prices. There were obviously other economic forces in the market which counteracted the incentivising property of reducing the proportion of taxable gain. The reaction demonstrated in week 24, 25 and 26 was quite a temporary one.

(c) 1981

Another policy matter on the capital gains taxation came in 1981 when withholding tax on investment shares was reduced from 35% to 15%, in the words of the Minister, "in order to boost our stock exchange".[11]

The movement of Share Price indices for 52 weeks in 1981 is shown in figure 5. The trend is extremely "wandering" and large flactuations were recorded from week to week. The effect of reduced withholding tax is hardly significant in 1981; infact the behaviour of the indices is contrary to expectations. For instance, two weeks (week 25) after the announcement of the measure to "boost" the exchange, the index not only dropped considerably from 102.5 in week 25 to 81.4 in week 26, (by 21.4) but it was one of the lowest in the year. The reduction in the rate of withholding tax, therefore, can hardly be said to have "boosted" the stock exchange at all. There must have been other stronger forces which diluted any incentive likely to have come from the reduced tax rates. Reduced withholding tax rate was, therefore, by no means a significant factor in influencing the movement of weekly share prices in 1981. This conclusion supports the view of the then Finance Minister when in 1982 he lamented, "...the rate of capital gains tax was reduced by half last year in order to enable sellers to put more ....shares and stocks in the market. Judging from the current prices ....of stocks in the market, the sellers do not seem to have responded to this incentive."[12]

(d) 1982

The last change on capital gains tax rate came in 1982 when the portion of taxable gain was reduced further by half making the taxable gain to stand at 25%. This measure was introduced in week 24. Figure 6 traces the movement of weekly share price indices for 52 weeks. Although the trend of weekly indices is a flat one, it has an inclination to be downward. This downward trend continues even after week 24 all the way to week 52 when the lowest index of 81.4 was recorded, otherwise the indices remained generally between 90 and 100 upto week 31 when they dropped to below 90 but above 80.

Like in the case of 1981, there is no noticeable effect on the reduced taxation rate in 1982. Infact one notes that the prices in 1982 exhibited exceptional stability and there is hardly any noticeable disturbance. One consequently concludes that the decision to reduce the taxable gain from 50% to 25% had hardly any incentive in the stock market. Other considerations must have outweighed the tax incentive so that prices not only continued to remain low, but they showed no response to the measure.

CHAPTER THREE

FOOTNOTES

1. Eiteman, W.J., C.A. Dice and D.K. Eiteman, The Stock Market, 4th Edition, PP. 175 - 179

2. Ibid, PP. 192 - 194

3. Boyd, Harper W., R. Westfall and S.F. Stasch, Marketing Research: Text and Cases, 5th Edition, P. 78

4. Dominowski, Roger L., Research Methods, P. 298

5. Boyd Op.Cit P.67

6. Dominowski Op. Cit P. 298

7. Cootner, Paul H. (Editor), The Random Character of Stock Market Prices, Revised Edition P.1

8. Eiteman Op. Cit P. 403

9. Briston, R.J. The Stock Exchange and Investment Analysis, P. 374

10. The Derivation of the Expression of the Trend Line is given in Appendix P.

11. Kibaki, Mwai, Budget Speech, 16th June 1981, P.11

12. Magugu, Arthur, Budget Speech, 16th June 1982

CHAPTER FOUR

SUMMARY AND CONCLUSION

4.1 Summary

It has been shown that capital gains taxation in Kenya has generated a lot of debate and controversy centred mainly on what was thought to be its undersirable effects on the economy. One sector of the Kenyan economy which has been a focus of discussion on the likely effects of the tax is the Nairobi Stock Exchange where gains arising from shares traded on it are required to be taxed. It is on this stock exchange that the study focused. It was motivated by the opposition of the tax as a part of Kenyas fiscal system and specifically as far as it applies to the Nairobi Stock Exchange.

This study sought, first to present indices of ordinary share prices in order to indicate their general trend and changes from 1973 to 1983. Second, to analyse the trend of these indices in order to establish whether the introduction of capital gains tax in Kenya had any impact on them, and third, to establish whether the various reductions of the capital gains tax rates produced any impact on the trend of these indices.

The history of capital gains taxation in Kenya and an overview of the operations of Nairobi Stock Exchange was presented in chapter one. The literature review has shown that equity and social justice are argued to be the key rationale for taxing capital gains. These reasons were quoted in countries such as Britain, Canada and Kenya when the tax was introduced. Equity, however, is a factor difficult to measure because it is founded more on belief than fact. Despite lack of universal agreement among writers of what constitutes income, capital gains are considered by Accountants and Economists as income, and, therefore, taxable like other incomes. Arguments against taxing capital gains have centred mainly on issues such as that the gains are illusory as a consequence of inflation, difficulties in administration of the tax, lock-in-effect, its effects on savings and the uncertainty inherent in realization of capital gains.

A review of empirical studies has shown that there has been substantial interest among researchers to determine the influences, effects and impact of capital gains taxation on varying aspects of stock exchange. These studies have tended to focus on the advanced stock markets such as the New York Stock Exchange. They are an indication that capital gains taxation is an issue in other countries and not just in Kenya.

This study relied on tabular and graphical analysis of ordinary share price indices on annual and monthly basis for all years. Weekly indices were analysed for 1975, the year capital gains tax was introduced in Kenya, and 1979, 1981 and 1982, the years involving reductions in tax rates.

