Economic Crisis and Women's Employment in Urban Kenya

by

Wambui Rose Wamuthenya

This dissertation is part of the research programme of CERES, Research School for Resource Studies for Development.

Funded by the Netherlands Fellowship Programme (NFP).

Cover photo taken from Kibera slum where part of the fieldwork took place. Kibera slum is the largest of Nairobi's slums and the second largest urban slum in Africa. Copyright © UN-HABITAT

Printed in The Netherlands

ISBN number 978-90-423-0390-4

Shaker Publishing BV
St. Maartenslaan 26
6221 AX Maastricht
Tel.: 043-3500424 / Fax: 043-3255090 / http:// www.shaker.nl

Economic Crisis and Women's Employment in Urban Kenya

De economische crisis en werkgelegenheid voor vrouwen in stedelijke gebieden in Kenia

Thesis

to obtain the degree of Doctor from the
Erasmus University Rotterdam
by command of the Rector Magnificus
Prof.dr. H.G. Schmidt
and in accordance with the decision of the Doctorate Board

The public defence shall be held on
Thursday 8 April 2010 at 16.00 hrs

by

Wambui Rose Wamuthenya
born in Nyeri, Kenya

Doctoral Committee

Promotors

Prof.dr. A.S. Bedi
Prof.dr. M.E. Wuyts

Other members

Prof.dr. A. Bigsten, University of Gothenburg
Prof.dr. R. van der Hoeven
Dr. D.K. Manda, University of Nairobi

Acknowledgements

In completing this study, I am indebted to numerous individuals and organisations. I am very grateful to the NFP for awarding me a fellowship to undertake this study at the IISS-EUR. IISS-EUR has provided an excellent academic atmosphere for both study and learning how to do research and it has been a great experience to interact with scholars of diverse backgrounds. I would like to thank sincerely the staff at the PhD, finance, students, welfare and facilities offices, library and IT departments and the reception desk for excellent help I received in one way or another.

I am also highly indebted and grateful to my promoters: Professors Marc Wuyts and Arjun Bedi for their intellectual support, guidance, encouragement, and *a lot* of patience – for giving me an intellectual space to pursue my goal or perhaps 'to take a long walk' and for gently getting me back on track when I veered off.

I am very thankful to Prof. Wuyts for his interest in my thesis topic; and thus taking me as his Phd student when I first made my application to study at the IISS-EUR; for challenging questions, comments and suggestions; and for reading (during a very difficult time) the *examinable* version of the thesis with an *outsider's eye* – thus fulfilling his *task*: 'to ensure that what you are actually writing is a thesis'.

For various reasons, to finalize this project took much longer than the expected duration of four years. Certainly, I would never have been able to come this far without the time and dedication invested by Prof. Bedi. In December 2008, I presented my very first, too lengthy a draft to my promoters. To revise it to its present shape would not have been possible without Prof. Bedi's tireless help, which entailed hefty editing and sharpening my often over-bloated ideas. I would like to express profound appreciation to Prof. Bedi for accepting me as his doctorate student; for his encouragement, technical help, critical and razor-sharp direction; and for his commitment to see me succeed in completing this project, by going beyond his task as a promoter and working tirelessly in all fronts to *jokingly* 'get rid of you'.

I would like acknowledge the acceptance of Doctors Remco Oostendorp and Bridget OLaughlin as examiners for my research design and for their advice and critical comments.

My interest in labour market studies arose from my previous work with IDRC and from an attempt (in 2000) to apply for a research grant from AERC. Although my work with IDRC did not involve carrying out research, it partly involved designing research projects with partners, reviewing research proposals for funding and evaluating funded projects. One of IDRC's main criterion for research funding was that a project encompassed a gender element, which exposed me more to and triggered my interest in gender issues in relation to the labour market and education.

For the AERC project, I wanted to investigate whether public sector employment crowds out private sector employment. For some reason, AERC's resource persons rejected this idea. However, AERC in keeping with its mandate of capacity building in sub-Saharan Africa and the need to develop young researchers, the resource persons encouraged me to develop another related research idea. Therefore, I consulted Professors Germano Mwabu, Arne Bigsten, Eric Thorbecke, and John Strauss (the resource persons at that time and to whom I am most grateful) on a brighter idea. They advised me to consider looking at the determinants of access to public and private sector employment. With this idea, and on a second attempt to apply for a research grant from AERC, I was awarded a grant whose output is in the publication pipeline of AERC. This topic laid the foundation for the proposal that I submitted to the IISS-EUR for PhD admission and expanded to the topic of this thesis and the various issues addressed in it. By becoming part of the AERC research network, I immensely benefitted from AERC's bi-annual research workshops and training seminars where I interacted with highly accredited scholars and researchers. Before joining the IISS-EUR, AERC funded my training in Stata (the statistical software used to analyse the data used in this study) and in econometric skills to handle and analyse survey data (which I owe to Professors John Strauss and Stephen Younger). I would like to thank AERC for the contribution to my academic career and for an additional grant to conduct part of this research work.

Needless to emphasise that even as I wrote my doctorate, I continued to interact with AERC resource persons – Prof. Bigsten, on issues related to Kenyan data and Prof. Strauss on technical help concerning my data, Stata and on the subject matter of my thesis topic. Prof. Strauss read some of my chapters and his invaluable ideas helped me to revise the third *core* chapter, which my promoters would not have accepted in its very original form. I thank Prof. Strauss again for his valuable comments, willingness to help and

for friendship; and Prof. Bigsten for agreeing to examine my thesis and for responding quickly to my numerous queries in trying to organise my data sets for the study.

I am grateful to Prof. Rolph van der Hoeven and Dr Kulundu Manda for accepting to examine this thesis and Professors Njuguna Ndungu, Samuel Wangwe, Mohamed Salih, Doctors Pascal Mihyo and Mohammed Mwamadzingo, and Ms Fareena Chaudhry for support in various ways.

Thanks to Doctors Admasu Shefrew and Albert Musisi not only for their friendship as PhD colleagues but for their help fixing data and econometric problems. I would like to acknowledge the technical help/advice received from Doctors Olagoke Akintola, Paul Latreille and Professors Rob Fairlie, Helena Nielsen, Phil Murphy, Maureen Mackintosh and Christopher Baum.

My heartfelt thanks go to Mr Ralph Palim, for proofreading the entire first ever draft of my thesis manuscript and for constructive comments on the second chapter with an auditor's eye. I also would like to thank Mr Karlheinz Kadner for his interest in my work and for handy ideas in trimming the concluding chapter. Besides being my husband, friend, anchor and a constant spring of encouragement and love, I thank dearly, Dr Martin Wasmeier for reading and editing many versions of this study and for sharpening my thoughts with a lawyer's lens.

I would to like to convey my sincere appreciation to Ms Bernadette Wanjala, Ms Nancy Wafula, Staff of the Central Bureau of Statistics in Kenya (Mr Macharia Muchiri, Mr Nyoike, and Mr Robert Ndirangu), Mr Moses Mburu, Mr Simon Gichuki, Doctors Ann Kamau, Peter Kamau, and Lucas Njoroge and Prof. Richard Agesa for their help in obtaining the secondary data and other research material for this study.

With all my heart and love, I thank my dear son Derrick Mwangi for his constant understanding, love, laughter, jokes and prayers and for giving me hope. I would like to acknowledge the help and kindness of Ms Veronique-van Bauwel of the Dutch Embassy in Kenya for facilitating *a not easy to obtain* visa for Derrick to accompany me to Holland and without which I would have missed a great opportunity to study at the IISS-EUR.

Special thanks go to Mr John Ndiku (former IISS-EUR graduate student from Kenya) for being my research aide in the collection of the primary data in Nairobi in 2003 and for his willingness to work with me at odd hours (especially in often insecure Kibera Slums) and tight schedules so that I could return to Holland quickly to Derrick whom I had left under the care of Ms Dita Dirks. This data collection exercise would have been more complicated without the help received from them, from Ms Sunita Tripathi (former IISS-EUR graduate student from Bopal) who also took care of

Derrick while I was away, and from Ms Emily Mutai and Ms Miriam Saina for hosting my stay in Nairobi during my fieldwork.

Words are inadequate to express my deepest gratitude to many for their friendship and support: all those who made our stay in Holland memorable (fellow PhD colleagues; IISS-EUR graduate students; friends from Derrick's former schools and St. John and St. Philip Church, and my *Kenyan family* in the Hague); my family and friends in Kenya and abroad; family and church friends in Brussels; IDRC colleagues and friends; and all those who prayed for and with me. Unfortunately, I cannot name all of them here as they are numerous.

For help in formatting this thesis, I thank Ms Joy Misa, Goldenwest Editing for the final editing of the thesis and Shaker Publishing for printing and publishing this study.

I have acknowledged the help of several people but none is responsible for the views expressed in this thesis. I remain accountable for all errors and omissions.

It is not that I think I can do anything of lasting value by myself. My only power and success comes from God.

Wambui R. Wamuthenya
2010

Dedication

To the late Dr Luis Navarro, humble, humorous and
one of my greatest mentors, for strongly supporting and
encouraging me to pursue PhD studies.

Dr Navarro was a program leader for People, Land and Water (PLAW)
initiative of IDRC and acting director of IDRC's office in Nairobi.
I had an opportunity to work with him as colleagues
and as my immediate boss when he became acting director.

Contents

List of Tables, Figures and Boxes

Tables

Figures

Boxes

Acronyms

AERC	African Economic Research Consortium
CHE	Characteristics' Effect
CIS	Commonwealth of Independent States
COE	Component due to Coefficients' Effect
CPI	Price Index
DFI	Development Finance Institution
DHS	Demographic Health Survey
EAC	East African Community
EPZ	Export Processing Zones
EPZA	Export Processing Zones Authority
ER	Employment Rate
EUR	Erasmus University, Rotterdam
FI	Financial Institutions
FLFPR	Female Labour Force Participation Rate
GDP	Gross Domestic Product
ICT	Information and Communication Technology
IDRC	International Development Research Centre
ILO	International Labour Organisation
ILFS	Integrated Labour-Force Survey
IMF	International Monetary Fund
IISS-EUR	International Institute of Social Studies International Institute of Social Studies of Erasmus University, Rotterdam
KIPPRA	Kenya Institute of Public Policy Research and Analysis
LFPR	Labour Force Participation Rate

LFS	Labour Force Survey
ME	Marginal Effect
MNL	Multinomial Logit Model
NASSEP	National Sample Survey and Evaluation Programme
NFP	Netherlands Fellowship Programme
NHE	Non-agricultural Household Enterprises
NSE	Nairobi Stock Exchange
OE	Operational Enterprises
OECD	Organisation for Economic Cooperation and Development
PE	Public Enterprises
RFLS	Rural Labour-Force Survey
RPED	Regional Programme on Enterprise Development
SAP	Structural Adjustment Programmes
SOE	State-Owned Enterprise
SSA	Sub-Saharan Africa
TEM	Total Employment Manufacturing
ULFS	Urban Labour-Force Survey
UR	Unemployment Rate
VAT	Value Added Tax
WB	World Bank

Abstract

Traditionally, women have lagged behind men in terms of entering the labour force, and in many countries, their earnings lag behind male earnings. However, in recent years, many developed and developing economies have experienced transformations in their labour market structures due to trends such as globalisation and economic restructuring.