A test of the hypothesis of whether the trend of the indices was random showed that at 0.05 level of significance, the indices were not random. They exhibited a significant trend. This trend, as revealed by Figure 1, on the average was flat from January 1973 to July 1974; showing a declining tendency from August 1974 to May 1975 and declining sharply in June 1975 when it reached a level of absolute zero. Then there was a sharp rise in the index between July and October that year, from where it showed a flat trend up to March 1977. From April 1977 to October 1978 the tendency was a rising one and achieving the highest level in the series in May and June 1979 at 123.1. After a sharp decline, the trend assumed another flat tendency until October 1980 from when the trend was downwards upto the December 1983. Representing this trend as a annual index, Figure 2 reveals that 1973 to 1975 was a period of price decline, 1976 to 1978 a period of growth, 1979 to 1980 a period of stagnation and 1981 to 1983 one of decline. It was minimum in 1975 at 74.1 and maximum in 1978 at 133. The symbolic representation in APPENDIX N shows that the index was below the base from March 1973 to February 1977, above the base from March 1977 to November 1981 and again below the base from December 1981 upto December 1983.

The trend was analysed for the impact of Capital gains Tax in Figure 3,4,5 and 6. Figure 1 reveals that when the tax was introduced in week 24, 1975, there was a sharp fall in the index from 81 to zero, a situation which persisted for 3 weeks before a gradual recovery set in through to week 38. This impact of the introduction of the tax is also reflected in Figure 1 where in June 1975, the index sharply declined in that month from 81.1 to zero, but recovered in the following months through October. After week 38, the index is observed to have achieved its former expected general level.

A reduction in the tax rate in 1978 had a minimal boost in the index as revealed by Figure.4. In week 25 after the reduction of the tax rate in week 24, the index went up by only 0.4 and maintained the level of 135 for only three weeks and then started declining.

Figure 5 shows an extremely meandering trend in 1981. The new reduction in rates in week 24 does not have any noticeable effect on the movement of the index because the inherent fluctuations characteristic of that year continued as before even after the reduction in the rates. Infact as noted earlier, two weeks after the reduction in rates, the index went down sharply by 21.1 from 102.5 to 81.4 contrary to the expectation that the reduced rate would boost the index.

In contrast, 1982 was a stable year as far as the index was concerned. This is shown in figure 6. Rates were reduced again by another 50% as in 1981. This occured in week 24. As can be seen from this figure, and index did not respond to the measure at all. The trend continued as before.

4.2 Conclusion

The presence of a significant trend in the movement of ordinary share prices in the Nairobi Stock Exchange provides evidence that given some historical price data, investors can develop a formula to predict share prices in future. An investor, particularly the speculative one, seeks maximum returns from his investment by buying and selling shares based on his expectation about what their values are likely to be in future. Unless he can predict the share prices with a reasonable degree of accuracy, he is not likely to gain from speculative ventures.

Another conclusion from the results of the movement of the indices is that there is a relationship between the level of the indices and the general economic state in the country. Prices have tended to respond generally to the particular economic period. During the period of the oil crises in 1973 -75, the index was not only at low level but was on the decline. During the "coffee boom" of 1976 - 78, the index was on the rise and was at very high levels. It is during this period in 1978 that the highest level was recorded. The decline of the share price index from 1979 to 1983 not only marks the end of the 1976 - 78 economic boom but also the set in of the world economic recession which continued at the time.

The analysis to reveal the possible impact of capital gains tax on the stock prices under various circumstances leads to the conclusion that the measures of capital gains taxation have tended to have only a temporary rather than a permanent impact on the prices of ordinary shares at the Nairobi Stock Exchange. This impact was heavily felt in 1975 when the tax was introduced and to lesser extent when the rates were reduced in 1978. After a time, 24 weeks in case of 1975 and 3 weeks for 1978, the prices adjusted themselves to their former general levels. The effect of reduced rates in 1981 and 1982 were not noticeable at all from the analysis. The trend continued as before. Share price index is considered a barometer of the confidence of market participants, (mainly buyers and sellers) as discussed in chapter one. The index is expected to be high when the market participants have high confidence in the market and the index declines when the confidence is disturbed by any event. One concludes that in case of Nairobi Stock Exchange, the introduction of capital gains tax disturbed the confidence of market participants in the Stock Exchange but only temporarily. Once the tax is accepted as a reality, they learn to live with it to the extent that they don't show a noticeable response to reduced rates as shown in the case of 1981 and 1982. This means that after a time, tax ceases to be a consideration in buying and selling of shares.

This study provides evidence that the true effect of capital gains taxation as far as it relates to prices of ordinary shares on the Nairobi Stock Exchange has been grossly exaggerated by the members of the Stock Exchange itself and other opponents of the tax.

4.3 Relationship with Other Studies

The basic conclusions of this study have been similar in certain respects to those of some of the studies reviewed in chapter two.

Sprinkel, like in this study, found that the extent of the effect of capital gains tax is often exaggerated by investors. He asserted that investors frequently forget that a contingent tax liability exists. The tax consideration ceases to be an issue among investors because tax must eventually be paid unless the security is held until death.

Capital gains tax was found to be distabilizing on stock prices for a time in 1975. Like in this study, Wichern generated a price history which could be observed for tax effects. He found that capital gains tax tends to be distabilizing in certain cases for non-dividend paying securities. Although the distabilizing effect was felt for the security prices in the Nairobi Stock Exchange in 1975, all securities used were dividend paying unlike Wichern's case. For stock which pays dividends, he found that capital gains tax acts to stabilize the stock prices. Results show that in 1978 and 1982, the tax was not distabilizing on the stock prices. But it is not possible to say whether the apparent stability in stock prices in these years is due to capital gains tax. But it is clear that the change in the tax rates in 1978 did not distabilize the prices of ordinary shares at the Nairobi Stock Exchange.

The meandering behaviour of the price indices in 1981 is consistent with the observation of Lomas about the imperfection in share price determination on the Nairobi Stock Exchange. He observed that the seller of a particular security might fix a selling price on the basis of the price at which the last transaction took place. If he is an insistent seller, he will progressively lower his price in order to induce a buyer to come forth if there are no buyers in the market. Similarly an insistent buyer may have to progressively raise his price in order to attract a seller. The resultant is big variations in the prices at which consecutive bargains are struck.

4.4 Recommendations

Members of the Nairobi Stock Exchange have often claimed that capital gains tax has killed their business. If indeed the market is dying, on the basis of the results of this study, they should go beyond capital gains tax to get the cause of that death.

Capital gains tax, it was noted has been suspended in Kenya as this study was being finalised. The question is whether the tax should be abolished altogether. This study provides evidence that there was no need to reduce the tax rates, let alone abolish it in as far as it relates to transactions on the Nairobi Stock Exchange.

For the ten years that capital gains tax on shares has been in existence in Kenya, it is clear from the study that it has not succeeded in gaining acceptance by the business community and members of Nairobi Stock Exchange. But no tax is popular with those who are taxed. "Every gentleman has his favourite plan for repealing a particular tax and this tax upon justice was that which he should most desire to see reduced" (Shoup P. 57) It is, therefore, important for members of parliament as law makers to assess fully the effects on the community and the economy of the tax laws they pass because

> "...under a complicated system of taxation, it is impossible for the wisest legislature to discover all the effects, direct and indirect, of its taxes, and if it cannot do this, the industry of the country will not be exerted the greatest advantage" (Shoup P.57)

This problem is even more serious in Kenya where members of the legislature cannot be called upon to provide technical competence in tax matters. It is recommended that those concerned with tax policies should try to gain technical competence in issues of taxation so that if they are convinced of the advantage to society of a particular tax law, the mere oppossition of a particular tax by some people or group of people should not form the basis of repeal of that tax. As noted, no tax is popular with those who pay it.

4.5 Suggestions for Further Research

There is need for a study to reveal the trend of the prices of preference shares, city ccuncil stocks and government stocks.

A study needs to be done including all the ordinary shares of companies quoted on the Nairobi Stock Exchange in order to see whether the results would be the same.

With respect to other factors that influence stock prices in the Nairobi Stock Exchange, a study needs to be done to determine what these factors are, and the significance of each factor preferably using factor analysis technique.

If possible to get data on the volume of transactions of trading in shares, a study to determine the response of trading transactions to the introduction of capital gains tax and its changes is appropriate.

The suspension of capital gains taxation in Kenya on June 13, 1985 provides an opportunity for a research to be done on the response of share prices to this measure. This would help compare the findings with those of this study and determine whether the suspension was worthwhile.

APPENDICES

APPENDIX A DATA COLLECTION INSTRUMENT

YEAR: ______________ PERIOD COVERED: ______________ TYPE OF DATA: Prices ______________

WEEK / NAME OF COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
A. Baumann & Co. Ltd.																																																					
B.A.T. Kenya Ltd.																																																					
Brooke Bond Kenya Ltd.																																																					
Car and General (Kenya)																																																					
Carbacid Investments Ltd.																																																					
Consolidated Holdings Ltd.																																																					
Credit Finance Corp. Ltd.																																																					
Diamond Trust of Kenya Ltd.																																																					
E.A. Breweries Ltd.																																																					
E.A. Oxygen Ltd.																																																					
George Williamson Kenya																																																					
ICDC Investment Co. Ltd.																																																					
Kakuzi Ltd.																																																					
Kenya National Mills Ltd.																																																					
Kenya Power & Lighting																																																					
Marshalls (E.A.) Ltd.																																																					
Mercat Ltd.																																																					
Nation Printers																																																					
National Industrial Credit																																																					
Sasini Tea and Coffee Ltd.																																																					

APPENDIX B

NAIROBI STOCK EXCHANGE

DAILY PRICE LIST

Prices on ____________

Company	Shares	Class	Buyers	Sellers
African Tours & Hotels				
A. Baumann & Company Limited	Shs. 5/-	Ordinary ..		
B.A.T. Kenya Limited	Shs. 10/-	„		
Bamburi Portland Cement Co. Ltd.	Shs. 5/-	„		
....				
Brooke Bond Liebig Kenya Ltd.	Shs. 10/-	„		
Carbacid Investments Limited	Shs. 5/-	„		
Car & General (Kenya) Limited	Shs. 5/-	„		
City Brewery Investment Ltd.	-/50	„		
Consolidated Holdings Limited	Shs. 5/-	„		
CMC Holdings Limited	Shs. 5/-	„		
Credit Finance Corporation Ltd.	Shs. 5/-	„		
Diamond Trust of Kenya Ltd.	Shs. 4/-	„		
Dunlop Kenya Limited	Shs. 5/-	„		
E.A. Bag & Cordage Co. Limited	Shs. 5/-	„		
E.A. Breweries Limited	Shs. 10/-	„		
E.A. Cables Limited	Shs. 5/-	„		
E.A. Oxygen Limited	Shs. 5/-	„		
E.A. Packaging Industries Limited	Shs. 5/-	„		
E.A. Portland Cement Co. Ltd.	Shs. 5/-	„		
E.A. Power & Lighting Co. Ltd.	Shs. 20/-	„		
—DO— 4%	Shs. 20/-	Preference ..		
E.A. Road Services Limited	Shs. 5/-	Ordinary ..		
Express Kenya Ltd.	Shs. 5/-	„		
George Williamson Kenya Ltd.	Shs. 5/-	„		
Hughes Limited	Shs. 5/-	„		
ICDC Investment Co. Limited	Shs. 5/-	„		
Kakuzi Limited	Shs. 5/-	„		
Kenya National Mills Limited	Shs. 5/-	„		
Kenya Oil Company Limited	Shs. 5/-	„		
Kulia Investments Limited	Shs. 5/-	„		
Marshalls (E.A.) Limited	Shs. 5/-	„		
Mercat Limited	Shs. 5/-	„		
Motor Mart & Exchange Limited	Shs. 5/-	„		
National Industrial Credit (E.A.) Ltd.	Shs. 5/-	„		
Nation Printers & Publishers Ltd.	Shs. 5/-	„		
Pan Africa Insurance Co. Ltd.	Shs. 5/-	„		
Pearl Dry Cleaners Limited	Shs. 5/-	„		
Phillips Harrisons & Crosfield Ltd.	Shs. 20/-	„		
Sasini Tea & Coffee Limited	Shs. 5/-	„		
Timsales Limited	Shs. 20/-	"A" Ordinary		
[illegible]..				
....				
....				
....				
....				