Indeed, the labour market in Kenya has undergone several changes since the country's independence in 1963. For instance, owing to a rapid expansion of its education system, the supply of educated labour has increased over time. Furthermore, since the 1970s, real wages have dropped steeply and the implementation of Structural Adjustment Programmes (SAP) in 1980s has been accompanied by changes in the structure of employment, incomes and poverty. The economy has performed poorly as evident from low GDP growth and declining real earnings and standard of living. Both unemployment and informal sector employment increased (informal sector employment increased from 20.0 per cent in 1988 to 79.1 per cent in 2007) while formal sector or modern wage employment declined (from 77.5 per cent in 1988 to 20.2 per cent in 2007).

Set against a background of declining growth rates and in the context of the urban areas of Kenya, this dissertation examines three issues. First, it provides an assessment of various factors (human capital, individual and household characteristics) that influence the substantial increase in women's employment rate. The employment rate (ER) is treated as the effective Labour Force Participation Rate (LFPR) as virtually all women were participating in the labour-force by 1998 (87.2 per cent as compared to 58.4 per cent in 1986). Second, it examines gender differences in the incidence of unemployment. Third, it examines the factors that determine sector of employment choice (formal versus informal job attainment).

The empirical analysis presented in the thesis is based on two cross-section labour force surveys conducted in 1986 and 1998 and on primary data (mainly qualitative) collected in 2003. The Labour Force Survey (LFS)

data are slightly more than a decade apart and coincide with periods before and after implementation of SAP. While more recent labour force data would have helped provide a more contemporary account, the 1998 LFS is the most recent publicly accessible survey.

As far as the first issue is concerned, the analysis reported in the thesis shows that the bulk of the increase in women's insertion into the labour market comes from an increased participation of married women. While women's higher educational endowments, particularly the increase in secondary education, accounts for an improvement in their employment prospects, the period also witnesses a sharp decline in the importance given to education in determining employment and by 1998, university graduates were as likely to be employed as individuals with no education. The period between 1986 and 1998 witnessed civil service reforms, restructuring of the private sector, firm closures and increasing job insecurities. Notwithstanding the role of education, declining opportunities for males who in 1986 were the primary breadwinners and the accompanying income and employment insecurities within households seem to be the key factors prompting the sharp increase in the labour supply of (married) women.

Turning to gender differences in unemployment, the sharp increase in female LFPR does not accompany an increase in their employment rate. Consequently, unemployment among women remains a pressing problem. In contrast, male unemployment rates are substantially lower and do not increase over time. Using a Blinder-Oaxaca type decomposition framework, the thesis establishes that the overall likelihood of being unemployed is heavily influenced by sex, marital status, household-headship and human capital characteristics such as experience and level of education. The decomposition estimates display that for both periods, gender gaps in unemployment may overwhelmingly be attributed to the composition effect (around 81 to 84 per cent).

Finally, in terms of access to formal sector employment, the analysis shows that in both periods, experience and education are highly valued in the formal sector. Over time, the importance of education in securing labour market access increases by about eight percentage points (for both primary and secondary education). However, there are sharp gender differences. For men, the importance of education increases (from seven to 31 percentage points for secondary education) while for women it declines (from 49 to 39 percentage points for secondary education) suggesting the presence of labour market segregation. Over time, the negative effect of marital status on female formal sector participation declines reflecting the increasing insertion of married women in the labour market. Underscoring

the use of the informal sector as a last resort option, the analysis shows that declines in husbands' real earnings are associated with a sharp increase in women's participation in the informal sector. The increasing participation of women in the vulnerable informal sector is consistent with the feminist version of the structuralist characterisation of the informal sector.

Samenvatting

De economische crisis en werkgelegenheid voor vrouwen in stedelijke gebieden in Kenia

Vrouwen hebben bij de toetreding tot de arbeidsmarkt van oudsher een achterstand op mannen en in veel landen verdienen vrouwen ook minder dan mannen. De afgelopen jaren zijn er echter veranderingen ontstaan op de arbeidsmarkt in veel ontwikkelde en ontwikkelingslanden door trends als globalisatie en economische herstructurering.

Zo zijn er verschillende veranderingen opgetreden op de arbeidsmarkt in Kenia sinds de onafhankelijkheid in 1963. Dankzij een snelle uitbreiding van het onderwijssysteem is het aantal geschoolde arbeidskrachten bijvoorbeeld toegenomen. Verder zijn de lonen sinds de jaren zeventig sterk gedaald en heeft de invoering van structurele aanpassingen (*structural adjustment reforms*; SAP) in de jaren tachtig veranderingen in de structuur van werkgelegenheid, inkomen en armoede met zich meegebracht. De economie staat er slecht voor, wat blijkt uit een lage groei van het bbp en een daling van de inkomens en de levensstandaard. De werkloosheid en de werkgelegenheid in de informele sector zijn beide toegenomen (de werkgelegenheid in de informele sector is gegroeid van 20,0 procent in 1988 tot 79,1 procent in 2007), terwijl de werkgelegenheid in de formele sector of in dienstverband afgenomen is van 77,5 procent in 1988 tot 20,2 procent in 2007.

Dit proefschrift behandelt drie onderwerpen binnen de context van stedelijke gebieden in Kenia en tegen de achtergrond van dalende groeicijfers. Het onderzoek richt zich ten eerste op de factoren (menselijk kapitaal, individuele kenmerken en kenmerken van huishoudens) die de substantiële toename van de arbeidsparticipatie van vrouwen beïnvloeden. De arbeidsparticipatie wordt beschouwd als de effectieve participatiegraad omdat vrijwel alle vrouwen in 1998 deelnamen aan het arbeidsproces (87,2% in vergelijking met 58,4% in 1986). Ten tweede richt het onderzoek zich op sekseverschillen op het gebied van werkloosheid en ten derde worden de factoren

die bepalen in welke sector mensen werk krijgen (de formele of de informele sector) onderzocht.

Het empirisch onderzoek in dit proefschrift is gebaseerd op twee cross-sectionele onderzoeken onder de beroepsbevolking die gehouden zijn in 1986 en 1998 en op eigen (voornamelijk kwalitatief) onderzoek uit 2003. De onderzoeken onder de beroepsbevolking zijn ruim tien jaar na elkaar gedaan, respectievelijk voor en na de invoering van de SAP. Recentere gegevens over de beroepsbevolking hadden de actuele situatie beter weer kunnen geven, maar het onderzoek uit 1998 is het meest recente onderzoek waarvan de gegevens openbaar toegankelijk zijn.

Wat het eerste onderwerp van het proefschrift betreft, blijkt uit de analyse dat de toestroom van vrouwen op de arbeidsmarkt grotendeels toe te schrijven is aan een toegenomen arbeidsparticipatie van getrouwde vrouwen. Omdat het opleidingsniveau van vrouwen is gestegen, waarbij vooral het aantal vrouwen dat voortgezet onderwijs heeft gehad is toegenomen, hebben ze betere vooruitzichten op de arbeidsmarkt. Tegelijkertijd is in deze periode de invloed van het opleidingsniveau op het vinden van werk sterk afgenomen. In 1998 hadden afgestudeerden aan een universiteit evenveel kans op een baan als mensen zonder opleiding. Tussen 1986 en 1998 waren er reorganisaties bij de overheid en in het bedrijfsleven, sloten bedrijven hun deuren en kwamen er steeds meer banen op de tocht te staan. Ondanks de rol die de opleiding speelt, lijkt de sterke toename van het aantal (getrouwde) vrouwen op de arbeidsmarkt vooral verklaard te worden door de verslechterde vooruitzichten voor mannen, die in 1986 meestal kostwinner waren, en de onzekerheid over werk en inkomen die daarmee gepaard ging binnen huishoudens.

Op het gebied van sekseverschillen in werkloosheid zien we dat de sterke stijging van de participatiegraad van vrouwen niet gepaard gaat met een toename van het aantal vrouwen met een betaalde baan en dat werkloosheid daarom bij vrouwen een groot probleem blijft. De werkloosheid onder mannen is daarentegen aanzienlijk lager en deze laat ook geen stijging zien. Op basis van de decompositiemethode van Blinder-Oaxaca wordt in dit proefschrift vastgesteld dat de kans om werkloos te worden sterk bepaald wordt door sekse, burgerlijke staat, het feit of iemand gezinshoofd is, en door kenmerken van het menselijk kapitaal als ervaring en opleidingsniveau. Uit de decompositieschattingen blijkt dat sekseverschillen in werkloosheid in beide perioden grotendeels, in ongeveer 81 tot 84 procent van de gevallen, toegeschreven kunnen worden aan het compositie-effect.

Wat betreft de werkgelegenheid in de formele sector blijkt ten slotte uit het onderzoek dat ervaring en opleiding in beide perioden zeer belangrijk

geacht worden in deze sector. Het belang van onderwijs voor het krijgen van toegang tot de arbeidsmarkt neemt met ongeveer 8 procentpunt toe in de loop van de tijd (dit geldt zowel voor basis- als voortgezet onderwijs). Er zijn echter grote sekseverschillen. Voor mannen neemt het belang van onderwijs toe (van 7 tot 31 procentpunt voor voortgezet onderwijs), maar voor vrouwen neemt het af (van 49 tot 39 procentpunt voor voortgezet onderwijs). Dit wijst op een segregatie op de arbeidsmarkt. In de loop van de tijd neemt het negatieve effect van de huwelijkse staat op de arbeidsparticipatie van vrouwen in de formele sector af, wat in overeenstemming is met de toename van het aantal getrouwde vrouwen op de arbeidsmarkt. Het onderzoek toont aan dat inkomensachteruitgang bij de echtgenoot samengaat met een sterke stijging in de arbeidsparticipatie van vrouwen in de informele sector, wat benadrukt dat de informele sector als laatste redmiddel gebruikt wordt. De toename van de arbeidsparticipatie van vrouwen in de kwetsbare informele sector is in overeenstemming met de feministische interpretatie van de structuralistische benadering van de informele sector.

1 Introduction to the Study

"We can only be confident that opportunities are equal when the outcome is equal too. Any systematic disparity in outcomes – whether this be a concentration of certain groups at certain points of the social hierarchy or a marked segregation of occupations and roles – alerts us to a likely inequality in initial opportunities"
(Phillips 2004: 13).

Traditionally, women have lagged behind men in terms of entering the labour force and in many countries, their earnings lag behind male earnings. However, in recent years, many developed and developing economies have experienced transformations in their labour market structures due to trends such as globalisation and economic restructuring. One such transformation has been a striking increase in the female Labour Force Participation Rate (LFPR).[1] Indeed, it is now widely recognised that adjustment policies have been associated with worsening income distribution in most less developed economies.[2] In part, because of this, additional family members especially among low-income groups have been forced to search for paid employment to compensate for declining family incomes.

The labour market in Kenya has undergone several changes since the country's independence in 1963. For instance, owing to rapid expansion of its education system, the supply of educated labour has increased over time. This phenomenon has been accompanied by shifts in labour demand in favour of skilled and highly educated labour (Manda 1997). Furthermore, since the 1970s, real wages have dropped steeply and the implementation of structural adjustment reforms/programmes/policies in 1980s has been accompanied by changes in the structure of employment, incomes and poverty.[3] The economy has performed poorly as evident

from low GDP growth and declining real earnings and standard of living. Both unemployment and informal sector employment have increased (informal sector employment has increased from 20.0 per cent in 1988 to 79.1 per cent in 2007) while formal sector or modern wage employment has declined (from 77.5 per cent in 1988 to 20.2 per cent in 2007).[4] The increasing rate of informalisation has magnified the incidence of poverty, as earnings in the informal sector are considerably much lower than in modern wage employment (Mwabu et al. 2004).

In the 1980s and 90s, reluctant 'stop-go' economic reforms accompanied by poor growth performance, led to a protracted process of real earnings decline, which adversely affected the livelihoods of households. This in-turn led to a significant rise in the incidence of poverty, particularly in urban areas. These changes can affect one's involvement in the labour market or allocation of labour within households. A distinctive feature of urban markets is their highly commoditised nature. Labour is the urban poor's most important asset for generating income. When household income declines, the first and most important response is to mobilise additional labour.

Consistent with this expectation, between 1986 and 1998 there has been a sharp increase in urban female LFPR, marking a near convergence with male LFPR. At the same time, women remain a majority among the unemployed and their unemployment rate (UR), especially of married women, has risen significantly.[5] On the contrary, not only is the male UR much lower than that of females, but it has not increased over time. Although the problem of unemployment affects both adults and the youth, it is more serious among the youth (mainly women). For instance, in 1998 and 1986, 65 percent and 78 percent (respectively) of all unemployed persons may be classified as young (between ages 15-29). An even more striking pattern is a persistent and rising gender imbalance in youth unemployment – of the total number of unemployed youth in 1998 and 1986, 76 per cent and 54 per cent respectively, were females.

Set against a background of declining growth rates and in the context of the urban areas of Kenya, this thesis examines three issues. First, it provides an assessment of various factors (human capital, individual and household characteristics) that influence the substantial increase in women's employment rate. The employment rate is treated as the effective LFPR as virtually all women were participating in the labour-force by 1998 (87.2 per cent as compared to 58.4 per cent in 1986). Second, it

examines gender differentials in the incidence of unemployment and third, it examines the factors that determine sector of employment choice (formal versus informal job attainment). The empirical analysis presented in the thesis is based on two cross-section labour force surveys conducted in 1986 and 1998 and on primary data (mainly qualitative) collected in 2003. The Labour Force Survey (LFS) data are slightly more than a decade apart and coincide with periods before and after implementation of SAP. While more recent labour force data would have helped provide a more contemporary account, the 1998 LFS is the most recent publicly accessible survey.

While such a comparative cross-section analysis reveals changes in the composition and structure of the labour market, it does not reveal intra-household patterns. I attempt to bridge this gap by supplementing the LFS data with primary data gathered from two urban clusters each containing about 100 to 150 households. The clusters were stratified into a middle-income and low-income cluster and one cluster of each type was randomly drawn from a National Sample Survey and Evaluation Programme (NASSEP) frame created under the 1989 Kenyan population-housing census. These clusters represent a middle-income group (Umoja-II area of Nairobi) and a low-income group (Silanga in Kibera).[6] These different clusters were chosen in order to increase variation in terms of labour market behaviour. Household-heads, spouses and females between 15-64 years of age were interviewed using a structured questionnaire and open-ended questions. In addition to various socio-economic characteristics, the respondents were asked to provide an account of their employment histories, changing social and economic context, and strategies used to cope with deteriorating economic conditions.

Based on these analyses, this thesis argues that urban households sought to adjust to protracted adverse conditions by increasing and diversifying their supply of labour, particularly female labour. Thus, the dramatic increase in urban female labour-force participation witnessed in Kenya over recent years reflects household strategies aimed at protecting overall household income in a period where real earnings have been falling.

In terms of its contribution, while numerous studies have examined the notable rise in female LFPR phenomenon in developing countries, most of the literature is on Latin American and Asian countries and focuses on the influence of labour demand on women's employment, in

particular on the effect of international economic restructuring (Cerruti 2000; Laier 1997; Standing 1989; Stichter 1990). Previous labour market studies on Kenya and various reports by the Kenyan government often acknowledge increased entry of women into the Kenyan labour market. However, no study has systematically explored this trend and the cause of women's relative vulnerability to unemployment compared to men. Furthermore, although female unemployment is significantly larger than male unemployment in many parts of the world, studies that investigate the employment gender gap are scarce.

The Kenyan urban labour market structure consists of three broad categories: modern wage employment (public and private sectors together); informal sector employment (including unpaid family workers); and unemployment. Beyond examining the rise in participation rates and gender differences in unemployment, the thesis also examines the factors that drive the distribution of women into different sectors. This knowledge is important as different sectors offer different opportunities for skill realisation and earnings and such an analysis can provide indications of heterogeneity or discrimination in the labour market (Demery and Grootaert 1990; Wambugu 2003).

This study differs from past research in that it is about changes in women's involvement in urban labour markets. Previous studies on Kenya, for example, Milne et al. (1990) examines the determinants of urban labour force participation at a particular point in time. While Manda (1997) analyses changes in urban LFPR by comparing three data points in time, (data sets from 1977, 1986 and 1995). Manda's study is concerned with an examination of LFPR in general, while the present study is concerned specifically with women's labour force participation and employment. This study also uses data that are more recent and goes beyond existing work on Kenya by incorporating a decomposition methodology in which changes in employment across time and gender are disentangled into changes due to labour market valuation of characteristics and changes in the characteristics themselves.

To summarise, research on women's employment in terms of changes over time, differences between male and female employment rates and access to quality (formal and informal sector) employment are important areas that have received inadequate interest in the Kenyan context. It is especially important to analyse these issues given the increasing involvement of women in the labour market and the significant advancement in

women's education attainment. Furthermore, employment (labour income) constitutes the main source of income for most households living in the urban areas. The lack of it leads to poverty. Urban poverty and labour-force participation are strongly related because earnings in the labour market are the main source of income for the urban poor (Odhiambo and Manda 2003). As noted, unemployment affects women most and their unemployment rate is currently way above that of men. Female employment is thus an important determinant of the ability of families to escape from poverty; women indeed comprise the majority of the world's poor. Policies geared towards improving incomes and employment activities of women would go a long way in alleviating poverty in general and female poverty in particular.[7] This research attempts to fill these gaps by providing an understanding of these gendered labour market outcomes and by contributing to the literature on women's work in the context of developing countries.

The rest of the study is organised in the following manner. Chapter 2 provides a background for the rest of the thesis and contains a review of the Kenyan economy with an emphasis on the labour market. Chapter 3 explores temporal increases in the female labour force participation/employment rate. Chapter 4 focuses on gender differences in unemployment while chapter 5 investigates the factors associated with formal and informal sector employment. Chapter 6 summarises the study's main findings, provides critical reflections and suggests areas for further research.

Notes

[1] In ILO (2004: 4), it is noted that 'The growing proportion of women in the labour force has been one of the most striking labour markets trends of recent times especially in the 1980s and to a lesser extent until today. Never before, have so many women been economically active: the female labour force (the sum of unemployed plus employed women) was 1.2 billion in 2003 up from 1 billion in 1993. In addition, the LFPR for men has decreased in most regions of the world. As a result, the gap between the sexes in terms of labour force participation rates has decreased considerably.' However, ILO (2007: 3), also notes, 'taken on their own, rising or high labour force participation rates do not necessarily mean that labour markets are developing positively for women.' This report explains that female work is characterised by the fact, 'women have a smaller likelihood of being in regular wage and salaried employment than men. In addition, the female

share of contributing family workers exceeds the male rate. In economies with a high share of agriculture, women work more often in this sector than men. Women's share of employment in the service sector also exceeds that of men. Additionally, women are more likely to earn less than men for the same type of work, even in traditionally female occupations.'

[2] In several cases, stabilisation, adjustment and liberalisation contributed to greater inequality (Van der Hoeven 2000). For those countries where reliable data was available in the 1980s, income inequality increased in Asia in six out of 12 countries: Bangladesh, Indonesia, Thailand, China, Singapore and Sri Lanka; in Africa in four out of six countries: Nigeria, Tanzania, Kenya and Ethiopia; and in Latin America in nine out of 14 countries: Bolivia, Mexico, Argentina, Brazil, Panama, Venezuela, Guatemala, Honduras, Peru (WB 1996). Also in ILO (1996), wage dispersion increased with falling real wages for most countries, which underwent structural adjustment programmes in the 1980s.

[3] 'The term can be defined as a set of policy changes or reforms which combine short-run stabilization measures and long-term adjustment measures' (Van der Hoeven and Van der Geest 1999: 9). 'SAP mainly entails changes in macroeconomic policies to make the economy adaptable to changing economic realities and basically more market oriented' (Ikiara and Ndung'u in Van der Hoeven and Van der Geest 1999: 73). Implementation of SAP required restructuring of numerous public services and social support systems with the intention of reducing government budget deficit and correcting macroeconomic imbalances for medium and long-term economic recovery and growth. The process also involved cost sharing of basic social services such as health and education; retrenchments in the public sector; privatisation and sale of non-strategic public enterprises; removal of price controls and subsidies; and trade liberalisation.

[4] These figures exclude persons engaged in small-scale farming and pastoralist activities.

[5] Negative effects in income distribution under structural adjustment programmes forced women and men to intensify paid work outside the household. Women are often incorporated into informal employment under insecure and worsening conditions. Although females constitute about 50.1 per cent of the total population, on average, they account for only about 30 per cent of the total formal sector wage employment and earn 33 per cent less than their male counterparts (Were and Kiringai 2004). Women's earnings have been found to be lower than men's even after making adjustments for the type of employment, occupation and hours of work while when combining domestic chores with economic activities, Mariara (2003) finds that women in the working age group worked 50.9 hours per week compared with only 33.2 hours worked by men. Zepeda (2007) reports a wage gap of 19 per cent in favour of males in the urban

areas and 14 per cent in the rural areas. According to Zepeda, male wages are on average 43 per cent higher than female wages.

[6] See also Central Bureau of Statistics (2003).

[7] There is growing evidence not only of a substantial increase in women-headed households all over the world, but also the severely disadvantaged economic conditions of these households.

2 Labour Supply and Demand in a Transforming Economy

2.1 Introduction

As in many developing countries, Kenya has gone through a process of structural adjustment that has brought with it transformations in the economy's employment composition and changes in income and poverty. This chapter provides a background for the rest of the thesis and starts by providing an overview of Kenya's economic performance since independence in 1963. This is followed by a discussion of employment and earnings performance. Key urban labour market outcomes and trends linked to this process, namely, labour-force participation, employment, unemployment and education are then discussed.

2.2 Kenya's Economic Performance: An Overview

Eradication of poverty, ignorance and disease were among the important targets of government efforts following Kenya's independence in 1963 (Republic of Kenya 1965). Other targets in the 1960s and 1970s included, strengthening the role and participation of the state through setting minimum wages, price and interest rates controls, subsidising education, agricultural inputs, guaranteeing public sector employment and population control measures. While such measures were associated with a phase of rapid economic growth immediately after independence, this momentum has not been sustained. In fact, according to some commentators (Mwabu et al. 2000), a number of these measures had significant negative effects on overall economic dynamism in that they failed to create the necessary conditions for the economy to absorb mounting numbers of unemployed labour and to uplift the purchasing power of those employed in the formal and informal sectors.