NAIROBI STOCK EXCHANGE

1

WEEKLY PRICE LIST

Prices on________________

			Buyers	Sellers	Sales
African Tours and Hotels Ltd.	Ord.	20/- ..			
" " "	6% Pref.	20/- ..			
A. Baumann & Co. Ltd.	Ord.	5/- ..			
B.A.T. Kenya Ltd.	Ord.	10/- ..			
Bamburi Portland Cement Co. Ltd.	Ord.	5/- ..			
Brooke Bond Liebig Kenya Ltd.	Ord.	10/- ..			
Car and General (Kenya) Ltd.	Ord.	5/- ..			
Carbacid Investments Ltd.	Ord.	5/- ..			
City Brewery Investment Ltd.	Ord.	-/50 ..			
Consolidated Holdings Ltd.	Ord.	5/- ..			
" "	Preferred Ord.	5/- ..			
CMC Holdings Ltd.	Ord.	5/- ..			
Credit Finance Corp. Ltd.	Ord.	5/- ..			
Chancery Investments Ltd					
Diamond Trust of Kenya Ltd.	Ord.	4/- ..			
Dunlop Kenya Ltd.	Ord.	5/- ..			
Eaagads Ltd.	Ord.	1/25 ..			
E.A. Bag and Cordage Co. Ltd.	Ord.	5/- ..			
E.A. Breweries Ltd.	Ord.	10/- ..			
E.A. Cables Ltd.	Ord.	5/- ..			
E.A. Oxygen Ltd.	Ord.	5/- ..			
E.A. Packaging Industries Ltd.	Ord.	5/- ..			
E.A. Portland Cement Ltd.	Ord.	5/- ..			
E.A. Power & Lighting Co. Ltd.	Ord.	20/- ..			
" " "	4% Pref.	20/- ..			
" " "	7% Pref.	20/- ..			
E.A. Road Services Ltd.	Ord.	5/- ..			
Elliot's Bakeries Ltd.	Ord.	10/- ..			
" "	8% Pref.	20/- ..			
Express Kenya Ltd.	Ord.	5/- ..			
George Williamson Kenya Ltd.	Ord.	5/- ..			
Hutchings Biemer Ltd.	Ord.	5/- ..			
" "	$5\frac{1}{2}$% Pref.	20/- ..			
ICDC Investment Co. Ltd.	Ord.	5/- ..			
Jubilee Insurance Co. Ltd.	ord	5/=			
Kakuzi Ltd.	Ord.	5/- ..			

NAIROBI STOCK EXCHANGE

2

WEEKLY PRICE LIST

Prices on ____________

Company	Security			Buyers	Sellers	Sales
Kapchorua Tea Co. Ltd.	Ord.	5/-	..			
Kenstock Ltd.	12½% Pref. Unsec. Loan	20/-	..			
Kenstock Ltd.	12½% Defd. Unsec. Loan	20/-	..			
Kenya Co-op. Creameries Ltd.	5% 1st Pref.	100/-	..			
" " "	5% "A" Red. Pref.	20/-	..			
" " "	5% "B" Red. Pref.	20/-	..			
" " "	5% "C" Cum Red. Pref.	20/-	..			
Kenya Hotels Ltd.	Ord.	5/-	..			
" "	6% Pref.	20/-	..			
Kenya National Mills Ltd.	Ord.	5/-	..			
Kenya Oil Co. Ltd.	Ord.	5/-	..			
Kenya Orchards Ltd.	Ord.	5/-	..			
" "	6½% Pref.	20/-	..			
K.P.C.U. Ltd.						
[illegible]0% Unsecured Loan Stock 1983		10/-	..			
[illegible]0% Unsecured Loan Stock 1991/95		10/-	..			
			..			
Kulia Investments Ltd.	Ord.	5/-	..			
Limuru Tea Co. Ltd.	Ord.	20/-	..			
Marshalls (E.A.) Ltd.	Ord.	5/-	..			
" "	7% Pref.	20/-	..			
Mercat Ltd.	Ord.	5/-	..			
			..			
Motor Mart and Exchange Ltd.	Ord.	5/-	..			
" " "	5% Non Cum. Pref.	20/-	..			
" " "	6% Red. Pref.	20/-	..			
Nation Printers and Publishers Ltd.	Ord.	5/-	..			
National Industrial Credit (E.A.) Ltd.	Ord.	5/-	..			
Ol Pejeta Ranching Ltd.	Ord.	4/-	..			
Pan Africa Insurance Co. Ltd.	Ord.	5/-	..			
Pearl Dry Cleaners Ltd.	Ord.	5/-	..			
" " "	5% Pref.	20/-	..			
Phillips, Harrisons and Crosfield Ltd.	Ord.	20/-	..			
Sasini Tea and Coffee Ltd.	Ord.	5/-	..			
Sofar Investments Ltd.	Ord.	2/50	..			
Theta Group Ltd.	Ord.	1/-	..			
			..			
Timsales Ltd.	"A" Ord.	20/-	..			
"	"B" Ord.	20/-	..			
"	8% Red. Loan	20/-	..			
Uplands Bacon Factory (K) Ltd.	5% Pref.	20/-	..			

NAIROBI STOCK EXCHANGE 3

WEEKLY PRICE LIST

Prices on ____________

	Buyer	Seller	Sales
Kenya Government Stocks			
3½% 1979 'A'			
6% 1979			
5½% 1976/80			
3½% 1980			
5¾% 1980			
2½% 1981 'A'			
8% 1981			
6½% 1981			
3% 1982 'C'			
3½% 1982			
2½% 1982 'A'			
2½% 1982 'B'			
6% 1982			
7% 1982			
7½% 1982			
6% 1980/83			
3% 1983			
7½% 1983			
8½% 1983			
3½% 1984			
6% 1984			
6½% 1984			
7½% 1984			
7% 1985 'A'			
6% 1985			
6% 1985 'B'			
6% 1985 'C'			
6% 1986			
7% 1986 'A'			
8% 1986			
6% 1987			
6½% 1987			
6¾% 1988			
7½% 1988			
6¾% 1989			
5% 1990			
6% 1990 'A'			
7% 1990 'B'			
7% 1990 'C'			
6% 1991			
6% 1991			
8% 1991/92			
8½% 1991/92			
6% 1992			
7% 1992			

NAIROBI STOCK EXCHANGE

4

WEEKLY PRICE LIST

Prices on

Kenya Government Stocks (Continued)	Buyers	Sellers	Sales
6% 1994			
8½% 1994			
6% 1995			
6% 1997			
8% 1997 'A'			
6½% 1998			
6½% 1999			
6% 2010			
Nairobi City Council Stocks			
6% 1984			
6% 1985			
6½% 1979			
6½% 1987			
6¾% 1988			
6½% 1989			
8½% 1990			

APPENDIX D

TWENTY SELECTED COMPANIES AND THEIR INDUSTRIAL GROUPS

(a) Manufacturing:

1. A. Baumann and Company Limited
2. B.A.T. Kenya Limited
3. Car and General (Kenya) Limited
4. Carbacid Investments Limited
5. E.A. Oxygen Ltd

(b) Plantations:

6. Brooke Bond Kenya Limited
7. Kakuzi Limited
8. Sasini Tea and Coffee Limited
9. George Williamson Kenya Limited

(c) Finance:

10. Credit Finance Corporation Limited
11. Diamond Trust of Kenya Limited
12. I.C.D.C. Investments Company
13. National Industrial Credit (E.A) Limited.

(d) Motors:

14. Marshalls (E.A) Limited

(e) Millers:

15. Kenya National Mills Limited
16. Mercat

(f) Breweries:

17. E.A. Breweries Ltd

(g) Public Services:

18. Kenya Power & Lighting Co. Limited

(h) Newspapers and Printers

19. Consolidated Holdings Ltd
20. Nation Printers and Publishers Limited

APPENDIX E

MONTHLY AGGREGATE SHARE MARKET PRICES

Month	Week	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
January	4	11.85	11.65	9.50	10.80	11.15	15.25	13.50	13.55	12.65	11.20	9.90
February	8	11.85	11.80	9.80	10.80	11.35	15.30	12.90	13.70	12.30	11.50	10.70
March	13	11.65	11.80	9.45	11.50	11.90	15.60	13.25	13.80	12.40	11.25	10.20
April	17	11.20	11.90	9.60	11.10	12.60	15.70	13.10	15.70	11.55	11.00	9.75
May	21	11.00	12.10	9.60	10.40	12.35	16.00	13.20	14.00	12.30	11.20	10.30
June	26	11.10	11.70	Nil	10.40	12.60	16.00	13.30	15.85	12.15	11.20	10.60
July	30	12.05	11.75	6.10	9.75	12.70	15.95	13.70	14.10	12.30	11.00	10.70
August	34	12.40	11.50	8.70	9.80	13.10	15.90	13.90	14.80	12.55	10.60	10.60
September	39	12.25	11.10	9.80	10.30	14.10	15.90	13.70	14.30	12.30	10.50	10.30
October	43	12.25	10.00	10.50	10.60	14.40	15.90	13.60	15.00	12.20	10.10	11.50
November	47	11.75	9.90	10.30	9.05	13.90	15.70	13.25	13.10	12.00	10.00	10.65
December	52	11.35	10.80	10.90	10.55	14.00	13.85	12.70	12.60	10.80	9.65	11.05
Annual Aggregate	-	140.70	136.00	104.25	125.05	154.15	187.05	160.10	166.50	145.50	129.20	126.25

* All figures in K.Shillings.

APPENDIX F

WEEKLY AGGREGATE SHARE PRICES FOR 1975, 1978, 1981 & 1982

WEEK	1975	1978	1981	1982
1	9.75	14.60	12.60	11.00
2	9.50	14.90	12.60	11.00
3	8.90	15.20	12.65	11.30
4	8.00	15.20	12.65	11.20
5	9.50	15.85	12.30	10.70
6	9.60	15.30	11.45	11.00
7	9.50	15.30	11.55	11.40
8	9.40	15.30	12.30	11.50
9	9.80	15.50	13.10	11.70
10	9.40	15.60	11.60	11.60
11	9.35	15.50	11.80	10.40
12	8.80	15.60	12.85	11.25
13	9.45	15.60	12.70	11.40
14	9.50	15.40	12.00	11.35
15	9.60	15.65	11.50	11.30
16	9.50	15.60	10.30	11.25
17	9.60	15.70	11.55	11.00
18	9.65	15.95	11.80	10.95
19	9.60	15.85	12.00	11.20
20	9.60	15.90	12.20	11.10
21	9.65	16.00	12.30	11.20
22	9.60	15.95	11.75	11.35
23	9.60	15.95	12.40	11.00
24 *	0	16.00	12.00	11.30
25	0	16.00	12.15	11.20
26	0	16.00	9.65	11.00
27	5.25	15.80	10.50	11.00
28	5.00	15.95	10.30	11.00
29	6.20	15.95	10.20	11.10
30	6.10	15.95	12.30	11.00
31	8.60	15.85	10.35	N/C