In any case, Kenya's economic growth record overall has been sporadic and can be split into four broad phases. A growth phase (1964-72), a shock phase (1973-84), an adjustment phase (1985 to 2002) characterised by inconsistent donor flow and economic stagnation (particularly from 1990 to 2002) and finally, the current situation, which may largely be characterised as leading to an economic recovery since 2003.

The first decade after Kenya's independence was marked by rapid economic growth at 6.5 per cent per annum. Agricultural production grew by 4.7 per cent annually during the same period. Much of this growth may be attributed to policy measures enacted that emphasised increasing land available for cultivation, movement from large to small farms and from low to high value crops; industrialisation based on an import substitution strategy, which included incentives for private industrial investment; and high rates of investment financed mainly from domestic savings (Manda 1997; Milne and Neitzer 1994). However, this growth was accompanied by high-income inequality and other setbacks including unemployment and balance of payment deficits.[1]

Between the mid-1970s and mid-80s, Kenya suffered a series of economic crises due to rapid increases in oil prices in 1973-74 (first oil shock)[2], the commodity boom of 1976-77 (fluctuation in coffee and tea prices)[3], the collapse of the East African Community (EAC) in 1978[4], the drought of 1979, the second oil shock in 1979[5], the world recession of 1981-82 caused by a rise in world interest rates, a coup attempt in 1982 and a series of droughts.

Economic performance during the first half of the 1980s was frail with average real GDP growth rate of 3.4 per cent for the period 1980-84. Although the economic picture in the second half of the 1980s was relatively better, it started declining continuously from the early 1990s. In part due to both internal and external shocks including a drought in 1992-1993, deteriorating terms of trade; increases in oil prices due to the Gulf war; declining foreign investments, the period 1991-93 witnessed Kenya's worst economic performance since independence marked by a stand-still in GDP growth, contraction in agricultural production at a yearly rate of 3.9 per cent, inflation reached a record 100 per cent in August 1993, and the government's budget deficit was more than 10 per cent of GDP. As a result of these combined problems, bilateral and multilateral donors suspended programme aid to Kenya in 1991 as a prerequisite for more reforms. In 1993, the Government began a major agenda

of economic reorganisation and liberalisation with the backing of the World Bank (WB) and the International Monetary Fund (IMF). This plan encompassed elimination of price controls, elimination of import licensing and foreign exchange controls among other fiscal and monetary policies; privatisation of state-owned companies and employment restructuring in the civil service by greatly reducing the number of government employees. During the period 1994-96, real GDP growth rate averaged above four per cent annually.

In 1997, however, the economy regressed into sluggish growth caused by adverse weather conditions and tapering economic activity preceding general elections in December 1997. Bad rains (*El Niño*) in 1997 significantly affected agricultural production and two major bombings (in 1998 in Nairobi and in 2002 in Mombasa) had a negative impact on the tourism industry. By 2000, the economic situation seemed hopeless, recording a negative real GDP growth rate. After three years of sluggish growth, since 2004 the economy has shown remarkable recovery until the recent post-elections violence experienced in December 2007 threatened to overturn this progress. Average real GDP growth rate for the period 2004 to 2006 has been 5.6 per cent.

In sum, several decades of declining economic performance, combined with rapid population growth (Figure 2.1), have over time, been rendered into diminished per-capita income (see Table 2.1), increased poverty[6], inequality[7] (see Table 2.2) and worsening unemployment (for instance, urban unemployment rate in the 1990s experienced a three-fold increase as compared to the situation in the 70s) and in particular, shifts from formal to informal sector employment[8] where earnings are considerably lower.[9] Of particular relevance to this thesis, it is estimated that the share of informal sector employment to total employment increased from 4.2 per cent in 1972 (Ikiara and Ndung'u 1999) to 20.0 per cent in 1988 and to 79.1 per cent in 2007.

As may be expected, the standard of living has deteriorated as shown by the poor performance of GDP per capita and real earnings growth (see Tables 2.1 & 2.3) and there has been a drastic increase in rural and urban poverty.[10] The decline in real earnings was highest in the periods 1982-1994 and 1991-1994 coinciding with a more rigorous implementation of SAP. The increasing pressure felt by households and the increasing gap between earnings and costs of living are clear from the primary data gathered. Table 2.4 summarises the economic context of urban

households starting from mid-1970s to 2003 in which the economic situation of urban households generally appears to have been very good in the late 1970s, and regressed to good in the period 1980-89 and finally to bad and very bad since the 1990s. In general, the most troublesome sources of insecurity identified by households were escalating cost of living and unexpected unemployment of household members via lay-off or retrenchments (resulting from employment restructuring: civil service reforms and privatisations).

Table 2.1
Selected macroeconomic indicators (annual percentage)

Year	Real GDP growth (market prices)	Real GDP per capita growth	Real manu-facturing GDP growth rate	Real earnings growth	Inflation rate
1973	5.9	2.2	30.1	-3.0	8.9
1974	4.1	0.4	5.2	-5.1	15.8
1975	0.9	-2.8	0.6	-0.6	17.8
1976	2.2	-1.5	-1.1	5.2	10.0
1977	9.5	5.5	15.9	-4.2	12.7
1978	6.9	3.0	12.5	-1.4	12.6
1979	7.6	3.6	7.5	1.0	8.4
1980	5.6	1.2	5.2	0.9	12.8
1981	3.8	0.0	3.6	3.6	12.6
1982	1.5	-2.0	2.3	-13.2	22.3
1983	1.3	-2.2	4.5	-6.1	14.5
1984	1.8	-1.8	4.3	0.4	9.1
1985	4.3	0.7	4.5	-2.2	10.7
1986	7.2	3.5	5.8	3.0	5.7
1987	5.9	2.3	5.7	0.1	10.5
1988	6.2	0.6	6.0	1.9	12.8
1989	4.7	3.3	5.9	1.3	14.6
1990	4.2	0.9	5.2	-5.9	17.7
1991	1.4	-1.6	3.8	-8.3	19.6
1992	-0.8	-3.6	1.2	-10.9	27.3
1993	0.4	-2.3	1.8	-22.1	46.0
1994	2.6	0.1	1.9	-8.3	28.8
1995	4.4	2.0	3.9	19.8	1.6
1996	4.1	1.8	3.7	11.7	9.0
1997	2.1	-0.2	1.9	8.5	11.2
1998	1.6	-0.6	1.4	11.2	6.6
1999	1.3	-0.8	1.0	8.0	5.8
2000	0.6	-3.7	1.1	4.7	10.0
2001	4.5	3.0	1.0	8.7	6.0
2002	0.6	-1.2	0.1	12.7	2.0
2003	2.9	-1.0	6.0	-2.7	10.0
2004	5.1	2.0	4.5	9.9	12.0
2005	5.8	2.9	4.7	2.4	10.0
2006	6.4	3.5	6.3	1.3	14.0
2007	7.0	4.0	6.2	-0.3	10.0

Source: Manda (1997: 9); 2001 World Bank's Africa Database; Republic of Kenya, Economic Survey (various issues).

Table 2.2
Poverty incidence (% urban/rural population) & Gini coefficients

Poverty Incidence[1]			Gini Coefficients[2]	
Year	Urban	Rural	Year	Urban & Rural
1974/75*		25	1994	0.445
1976*	15.3		1997	0.570
1981/82		48.8	1998	0.612**
1992	29.3	46.3	1999	0.653**
1994	29.0	46.8	2000	0.695**
1997	49.2	52.9		
2000	51.5	60		

Note * represents the per cent of urban (rural) households. [1] *Source:* Mwabu et al. (2000), Mwabu et al. (2002).

Note ** represents the per cent of urban (rural) households. [2] *Source:* Mwabu et al. (2002).

Table 2.3
Real average wages per employee by sector (%)

	Total Private	Total Public	Total Public and Private
1981-85	-1.6	-2.3	-1.8
1986-90	-0.9	-1.4	-0.9
1991	-7.9	-9.9	-8.3
1992	-9.2	-12.3	-10.9
1993	-20.2	-24.2	-22.1
1994	-8.5	-8.1	-8.3
1995	22.5	16.1	19.7
1996	12.3	10,7	11.7
1997	8.8	7.6	8.4
1998	25.6	40.2	11.2
1999	4.9	4.3	4.7
2000	8.7	8.5	8.7
2001	3.8	13.3	7.4
2002	-0.2	-14.0	-5.7
2003	11.3	7.1	9.9
2004	5.0	-3.5	2.4
2005	2.4	-2.3	1.3
2006	2.4	-2.3	1.3
2007	-0.6	-1.7	-0.3

Source: Manda (1997: 17); Own Computations- Republic of Kenya; Economic Survey (various issues).

Table 2.4
Earnings rate in relation to cost of living (frequency of responses)

Rate/Period	1975-1979	1980-1985	1986-1989	1990-1995	1996-2000	2001-2003
Very good-surplus (%)	61.4	28.6	21.1	13.3	3.7	1.8
No. of respondents	16	12	12	12	4	2
Good-sufficient (%)	15.4	54.7	49.1	22.2	14.8	5.3
No. of respondents	4	23	28	20	16	6
Bad-just enough (%)	11.5	7.1	26.3	36.7	28.7	22.1
No. of respondents	3	3	15	33	31	25
Very bad-not enough (%)	11.5	9.5	3.5	26.7	52.8	70.8
No. of respondents	3	4	2	24	57	80
Total Respondents	26	42	57	90	108	113
Household-head's Year of Birth	1938-1963	1938-1968	1938-1968	1938-1978	1938-1983	1938-1983

Source: Interviews with household-heads: Percentages across columns add-up to 100.

2.3 Employment Effects of Economic Liberalisation and SAP in Kenya

Before turning to a more detailed discussion of labour market outcomes, this section discusses the broader context in which such changes may be viewed.

The period from 1980 to the 1990s can be regarded as the economic reform period and was characterised by a stronger commitment and rigorous implementation of SAP by the government. The era witnessed measures undertaken to enhance economic efficiency by strengthening the role of the private sector, dismantling of price controls, reduction and removal of import controls, implementation of financial reforms and privatisation of parastatals. A programme of structural adjustment was adopted with the view that accompanying measures would spark economic growth and rectify the worsening macroeconomic imbalances. According to Ikiara and Ndung'u (1999), Kenya's experience with structural adjustment falls into three phases as follows:

The *1980-1984 phase*, characterised by a slow start and non-compliance with the agreed terms due to timing, design shortcomings and partial commitment by the government.

The *1985-91 phase*, characterised by poor implementation of the agreed reforms. This period witnessed considerable official acceptance of the reform programme. Although more efforts were made to introduce reforms in various sectors (mainly agriculture, trade and industry, education, health, parastatals, foreign exchange markets and the financial sector), the pace of implementation remained poor. Simultaneously with the SAP, stabilisation programmes directed at the demand side of the economy and intended to correct short-term instabilities such as inflationary tendencies, budgetary and balance of payments deficits were also implemented.

The *1992-1995 phase*, characterised by rapid implementation of SAP, was characterised by a string of aid deferments and resumptions. For instance, quick-disbursing aid to Kenya was suspended in 1991 because of donor disappointment with a reluctant 'stop-go' (sluggish pace and sometimes reversal) approach to SAP implementation.[11] However, more pressure from donors and a severely ailing economy (particularly during the period 1991-93) led to more commitment and seriousness by the government to the execution of the reforms. As a result, major political and economic reforms (including the removal of virtually all price and foreign exchange controls, the liberalisation of domestic marketing trade, import liberalisation, reduction of the budget deficit, financial reforms, privatisation, removal of wage guidelines and other labour market reforms and exchange rate liberalisation) were implemented by the end of 1995. Notwithstanding these reforms, in 1997 and in 2002, the IMF and the WB withdrew all aid to Kenya citing the government's failure to meet conditionalities tied to the loans as well as persistent corruption. This forced other major donors to withdraw their financial support to Kenya.