Condt...Appendix F

WEEKLY AGGREGATE SHARE PRICES FOR 1975, 1978,1981 & 1982

WEEK	1975	1978	1981	1982
32	8.80	16.00	10.80	10.10
33	8.75	15.50	11.10	10.70
34	8.60	15.90	12.55	10.60
35	8.70	15.50	9.60	10.50
36	9.30	15.80	10.40	10.40
37	8.75	15.70	11.80	10.40
38	9.80	15.80	12.30	10.60
39	9.80	15.90	9.90	10.50
40	9.85	15.85	9.50	10.65
41	9.85	16.00	9.95	10.50
42	9.95	16.00	9.95	10.55
43	9.80	15.90	12.20	10.10
44	10.50	13.80	10.50	10.00
45	9.80	11.40	12.10	10.00
46	10.10	15.45	11.20	10.00
47	9.90	14.70	12.00	10.00
48	10.30	15.70	10.00	10.00
49	10.15	11.90	10.25	10.10
50	10.60	14.40	10.95	10.15
51	10.60	13.10	11.35	10.00
52	10.90	13.85	10.80	9.65

∴ Figures in Kenya Shillings

* Budget week - (Tax announcement)

N/C - No call-over because of stock taking.

APENDIX G

UNWEIGHTED MONTHLY AGGREGATIVE SHARE PRICE INDEX

JANUARY 1973 = BASE = 100

MONTH	WEEK	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
January	4	100.0	98.3	80.2	91.6	94.1	128.7	114	114.3	106.8	94.5	83.5
February	8	100.0	99.6	82.7	91.1	95.8	129.1	108.9	115.6	103.8	97.1	90.3
March	13	98.3	99.6	79.7	97.1	100.4	131.6	111.8	116.5	104.6	94.9	86.1
April	17	94.5	102.5	81.1	93.7	106.3	132.5	110.5	115.6	197.5	92.8	82.3
May	21	92.8	103.4	81.1	87.8	104.3	135.0	111.4	118.2	103.8	94.5	86.9
June	26	93.7	100.4	Nil	87.8	106.4	135.0	112.6	116.9	102.5	94.5	89.5
July	30	101.7	99.2	51.5	82.3	107.2	134.6	115.6	119.0	103.8	92.8	90.3
August	34	104.6	97.1	73.4	82.7	110.5	134.2	117.3	124.9	105.9	89.5	89.5
September	39	103.4	93.7	82.7	86.9	119.0	134.2	115.6	120.7	103.8	88.6	86.9
October	43	103.0	84.4	88.6	89.5	121.5	134.2	114.8	126.6	102.9	85.2	97.1
November	47	99.2	83.5	86.9	76.4	117.3	132.5	111.8	110.5	101.3	84.4	89.9
December	52	95.3	91.1	92.0	89.1	118.1	116.9	107.2	106.3	91.1	81.4	93.2
Index for the Year 1973 = 100		100	96.7	74.1	88.9	109.6	133	113.8	113.4	103.4	91.8	89.8

APPENDIX H

WEEKLY AGGREGATIVE SHARE PRICE INDEX (DOE - JONES INDEX)

FOR 1975, 1978, 1981 and 1982 WEEK 4 1973 = BASE 100

WEEK	1975	1978	1981	1982
1	82.3	123.2	106.3	92.8
2	80.2	125.7	106.3	92.8
3	75.1	128.3	106.8	95.4
4	67.5	128.3	106.8	94.5
5	80.2	133.8	103.8	90.3
6	81.1	129.1	96.7	92.8
7	80.2	129.1	97.5	96.2
8	79.3	129.1	103.8	97.1
9	82.7	130.8	110.6	98.7
10	79.3	131.6	98.0	97.9
11	78.9	130.8	100.0	87.8
12	74.3	131.6	108.4	94.9
13	79.7	131.5	107.2	96.2
14	80.2	130.0	101.3	95.8
15	81.0	132.1	97.1	95.4
16	80.2	131.6	86.9	94.9
17	81.0	132.5	97.5	92.8
18	81.4	134.6	99.6	92.4
19	81.0	133.8	101.3	94.5
20	81.0	134.2	103.0	93.7
21	81.4	135.0	103.8	94.5
22	81.0	134.6	99.2	95.8
23	81.0	134.6	104.6	92.8
24*	0.0	135.0	101.3	95.4
25	0.0	135.0	102.5	94.5
26	0.0	135.0	81.4	92.8
27	44.3	133.3	88.6	92.8
28	42.2	134.6	86.9	92.8
29	52.3	134.6	86.1	93.7
30	51.5	134.6	103.8	92.8
31	72.6	133.8	87.3	N/C

Contd..... Appendix H

WEEK	1975	1978	1981	1982
32	74.3	135.0	91.2	85.2
33	73.8	130.8	93.7	90.3
34	72.7	134.2	105.9	89.5
35	73.4	130.8	81.1	88.6
36	78.5	133.3	87.8	87.8
37	73.8	132.5	99.6	87.8
38	82.7	133.3	103.8	89.5
39	82.7	134.2	83.5	88.6
40	83.1	133.8	80.2	89.9
41	83.1	135.0	84.0	88.6
42	84.0	135.0	84.0	89.0
43	82.7	134.2	103.0	85.2
44	88.6	116.5	88.6	84.4
45	82.7	96.2	102.1	84.4
46	85.2	130.4	94.5	84.4
47	83.5	124.1	101.3	84.4
48	86.9	132.5	84.4	84.4
49	85.7	100.4	86.5	85.2
50	89.5	121.5	92.4	85.7
51	89.5	110.5	95.8	84.4
52	92.0	116.9	91.1	81.4

*Budget Week (Tax announcement)

N/C - No call-over because of stock taking.

APPENDIX I

WEIGHTED MONTHLY AGGREGATIVE SHARE PRICE INDEX

Month	Week	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
January	4	100.0	107.3	94.4	118.1	129.4	177.0	168.7	180.8	190.6	173.5	162.1
February	8	100.0	108.6	97.4	118.1	131.7	183.5	161.2	182.8	185.4	178.2	175.2
March	13	98.3	108.6	93.9	125.8	138.1	187.1	165.5	181.1	180.9	174.3	167.0
April	17	94.5	109.6	95.4	121.4	146.2	188.3	163.7	182.8	174.1	170.4	159.7
May	21	92.8	111.4	95.4	113.7	143.3	191.8	164.9	186.8	185.4	173.5	168.7
June	26	93.7	107.7	Nil	113.7	146.2	191.8	166.2	184.8	183.2	173.5	173.6
July	30	101.7	108.2	60.6	106.6	147.4	191.3	171.2	188.1	185.4	170.4	175.2
August	34	104.6	105.9	86.4	107.2	152.0	190.7	173.7	197.5	189.2	164.2	173.6
September	39	103.4	102.2	97.4	112.6	163.6	190.7	171.2	190.8	185.4	162.7	168.7
October	43	103.0	92.1	104.3	115.9	167.1	190.7	170.0	200.1	183.9	156.5	188.4
November	47	99.2	91.6	102.3	98.9	161.3	188.3	165.5	174.8	180.9	154.9	174.4
December	52	95.8	99.4	108.3	115.4	162.5	166.1	158.7	168.1	162.7	149.5	180.9
Index for the year		100.00	105.5	87.3	115.2	150.7	189.0	168.5	187.2	184.8	168.6	174.2

APPENDIX J

TOTAL NUMBER OF SHARES OUTSTANDING PER YEAR

Year	Shares Outstanding	Weighting Factor
1973	95,403,801	9.540
1974	104,093,805	10.409
1975	112,332,405	11.233
1976	123,618,297	12,362
1977	131,213,821	13,121
1978	135,583,154	13,583
1979	141,225,904	14.123
1980	150,840,904	15.084
1981	170,389,972	17.039
1982	175,139,972	17.514
1983	185,139,972	18.514

SOURCE: Compiled from Nairobi Stock Exchange Official Year Books: 1972, 1979, 1980 - 81, 1981 - 82, 1982 - 83

APPENDIX L

THE ANNUAL SHARE PRICE INDEX COMPUTED BY THE NAIROBI STOCK EXCHANGE

YEAR	INDEX 1966 = 100	SPLICED: 1973 = 100
1973	244.1	100.0
1974	208.9	85.6
1975	186.3	76.3
1976	208.4	85.4
1977	308.8	126.5
1978	418.9	171.6
1979	374.7	153.5
1980	374.3	153.3
1981	365.8	149.8
1982	351.6	144.0
1983		

SOURCE:

Extracted from the Nairobi Stock Exchange Official Year Book: 1972, 1979, 1980 - 81, 1981 - 82, 1982 - 83.

Splicing formula used was:

$$100 \frac{I_i}{I_{1973}}$$

where I_i = Index for each of the years 1973 to 1983

I_{1973} = Index in 1973

APPENDIX M

HOW THE ORDINARY SHARE PRICE INDEX IS COMPUTED BY THE NAIROBI STOCK EXCHANGE

Computation of the index was formally done by T.L. Champion but is now done by one of the Brokers, Dyer and Blair since October 1968. The Base is January 1966. The index is computed weekly.

The 17 companies whose shares were being used upto 1983 were:

1. A. Baumann
2. Car and General
3. E.A. Bag & Cordage
4. Kakuzi Limited
5. Motor Mart
6. Kulia Investment
7. Consolidated Holdings
8. E.A. Portland Cement
9. Kenya National Mills
10. Brooke Bond
11. National Industrial Credit
12. C.M.C. Holdings
13. Marshalls
14. B.A.T. (K) Ltd
15. Mercat
16. E.A. Breweries
17. Kenya Power and Lighting Co.

At the time of the study Sasini Tea & Coffee Ltd, Diamond Trust of Kenya, Jubilee Insurance Ltd and Elliots Bakeries had replaced A. Baumann, E.A. Bag and Cordage, Marshalls, and Mercat.

An arbitrary figure of £2000 is assumed to be invested in these companies in total each getting £100 except E.A. Breweries and Kenya Power which is allocated £250 each. So in reality only the two are weighted.

The following formula is then utilized:

$$I_c = \frac{\sum_{i=1}^{n} \left[(SP) \right] (B)}{2}$$

Where:

I_c	=	Ordinary Share Price Index in the current Week.
n	=	Number of Companies = 17
S	=	Number of shares outstanding for each Company.
P	=	Middle Market Price for the ordinary shares of each company in the current week.
B	=	Base Index as at 3rd October 1968 = 170.86

Note:

The number of shares outstanding are not actual but are arrived at by dividing the £2000 arbitrary investment figure by the mid-market price.

SOURCE: Dyer and Blair Limited

APPENDIX N

TO TEST THE HYPOTHESIS OF RANDOMNESS IN SHARE PRICE MOVEMENT

THE ONE SAMPLE RUNS TEST[1]

When a series of prices are observed at very close intervals, the systematic behaviour that might be present may be concealed. This phenomena was confirmed by Kendall[2] in his study on the Chicago wheat series. Hence the hypothesis was tested using monthly share price indices between January 1973 to December 1983 (A total of 132 values). The weekly indices were likely to suffer from the weakness above because of the closeness of the interval, while the annual indices constituted too few data points to give a conclusive result.