While the various reforms are likely to have wide-ranging effects on labour markets and it is difficult to isolate the exact manner in which each reform may have influenced the labour market, according to Ikiara and Ndung'u (1997), the expected employment effects of SAP specific to the Kenyan economy for the period 1985-1995 may be characterised as follows.

Foreign exchange and exchange rate reforms: These competitiveness-enhancing reforms included removal of foreign-exchange controls and liberalisation of the exchange rate leading to a devaluation of the shilling especially in 1992-1993. Their effect on employment is expected to be

indirect (external trade liberalisation- see also Manda and Sen 2004). As a result of competition from imported goods, the production sectors of the economy may shrink. In the short run, trade liberalisation may be associated with unemployment. Also according to Ndulu et al. (2007), competition from imports was a serious problem for most firms and even more serious was unfair competition from local firms and evasion of import duties from the importers. Ikiara and Ndung'u (1997) observe that the removal of foreign exchange controls somewhat eased the foreign exchange constraints especially in manufacturing and agricultural industry as foreign exchange became more available to purchase imported inputs. Among those firms not adversely affected by import liberalisation, an improvement in foreign exchange availability may have a positive effect on employment via improved export opportunities. For instance, the creation of the export processing zones has continuously generated many jobs as detailed in the following sections.

Trade (foreign and domestic) liberalisation: Reforms pertaining to external trade liberalisation include removal of quantitative restrictions, reduction of tariff levels and export promotion, establishment of a flexible exchange rate regime, and a limited devaluation of the Kenya shilling. The overriding objective of these reforms was to make the industrial sector more efficient and more outward-oriented.

As a way of promoting industrialisation, Kenya pursued an import substitution strategy in the period immediately after independence. This was achieved through a variety of policy instruments including an overvalued exchange rate, high tariff barriers, import licensing, foreign exchange controls and quantitative restrictions to protect local producers against foreign competition. However, because of increasing recognition of the economic realities[12] facing the country towards the end of the 1970s, the government opted for a change in industrial strategy from import substitution to export-led industrialisation. A number of institutional and market-oriented initiatives were thus enforced during the period 1985-90 to re-orient the economy away from the import substitution strategy to export promotion. Among the initiatives were export compensation scheme, manufacturing under bond import duty and value added tax (VAT) remission schemes intended to improve export producers' access to imported inputs at world prices.[13]

With regard to domestic trade liberalisation, price controls before 1983 applied to most manufactured and agricultural products with the

aim of protecting low-income earners while those on manufactures were to prevent monopolistic pricing practices. By 1995, nearly all price controls had been dismantled. While manufacturers and those in business welcomed the move, trade unionists argued that the process would lead to major increases in the cost of living and erode workers' purchasing power. Additionally, trade liberalisation may have production and employment displacement effects. For example, uncompetitive firms may not be able to face competition from cheaper imports while the preference for imported goods by local consumers may force local enterprises to close leading to job losses. Ndulu et al. (2007) acknowledge that export opportunities for Kenyan domestic firms improved with structural adjustment and liberalisation but at the same time note that local firms were not competitive enough to take advantage of this environment. Although access to foreign exchange had improved with foreign exchange liberalisation, the cost of foreign exchange and an unstable foreign exchange were a handicap. Lack of a futures market and the use of the spot rate instead of the forward rate in the foreign exchange market made matters worse. While the exact effects of foreign and domestic trade liberalisation on employment are hard to isolate, and statistics on the number of firm closures due to such measures is not available, according to Ikiara and Ndung'u (1997) and Manda and Sen (2004), the closure of domestic firms due to increasing competition led to job-losses.

Financial sector reforms: The reform programme in this sector, formally adopted in 1989 focused on both market and institutional reforms.[14] The target of the market reforms has been to ensure positive real interest rates in order to enhance efficient utilisation of available credit sources. Strengthening the central bank to help it undertake its inspection and regulatory roles more effectively has been a key focus of the institutional reforms. In the latter part of the 1980s and 90s, financial sector reforms emphasised tight credit controls to check inflationary tendencies especially through adjustments of cash ratio requirements for commercial banks and the raising of interest rates. In general, several financial institutions (FI) have had to close down or to restructure their operations. For instance, because of a banking crisis in 1986, several locally-owned financial institutions (FI) collapsed owing to severe liquidity problems because of mismanagement and fraud while eight such institutions were taken over and merged into a state bank (Consolidated Bank of Kenya Ltd.) in 1989 (Brownbridge et al. 1998; Mwega 2003). In addition, rapid

inflationary increases in the money supply accompanied widespread instability and fraud leading to financial turbulence in the early 1990s. Irregular borrowing from the central bank by politically connected financial institutions was a key source of the monetary growth. Under pressure from donors, the IMF and the WB, the central bank liquidated 16 financial institutions in 1993-94 while others including the government-owned commercial banks were recapitalised by shareholders. As has also been highlighted by Ikiara and Ndung'u (1997), a logical consequence of these closures and mergers is a reduction in employment opportunities within these institutions.

Parastatal sector reforms: Parastatals accounted for a large share of public sector employment before the start of the reform programme and had become a significant source of budgetary deficits as a majority of them depended on subsidisation by the central government; also, most are overstaffed and mismanaged. These factors provided the rationale for the parastatal reform programme whose broad objective was to reduce the financial burden on the government treasury, improve efficiency in service delivery and enhance opportunities for private sector investment. So far, the reforms implemented have had serious direct employment effects through their restructuring and privatisation components.[15] To this end, the civil service has been trimmed by more than 33,000 jobs since July 1993. 'Some of the parastatals carrying out retrenchments during the period 1990-1992 laid off 30 per cent on average, of their total work force' (Ikiara 1992: 34, cited in Ikiara and Ndung'u 1997). For example, Kenya Railways one of the largest parastatals classified as a strategic state corporation under the public enterprise reform programme reduced its workforce from 22,000 in 1992 to around 12,000 by 2002.

Public expenditure control and reduction: Budget rationalisation programme, the civil service reform, parastatal sector reforms and introduction of user charges are some of the reform measures adopted under the SAP. Other on-going measures include improvements in expenditure control mechanisms and changing the composition of expenditures. These reform measures aimed at controlling and reducing public expenditures. The 1980-1984 period witnessed attempts to reduce budget deficits mainly through reduced public expenditures. Control and reduction of government spending and observing ceilings on government borrowing have been part of the conditions in the standby agreements with the IMF and the WB. As a way of raising productivity in the public sector,

an increase in the share of non-wage operation and maintenance, is among the components of the budget rationalisation programme.

Instituted in April 1992, civil service reforms to improve the quality of public service, reduce government spending, raise the productivity of the workforce and rationalise staffing levels, has had a crucial impact on the labour market. The civil service reform programme was designed in three phases: phase 1 – cost containment; phase 2 – performance improvement and phase 3 – consolidation and sustenance of gains made by reform initiatives. The target of the programme was to 'reduce the 272,000 civil servants at an annual rate of six per cent for five years with the emphasis on unskilled and semi-skilled categories of the civil servants. Women are more likely to be in these categories than men are. By October 1994, the number of civil servants had been reduced from 272,000 to 248,057' (Ikiara and Ndung'u 1997: 5-17) and to 191,670 in 2003. Public expenditure control and reduction has had both direct and indirect negative impacts on employment especially in the civil service where, by the end of 1995 more than 30,000 employees had been laid-off. The effect of this programme combined with the restructuring programmes in the private sector has exacerbated an already volatile unemployment situation in the country. This has aggravated competition for the limited number of new jobs estimated at slightly more than 100,000 a year whereas new entrants to the labour-force number more than 400,000 annually. Public expenditure reductions and cost sharing have also been blamed for worsening conditions of vulnerable groups through reduced access to essential services such as education, health, housing, water and sanitation (Odada and Ayako 1989).

To conclude from the above discussion, the SAP in Kenya has been accompanied by a reduction in employment opportunities in the formal sector, retrenchments and increased job insecurity. At the same time, a movement to the informal sector has matched the shedding of labour from the formal sector. It has been argued that the impact of economic reforms on the poor and various social indicators are varied and uncertain. Adjustment policies encompass both direct and indirect effects on social welfare. The direct effects work through changes in the level of income and its distribution while the indirect effects work through the provision of public services (Mwabu et al. 2000) and, a priori the direction of the effects is uncertain. In spite of the fact that SAP have addressed some areas of inefficiency in Kenya to a degree, it is now gener-

ally accepted that the programmes have had serious drawbacks especially their uncertain impact on growth, income distribution and employment, and poverty alleviation. Structural adjustment measures can create adverse effects on the poor including the tendency of SAP to reduce the purchasing power,[16] therefore the consumption of the poor especially in the short-term. Additionally, even in the long-term, the chronically poor are unlikely to enjoy the expected benefits from the adjustment process because they operate outside the formal organised economic sectors, which are the target of SAP measures (ibid).

While various criticisms and arguments have been levied against structural adjustment programmes in Kenya, a counter-argument in favour of these programmes is that in the end, they may help reduce poverty. The key argument is that economic reforms are crucial if a country is to improve economic management and tackle poverty. It is important not to treat the growing poverty in Kenya solely as a product of SAP, but also of government's failure to implement necessary economic and political reforms in a timely manner as well as economic mismanagement in general (ibid). There are a number of ways the poor have benefited from the on-going economic liberalisation (import liberalisation), such as improved access to cheaper imported products (food and clothing).[17] Furthermore, whether poverty would still have increased/reduced or whether the economy would have performed better/worse without SAP are beyond the scope of this thesis.

With this background, I now take a closer at labour market outcomes.

2.4 Population and Labour-force Growth

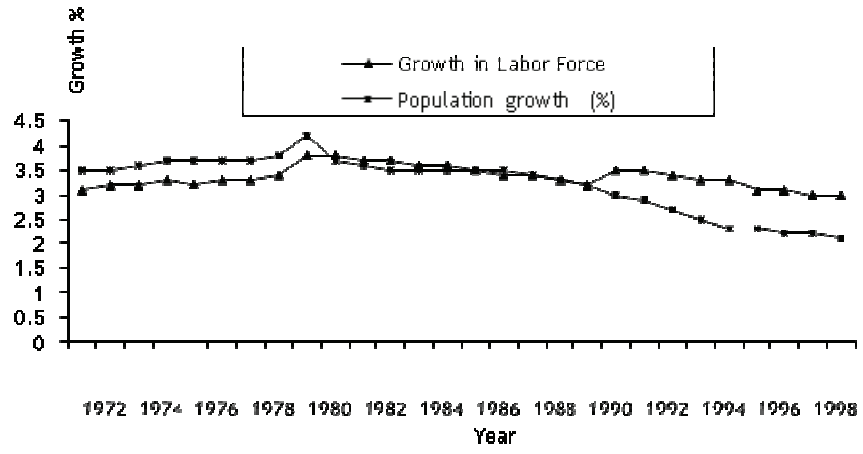
As can be seen in Figure 2.1, growth in the labour-force remained lower than the population growth between 1972 and 1980. This trend reversed thereafter. The percentage of rural population to the total population declined from 88.7 per cent in 1972 to 67.8 per cent in 1999 while urban population (characterised by a high sex ratio[18]) increased by almost threefold from 11.3 per cent in 1972 to 32.2 per cent in 1999. Both urban and rural populations have been growing at a declining rate (from 2.9 per cent in 1972 to 1.1 per cent in 1999 for rural and from 8.2 per cent in 1972 to 5.2 per cent in 1999 for urban) with higher growth in urban areas.[19] Therefore, a higher rate of labour-force growth than employment growth underscores the urgent need to create employment opportunities. For instance, between 1986 and 1996, the average growth rate in the la-

bour-force was 4.1 per cent annually, yet employment rose only by approximately 2 per cent and 2.5 per cent annually from 1986 to 1995 (Chune 2003). Consequently, unemployment is quite high and even among those counted as employed, a significant proportion are underemployed particularly in small-scale agriculture and the informal sector.

Poverty affects the unemployed and inactive population first. Extreme poverty appears much more common in households with incomes based mostly on informal activity. In urban areas, poverty is often a function of unemployment, though recent research has highlighted the serious problem of the 'poor employed' or 'poverty-level-employment'.[20] For example, Pollin et al. (2007) point out that roughly 65 per cent of all unemployed Kenyans in the labour-force live in poverty based only on earnings from employment. This proportion of persons living in poverty is essentially no different from that of employed persons working at-least 39 hours per week. For those working 1-27 hours per week, nearly 70 per cent live in poverty. For those working 28–39 hours per week, about 66 per cent live in poverty. Among labour-force participants working 40 hours or more per week, the percentage living in poverty diminishes to 46.1 per cent, which is still a high figure. In this context, Pollin et al. conclude that the most serious problem facing Kenyans in the labour-force currently, is not unemployment or few work hours, but a high likelihood that persons who report to be employed (outside the agricultural self-employed) and working long hours (40 hours or more) live in poverty.[21]

This reflects in part the fact that the poor are mainly employed in low productivity industries, including the informal sector.[22] With a fast growing supply of labour and with real wages constant or declining, tackling poverty becomes even more challenging.

Figure 2.1
Labour force & population growth



Source: World Bank Development Indicators CD-ROM 2001.

2.5 Urban LFPR and Unemployment Rate

A striking feature of the urban labour market, concurrent with the implementation of SAP is that female LFPR[23] increased sharply between 1986 and 1998 (Table 2.5). By 1998, the gap between male and female participation had almost converged. The rise in LFP is particularly notable among married women and by 1998, 96.6 per cent of married women were participating in the labour-force as compared to 56.4 per cent in 1986 an increase of about 40.2 per cent. A similar comparison for single women is 74.9 per cent in 1998 and 61.6 per cent in 1986, a rise of only about 13.3 per cent. Thus, overtime, women's LFPR increased immensely to a point where nearly every woman was in the labour-force.

Table 2.5
LFPR & unemployment rates (% of relevant population group)

	LFPR %		UR %		UR Overall
	Male	Female	Male	Female	
Urban					
1977/8	83.9	38.8	6.8	6.4	6.7
1986	82.2	55.8	11.6	24.1	16.2
1998/9	86.9	85.9	12.5	38.1	25.1
Rural					
1977/8	84.4	86.9			
1988/9	87.2	91	0.4	0.1	7.2
1998/9	74.4	73.1	8.3	10.4	9.4

Source: Republic of Kenya, Central Bureau of Statistics. Note: Based on Labour-Force Survey, 1977-78 report; Urban Labour-Force Survey (ULFS), 1986 report (includes active and passive job search); Rural Labour-Force Survey (RLFS), 1988-89, Integrated Labour-Force Survey (ILFS), 1989/99; Economic Survey, 2002. 1977/8 survey uses one day as the reference period while the other two surveys use one week as the reference period.

During this period, female unemployment rate (UR)[24] elevated sharply from 6.4 per cent in 1977 to 24.1 per cent in 1986 and to 38.1 per cent in 1998. While the male unemployment rate remained more or less constant at 6.8 per cent in 1977, 11.6 per cent in 1986 and 12.5 per cent in 1998. Thus, over time, from a negligible gender gap in employment in 1977, by 1986 the unemployment gender gap had risen by about 13 percentage points, which doubled to 26 percentage points by 1998. Overall, the urban unemployment rate went up from 6.7 per cent in 1977 to 16.2 per cent in 1986 and to 25.1 per cent in 1998. Given the gender gaps, it is clear that the increase in overall urban unemployment is essentially due to the tremendous increase in overall female unemployment.

As displayed in Table 2.6, for both periods, 1986 and 1998, unemployment rates are much higher among the youth. While male youth (15-24) unemployment rates are still high in 1998, they display a decline between 1986 and 1998. In contrast, female youth unemployment rates rose between the two periods. In terms of age patterns, both male and female unemployment rates tend to be lowest for the age group 30-39.

Table 2.6
Urban unemployment rate by age & sex 15-64 years

Urban Areas	1986		1998/9	
	Male	Female	Male	Female
15-19	63.1	39.6	56.2	42.8
20-24	34.0	45.0	27.2	58.7
25-29	10.9	23.4	9.0	38.8
30-34	5.3	14.1	4.8	27.5
35-39	3.2	12.3	4.7	21.2
40-44	2.0	3.1	6.1	18.8
45-49	3.3	1.4	8.4	30.7
50-54	3.6	4.1	9.6	30.6
55-59	7.8	43.2	35.2	52.0
60-64	0.0	0.0	31.2	59.1
Total	13.0	24.1	12.5	38.1

Source: Central Bureau of Statistics, Labour-Force Survey Reports.

2.6 Education Trends and Returns to Schooling

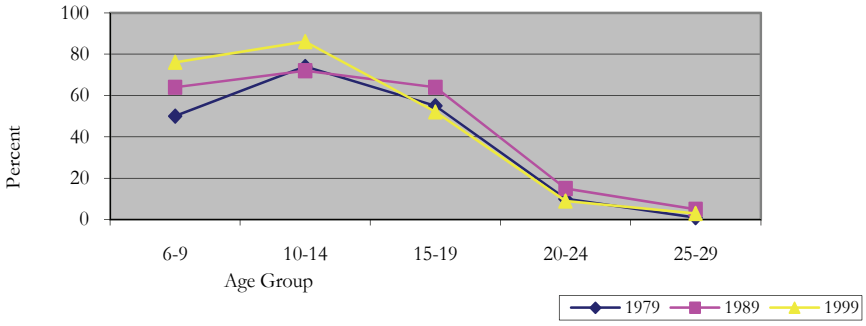
Labour-force participation, employment and earnings all relate to education level. Over the last three decades, Kenya has been successful in terms of expanding access to education by establishing a comprehensive network of schools all over the country. Prior to independence (in 1963), primary school gross enrolment was 47 per cent (in 1960), which reached 90 per cent by 1980. Free primary education initiated in 1974 fuelled expansion in primary school enrolment. Even more drastic was the expansion of the secondary school enrolment rate from a mere two per cent in 1960 to 19 per cent in 1980 (more than nine-fold increase) and to about, 30 per cent in 1990. The increase in secondary school enrolment was due to a large number of schools built through self-help initiatives, in response to high demand for education (Manda 1997; Manda et al. 2002).[25] The share of illiterate female and male population declined from 44.0 per cent in 1970 to 11.7 per cent in 1999 for males and from 74.1 per cent in 1970 to 25.2 per cent in 1999 for females.

The rapid expansion of education has been accompanied by worsening unemployment since the late 1960s. Moreover, since 1989, the impressive performance during the first two decades after independence

reversed. Primary school gross enrolment rates fell from 106 per cent in 1989 to 101.4 per cent in 1999 while secondary school enrolment rates also declined from 26 per cent in 1990 to 19 per cent in 1999.[26] Factors contributing to this decline include the high cost of education due to cost-sharing arrangements introduced in 1989, crippling poverty, early marriages and pregnancies.

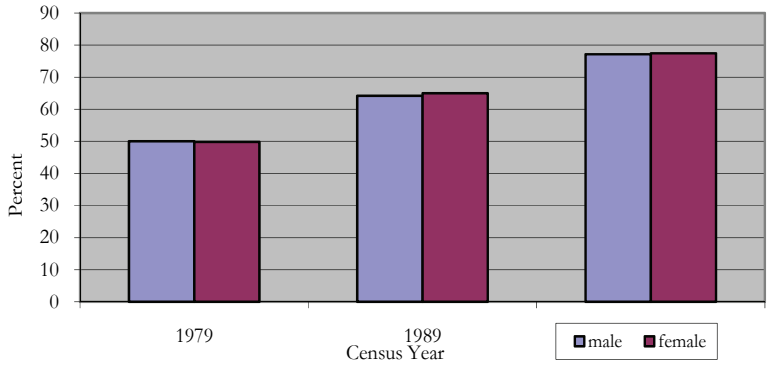
While enrolment rates and educational attainment generally exhibited a positive trend since independence, some periods showed declines. As shown in Figure 2.2, between 1989 and 1999, a number of age groups experienced a sharp decline in educational enrolment, a period that coincides with the introduction of user fees for educational services in Kenya. While enrolment rates between 1989 and 1999 fell for both males and females, gender gaps have declined (Figure 2.3).

Figure 2.2
Trends in the proportion attending school by age group, 1979-99



Source: Republic of Kenya (1999a,1999b).

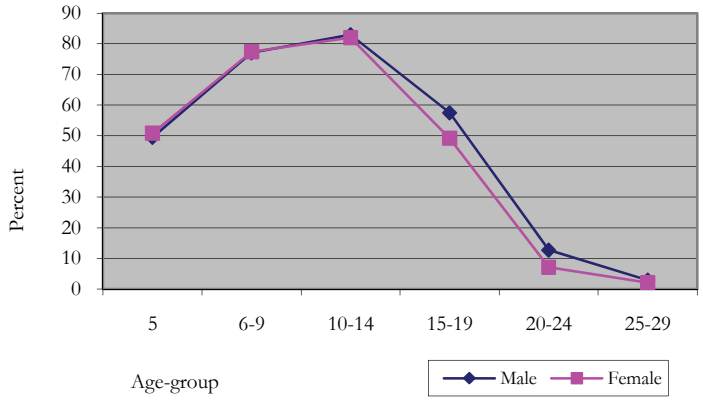
Figure 2.3
Trends in the population aged 6-9 attending school by sex, 1979-99



Source: Republic of Kenya (1999a,1999b).

Participation of males and females in lower primary level is roughly at par. However, the gap broadens at upper primary, secondary and tertiary levels in favour of the male population. While more females ages five to six attend school compared to the male population, the reverse is true from age nine onwards (Figure 2.4). This means that a bigger proportion of the female population leave school before completing primary education. The gender gap widens from age 15 onwards corresponding to secondary level and higher education.

Figure 2.4
Distribution of population attending school by age group & sex, 1999



Source: Republic of Kenya (1999a, 1999b).

Figures 2.5 and 2.6 show the distribution of the dropout population[27] in 1999 (by sex) and from 1979-99 (all) respectively. Figure 2.6 shows an increasing trend in the number of school dropouts particularly between 1989 and 1999 and especially among those aged 15-19, which may be attributed to the high cost of secondary education coupled with increased poverty levels during the 1990s. Specifically for 1999, figure 2.5 shows that females are more likely to drop out of school than men are, especially in the 15-19 and 20-24 age groups.