Any value above the base i.e 100 was designed A and those below were designed B. Those equal to the base (if any) were ignored. The following sequence from Table 2 emerged.

$B\ B_1 B\ B/A_2 A\ A\ A/B\ B\ B_3\ B\ B/A_4 A\ A/B\ B\ B\ B\ \dot{B}\ B_5 B\ B\ B\ B\ B\ B\ B\ B\ B\ B$

$B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B/A\ A\ \underset{6}{A}\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A$

$A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A$

$A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A/B\ B\ B\ B\ B\ B\ B\ \underset{7}{B}\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B$
$B\ B\ B\ B\ B$

Statement of the hypothesis

H_o : The share price indices are random and there is no trend

H_1 : There is a significant trend in the share price indices.

Specification of the level of significance

$\alpha = 0.05$

At this level of significance, value of $z = 1.96$

Decision rule

Reject H_0 if the computed value of the test statistic is greater than 1.96 or less than - 1.96 otherwise H_0 is not rejected.

Computation of the test statistic

This is computed using the formula:[3]

$$Z = \frac{r - \left(\frac{2n_1 n_2}{n_1 + n_2} + 1\right)}{\sqrt{\frac{2n_1 n_2(2n_1 n_2 - n_1 - n_2)}{(n_1 + n_2)^2(n_1 + n_2 - 1)}}}$$

Where r = Number of sequences of like symbols preceded and followed by unlike symbol. (Runs)

n_1 = Number of symbol A in the series

n_2 = Number of symbol B in the series

Hence $r = 7$

$n_1 = 64$

$n_2 = 66$

These values are substituted in the formula:

$$z = \frac{7 - \left(\frac{2(64)(66)}{64+66} + 1\right)}{\sqrt{\frac{2(64)(66)\left[2(64)(66) - 64 - 66\right]}{(64+66)^2(64+66-1)}}} = -10.39$$

Conclusion

Since the computed value of test statistic of -10.39 is less than the critical value of test statistic of - 1.96, the null hypothesis H_o is rejected.

Decision

There is a statistically significant evidence from the data that at 0.05 level of significance the series of price indices of shares at the Nairobi Stock Exchange has a significant trend. It is not random.

FOOTNOTES TO APPENDIX N

1. The one sample Runs Test is discussed extensively by T.R. Dyckman and L.J. Thomas, Fundamental Statistics for Business and Economics, (New Jersey, Prentice Hail Inc, 1977) PP. 640 - 643. and W.W. Daniel and J.C. Terrell, Business Statistics, (Boston, Houghton Miffin Company, 1975) PP. 312 - 315.

2. Kendal M.G. "The Analysis of Economic Time Series: Prices", published in The Random Character of Stock Market Prices, Edited by Pill.Cootner, Revised Edition (Massachusetts, Massachusetts Institute of Technology Press, 1970),P.87

3. The formula is adapted from Daniel et al (Above Cited) P. 314

APPENDIX P

DERIVING THE TREND EQUATION FOR 1975:

METHOD OF LEAST SQUARES

Xi	Xi	Xi²	XiYi
1	82.3	1	82.3
2	80.2	4	160.4
3	75.1	9	225.3
4	67.5	16	270.0
5	80.2	25	401.0
6	81.1	36	486.6
7	80.2	49	561.4
8	79.3	64	634.4
9	82.7	81	744.3
10	79.3	100	793.0
11	78.9	121	867.9
12	74.3	144	891.6
13	79.7	169	1036.1
14	80.2	196	1122.8
15	81.0	225	1215.0
16	80.2	256	1283.2
17	81.0	289	1377.0
18	81.4	324	1465.2
19	81.0	361	1539.0
20	81.0	400	1620.0
21	81.4	441	1709.4
22	81.0	484	1782.0
23	81.0	529	1863.0
276	1830.0	4324	22130.9

The normal Equations are utilized:

$$\sum x_i = na + b\sum x_i^2$$

$$\sum x_i y_i = a\sum x_i + b\sum x_i^2$$

Contd.....Appendix P

Values substituted:

$$1830.0 = 23a + 276b \quad \text{(i)}$$
$$22130.9 = 276a + 4324b \quad \text{(ii)}$$

Multiply (i) by 12 and (ii) by 1

$$21960.0 = 276a + 3312b \quad \text{(iii)}$$
$$22130.9 = 276a + 4324b \quad \text{(iv)}$$
$$-170.9 = -1012b \quad \text{(v)}$$

$$b = 0.169$$
$$a = 77.54$$

Trend equation is given by $y_{ti} = a + bx_i$

hence: $y_{ti} = 77.5 + 0.17 \quad \text{(vi)}$

where t_i = The week 1 to 52

y_{ti} = Index in week ti

See figure 3 for plotting of the trend equation.

APPENDIX Q

CONTEXT OF THE BUDGET SPEECH BY THE MINISTER OF FINANCE PROF.GEORGE SAITOTI ON JUNE 13 1985 ANNOUNCING THE SUSPENSION OF CAPITAL GAINS TAX IN KENYA

"...Finally, Capital Gains Tax: I have received numerous representations from members of the public, Companies and Nairobi Stock Exchange requesting me to consider abolishing capital gains tax on the grounds that the tax inhibits capital and share mobility and therefore economic growth. I also do know that there are very good reasons for maintaining the tax.

However, there seems to be general consensus that the tax does, to some extent, inhibit trading in real estate - and hence development. I have carefully weighted the Pros and Cons of this tax and decided, in line with this year's budget theme, to suspend it with effect from tomorrow.

We shall, however, continue to watch the situation carefully to see if its abolition will bring us the development promised by its opponents. In view of the current low rates of this tax, I expect to lose minimal revenue from this measure..."

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