A summary of education trends as concerns women shows that while school enrolment rates have risen, women are more likely to drop out of school than men are especially between the ages 15-24. Thus, females are less likely to complete their secondary education. The lower levels of secondary education lead to early labour-force entry for women, confining them to low-earning occupations and leading to higher unemployment levels.

Despite labour abundance, the Kenyan economy has become more capital-intensive. Private services in particular, with increased automation mainly in the financial services coupled with a rapid growth in information and communication technologies (ICTs). The private sector, targeted as the main conduit for employment and growth is more likely to

employ high-skilled labour. This largely benefits men since they are relatively more skilled and educated than women are.

Figure 2.5
School dropouts by age group & sex, 1999

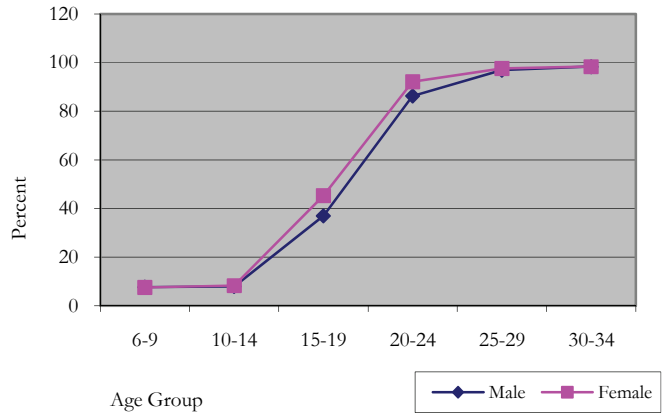
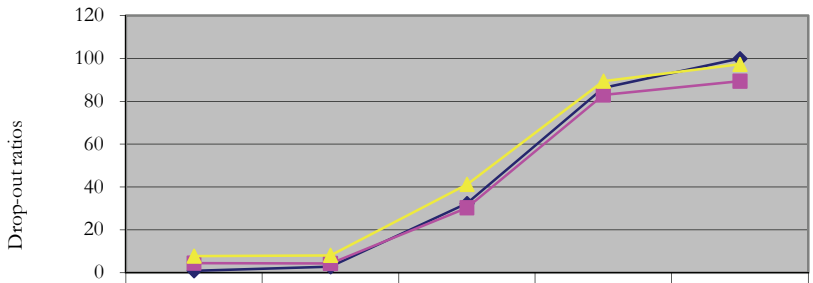


Figure 2.6
School dropouts by age group, 1979-99



	6-9	10-14	15-19	20-24	25-29
1979	0.9	2.8	32.3	86.3	99.9
1989	4.5	4.3	30.3	82.9	89.4
1999	7.7	8.1	41.2	89.4	97.2

Age Group

Source: Republic of Kenya (1999a, 1999b).

Implementation of SAP has been characterised by a significant decline in modern (formal) wage employment and an upsurge of both informal sector employment and unemployment. Overall employment rate (ER)[28] of women increased due to their influx into informal sector employment.[29] The increase in women's ER has taken place in the context of declining modern wage employment, which is expected to offer work opportunities for educated persons *ceteris paribus* and where skilled and educated labour is required more than in the informal sector. Besides, if women being absorbed into the informal sector are indeed those with higher education levels (at least secondary level and above), then this might reflect the increasing difficulty of the economy to absorb an increasingly educated labour-force. However, it seems that a substantial number of unemployed women and those in the informal sector (the two categories contributing to the sharp increase in their LFPR) are those with low education levels who may not be qualified for modern wage employment.

2.6.1 Returns to schooling

In a review of several studies on changes in returns to human capital in less developed countries, Pritchett (2001) finds that returns may increase, decrease or stay fixed over time. In the 1990s, when the Kenyan economy performed particularly poorly, returns to human capital may have changed due to both low demand for labour because of the poor economic performance and sustained expansion in supply of educated labour (Wambugu 2003).

A number of studies have investigated the returns to schooling (private returns) in the Kenyan context.[30] A consensus in these studies is that education premiums are quite high and increase with the level of education.[31] The fact that returns to education are quite high and especially so for the tertiary level education, may indicate that such skills are scarce and in high demand (Zepeda 2007). However, the studies also show that over time, returns to education have declined.

Manda (1997) finds that while returns to schooling increase with education level there is a considerable decline in educational returns over time – from 18 per cent in 1978 to 13 per cent in 1986 and to 5 per cent in 1995 and from 56, 37 and 13 per cent (respectively) for the secondary level.[32] He attributes this to the disappointing economic growth performance during the 1980s and 1990s. He also argues that rapid in-

creases in primary and secondary school enrolment (females in particular) during the 1970s and 1990s led to a large influx of potential labour-force entrants with at least primary level education and correspondingly a decline in educational returns. Milne and Nietzert (1994) further explain that the increase in the supply of school graduates tends to outbalance new wage employment opportunities in the formal sector as shown by increasing unemployment among the educated. In another study, Appleton et al. (1999) find that returns to primary level education fell from 10 per cent in 1978 to five per cent in 1986 and to two per cent in 1995, while similar figures for the secondary level education are 34, 16 and 12 per cent respectively. However, Appleton (2002) observes that it is unclear how returns to education in Kenya changed through the 1990s unlike in neighbouring Uganda, which shows a rise. A study by Wambugu (2003) on returns to education among manufacturing workers, points to a decline in returns to primary and secondary education, during the 1990s.

Turning to gender dimensions, Schultz's (2003) study on Kenya finds that returns to schooling tend to increase for women at the secondary level while they are high at the university level and appear higher for women than men. He observes that in response to higher returns to schooling for women at both secondary and university levels, women are closing the gender gap in education. This rapid advancement in female education relative to male education, has contributed to their rising rural-urban migration. In general, increased education levels (in response to higher returns to schooling) and rural-urban migration have implications for unemployment among women in the urban areas.

Overall, the various studies point to a general decline in the returns to primary and secondary level education signifying an acute lack of demand for educated labour or at least for the type of educated labour available in the Kenyan labour market.

2.7 Adjustment, Formal and Informal Sector Employment

Total employment in Kenya consists of three main categories: agricultural self-employment (50 per cent), the informal sector (36 per cent) and the formal sector (14 per cent) (Pollin et al. 2007). Kenya has a segmented labour market where the formal sector co-exists with the informal sector. In terms of sectoral contribution to employment, the service sector is the main source of employment in the formal sector, accounting

for more than 50 per cent of all formal wage employment.[33] In the informal sector, services (wholesale and retail trade, hotels and restaurants) account for most informal sector employment. In 2006 for instance, their contribution was about 58.6 per cent followed by the manufacturing sector at 22 per cent. On average, as expected, incomes are much higher in the formal than informal sector with significant income disparities among categories of workers within each sector (Manda and Sen 2004; Mwabu et al. 2002; Pollin et al. 2007). The wage disparity across sectors is large and on average, wages in the formal sector are about two times more than those in the informal sector and about four times those in the small-farm sector.[34]

2.7.1 Formal sector employment

In the Kenyan context, the 'formal sector' (referred to as the modern sector) includes the entire public sector and private sector enterprises and institutions that are formal in terms of registration, taxation and official recording (incorporated enterprises). The latest figures show that employment in this sector is male dominated and women constitute about one-third of the total employment in this sector (Table 2.7).

Kenya experienced rapid public sector employment growth from 1970 to 1980 (Tables 2.8a & 2.8b). This was accompanied by poor job creation in the private sector. Total wage employment in the public sector grew at 7.1 per cent while private sector employment growth was only 2.6 per cent per year on average. Between 1980 and 1990, employment growth in the public sector slowed down while employment in the private sector remained at roughly the same pace. Between 1990 and 2000, public sector employment recorded negative/zero growth.

Table 2.7
Wage employment by industry and sex, selected years (000s)

Year	1983	1986	1989	1991	1992	1994
Male employment						
Industry						
Agriculture & forestry	196	200	198	207	210	215
Mining & quarrying	3.4	5.4	6.8	3.4	3.5	3.4
Manufacturing	135	148	165	168	168	174
Electricity & water	16.1	16.7	19.2	19.2	19.1	19.1
Building & construction	57.5	52.6	64.4	68.3	69.1	69.7
Wholesale & retail trade, hotels & restaurants	68.9	78.9	93.8	97.8	98.3	104
Transport & communications	47.8	50.4	66.9	65.2	66.1	66.1
Finance, insurance, real estate & business services	36.4	44.8	50.5	51.5	55.1	57.6
Public administration	116	130	143	145	143	154
Education services	125	144	160	172	164	164
Domestic services	41.7	44.2	49.8	0.6	55.3	40.3
Other services	54.7	57.9	69.5	126	75.4	61
Total	898	972	1087	1124	1127	1128
Female employment						
Industry						
Agriculture & forestry	35.4	48.8	63.5	65	64.4	65.5
Mining & quarrying	0.1	0.1	1.7	0.9	0.9	1.2
Manufacturing	13.9	16.9	18	21.4	21.9	24.1
Electricity & water	1.2	1.5	3.2	3.2	3.1	3.2
Building & construction	2.7	3.1	4.3	4.1	4.1	3.8
Wholesale & retail trade, hotels & restaurants	11.4	15.6	16.5	18.9	20.2	22.4
Transport & communications	7.2	7.1	8.9	11	10.8	12.1
Finance, insurance, real estate & business services	9.2	11.2	13.1	14.8	15.5	17.4
Public administration	23.9	33.4	39.2	42	41.8	45.9
Education services	46.8	61.9	64.2	78.6	90.6	99.4
Domestic services	15	18	19.3	0.3	20.8	38.7
Other services	28.3	30.9	34	57.8	40.7	43.6
Total	195	249	286	318	335	377
Total Male & Female	1093	1221	1373	1442	1462	1506
Ratio Female to Total Employment	17.8	20.4	20.8	22.1	22.9	25.1

Table 2.7
(Continued)

Year	1996	1998	2001	2003	2007
Male employment					
Industry					
Agriculture & forestry	226	232	235	238	253
Mining & quarrying	3.5	3.9	4.2	4.2	4.9
Manufacturing	177	181	179	198	214
Electricity & water	19.3	19.2	17.8	17.3	15.5
Building & construction	72.5	74.2	71.9	71.7	75.9
Wholesale & retail trade, hotels & restaurants	107	109	114	119	142
Transport & communications	68.5	67.6	66.7	69.2	118
Finance, insurance, real estate & business services	60.3	62.1	62.5	62	69.6
Public administration	108	102	96.4	94.4	78.8
Education services	174	178	178	185	193
Domestic services	56.4	58.6	60.5	58.9	61.9
Other services	85.4	89.3	95.4	98.2	106
Total	1158	1178	1180	1216	1333
Female employment					
Industry					
Agriculture & forestry	76.6	76.5	78	78.5	87.2
Mining & quarrying	1.3	1.1	1.1	1.2	1.4
Manufacturing	33.8	36	38	41.8	47.1
Electricity & water	4	4	3.6	3.8	3.5
Building & construction	6.3	5	4.8	4.9	5.4
Wholesale & retail trade, hotels & restaurants	36.4	41.3	42.6	43.6	54.1
Transport & communications	17.7	17.4	17.6	17.6	31.2
Finance, insurance, real estate & business services	20.7	21.9	21.3	21.7	25.4
Public administration	64.7	64.1	55.2	55.7	49.1
Education services	111	124	134	141	156
Domestic services	38.9	40.4	40	39	43.1
Other services	50.3	55.9	60.4	62.2	71
Total	461	487	497	511	575
Total Male & Female	1619	1665	1677	1727	1907
Ratio Female to Total Employment	28.5	29.3	29.6	29.6	30.1

Source: Republic of Kenya. Economic Survey (*various issues).*

Structural adjustment policies have entailed making changes in macroeconomic policies in order to steer the economy towards changing economic realities and to becoming market oriented. The aim of the

policies has thus been to set the prices right by affecting changes in the relative price structure in order to give efficient signals to economic agents. While employment in the private sector continued to expand, it did not grow at a particularly rapid pace. The patterns of public sector employment are consistent with SAP limits on fiscal spending and employment within the civil service. Public sector employment was expected to decline in the short-run with the implementation of the civil service reforms while job creation would depend heavily on the private sector and self-employment. Structural adjustment placed emphasis on the contraction of the public sector and the promotion of the private sector. The main burden of job creation fell on the private sector particularly on small-scale firms, small-scale industry and services, and in the self-employment sector, seen as having relatively lower costs in creating jobs.

Although the private sector was to absorb the increasing labour-force, this did not happen to the extent expected. Frequent policy reversals and policy inconsistencies, lack of complementarity in reforms, political uncertainty, poor infrastructure, corruption and weak institutions are among the internal reasons for the lack of job creation. Poor trade terms and inability to compete internationally are some external reasons. Together these internal and external factors undermined the incentive structure and returns to investment and, translated into limited job creation (for details see Kimenyi et al. 2003; Roberts and Fagernäs 2004).

Table 2.8a
Average employment growth by sector (%)

Year	Public Sector	Private Sector	Total Formal	Agricul-ture	Manufac-turing	Services
1972-80	7.1	2.6	4.4	-0.2	7.4	5.3
1980-84	3.2	1.9	2.5	0.9	2	4.3
1984-91	3	2.5	2.8	2.4	1.3	3.5
1991-94	-1	2.7	1	0.8	1.1	1.2
1996-01	-1.2	2.1	0.7	0.6	0.6	0.8
2001-03	0.05	2.4	1.5	0.6	5.1	1
2003-07	-2.6	9.5	5.1	3.7	4.4	5.5

Source: Ikiara and Ndung'u (1997:30); Own Computations from Republic of Kenya, Economic Survey (*various issues)*.

Table 2.8b
Total recorded employment excluding small-scale agriculture and pastoralist activities

Year	Total (000)	Modern (Formal) Wage Employment (%)	Self Employed & Unpaid Family Workers (%)	Estimated Informal Sector Wage Employment (%)	Total (%)
1988	1736.3	77.5	2.5	20.0	100
1989	1796.2	76.2	2.5	21.3	100
1990	2395.0	58.8	2.0	39.3	100
1991	2557.1	56.4	2.0	41.6	100
1992	2753.2	53.1	2.0	44.9	100
1993	2997.5	49.2	1.9	48.9	100
1994	3355.1	44.8	1.7	53.8	100
1995	3858.6	40.4	1.6	58.0	100
1996	4325.8	37.4	1.5	61.1	100
1997	4698.4	35.1	1.4	63.6	100
1998	5096.7	32.9	1.3	65.8	100
1999	5492.6	30.7	1.2	68.1	100
2000	5911.6	28.7	1.1	70.2	100
2001	6409.8	26.3	1.0	72.6	100
2002	6866.8	24.8	1.0	74.2	100
2003	7325.7	23.6	0.9	75.5	100
2004	7800.1	22.6	0.8	76.6	100
2005	8503.8	21.3	0.8	77.9	100
2006	8975.6	20.7	0.7	78.5	100
2007	9450.3	20.2	0.7	79.1	100

Source: Republic of Kenya, Economic Survey (*various issues).*

Within the formal sector, Kenya's manufacturing sector recorded an impressive growth between the 1970s and 1990s. For instance, real manufacturing GDP growth rate averaged 10.9 per cent between 1972 and 1979 (Table 2.1, Section 2.2). Thereafter, this trend declined to an average of 4.8 per cent between 1980 and 1989 and to 2.6 per cent between 1990 and 1999. Although the absolute number of men and women engaged in the manufacturing sector has grown over time (Table 2.7 above), most of the growth is due to a tremendous insertion of women workers mainly in the 1990s. Most of this female labour was primarily absorbed in the Export Processing Zones (EPZ) started in Kenya in 1990 (Table 2.9).[35] In the formal manufacturing sector, women work mainly in export-oriented textile and garment industries of EPZ as

well as food and agro-processing industries as casual workers. It is not surprising therefore, that the growth in casual work is highest among women - as shown in Table 2.10 growth formal wage employment casualisation is highest between 1991-97 (the adjustment period), and it is particularly high among females. In the same period, regular employment declined among males matched by a sharp increase in casual employment.

Table 2.9
Employment growth in the EPZ firms

Year	OE		Kenyans* Only		TEM		Ratio EPZ/ TEM (%)
	No	% Change	No	% Change	No	% Change	
1993	12		1594		193600		
1994	15	25	2632	65.1	197500	2	1.3
1995	19	26.7	2718	3.3	204800	3.7	1.3
1996	22	15.8	2884	6.1	210500	2.8	1.4
1997	17	-22.7	2824	-2.1	214500	1.9	1.3
1998	18	5.9	3645	29.1	217500	1.4	1.7
1999	22	22.2	5077	39.3	219900	1.1	2.3
2000	24	9.1	6487	27.8	218700	-0.5	3
2001	39	62.5	13444	107.2	202900	-7.2	6.6
2002	54	38.5	26447	96.7	229800	13.3	11.5
2003	61	13	34139	29.1	239700	4.3	14.2
2004	74	12.1	37723	-1.2	244518	1.9	15.9
2005	68	-8.1	38051	0.9	248416	1.6	15.4
2006	71	4.4	36767	-3.4	254851	2.6	15.3
2007	72	1.4	34452	-6.3	261345	2.5	14.4

Note: OE= Operational Enterprises; *= Employment (Kenyans Only); TEM= Total Employment Manufacturing;

Source: Republic of Kenya, Economic Survey (*various issues)*.

Table 2.10
Growth rate in modern wage employment by regular & casual categories & by sex (%)

	1986-91	1991-97	1997-02
Males			
Regular	3.2	-0.3	0.3
Casual	1.4	7.0	0.7
Total	2.9	0.7	0.4
Females			
Regular	4.4	5.7	1.0
Casual	9.5	12.9	2.2
Total	5.1	6.9	1.2
Total Male and Female	3.4	2.2	0.6
Total Regular	3.4	1.1	0.5
Total Casual	3.0	8.6	1.2

Source: Republic of Kenya. Economic Survey (*various issues)*.

Given the anaemic growth of formal sector employment, the bulk of employment in Kenya comes from the informal sector, to which I now turn.

2.7.2 Informal sector employment

The 'informal sector' (locally known as the *Jua-Kali*) covers all small-scale activities that are normally semi-organized and unregulated, and use low and simple technology. The self-employed, employers with few workers and unpaid family workers comprise most of the sector. A major source of employment in both urban and rural areas, the sector is known for its ability to provide employment to increasing numbers of entrants in the labour market including young high school graduates, school dropouts, college and university graduates, multiple job holders (as an additional source of extra income for persons engaged in the mainstream sector), as well as those pushed out of modern wage employment. Nationwide, informal activities have become quite prominent and are primarily composed of 'own-account' workers in small-plot farming, multiple job holders, unpaid family workers in farms and businesses, self-employed workers in non-agricultural household enterprises and informal employment (formal enterprises). Table 2.8b shows the estimated share of total employment increased enormously from a 'mere 4.2 percent in 1972 to

53.8 percent in 1994' (Ikiara and Ndung'u 1999: 89) to 79.1 per cent in 2007. This is compared to formal sector employment, which declined from 89.6 per cent in 1972 to 44.8 per cent in 1994 and to 20.2 per cent in 2007.[36]

It is worth mentioning that Non-agricultural Household Enterprises (NHE) are a fundamental foundation of the Kenyan economy.[37] According to Pollin et al. (2007) about 2.1 million NHE existed in Kenya in 2006 out of which 90 per cent were informal enterprises. Out of 13.5 million Kenyans in the labour-force (in 2006), 12.1 million were employed. About 43 per cent or 5.2 million people of total employed persons work in NHE[38] with 4.1 million (79 per cent) working in informal enterprises and the rest in formal enterprises. The largest category of employment in the NHE sector is unpaid family members, comprising about 37 percent of total employment followed by own-account workers (people working alone for themselves) comprising about 34 percent of total employment. Thus, own-account workers and unpaid family members together account for more than 70 per cent of all employment in NHE. Gender-wise most of these workers are women as observed by Pollin et al. Additionally, Pollin et al. report that most NHE in Kenya are small in scale and average earnings of workers in these NHE is at a level below the poverty line.[39] Lack of access to credit is among the main factors inhibiting growth of these NHE. Given their large numbers, competition among them is unavoidably tough. In contrast, earnings from formal household enterprises (which are relatively large) are significantly higher.[40]

Horton et al. (1994), observe that in practice, structural adjustment has been associated with labour shedding from government and from formal sector activities. As workers cannot remain unemployed for long in developing countries due to lack of unemployment benefits, labour has tended to move to sectors with flexible entry, in particular the informal sector and agriculture. Consequently, the flocking of labour in these sectors may have also depressed relative wages in the short run. Informal and precarious forms of employment have become more prevalent during the period of intense enforcement of the adjustment policies and even formal sector firms have resorted to hiring irregular, flexible or casual workers with no formal contracts and employment benefits.

More recently, Manda and Sen (2004) observe that the economic reform period was accompanied by a dramatic increase in informal sector employment, which became gradually more insecure due to low survival rate of firms in the sector and low pay as compared to the formal sector.[41] Unemployment increased in both rural and urban areas and especially among women in urban areas. They find that the reform period also witnessed a shift in labour demand in favour of highly skilled labour, a decline in permanent full-time workers and an increase in part-time and casual workers as a cost cutting strategy.

In sub-Saharan Africa in general, economic development under structural adjustment saw an expansion of informal sector development. This entailed the growth of unregulated, partly export orientated labour-intensive activities (Wuyts 2001). For instance in Tanzania, two factors played important roles in shaping the dynamics of informal sector development. 'The process of relative cheapening of wage goods as a result of their importation, partly financed through foreign aid, thereby lowering unit labour costs in labour intensive production; and the processes at work of subsidizing real wages by other forms of economic security as a result of multiple, diversified and spatially extended livelihood strategies' (Wuyts 2001: 417). Wuyts observes that although these factors inspired new vitality in economic development, the long-run sustainability of these new trends remains questionable.

Growth of informality in the labour market activities of many economies is a matter of policy concern. First, large informal sectors have a tendency to misrepresent key economic indicators such as GDP, employment and unemployment rates and any choices based on them. Second, the dominant view is that the significantly large informal labour market in poor countries is not a sizeable unexploited tax resource because of its subsistence character. Third, for countries with high or rising human development profiles, development approaches that consciously rely on the informal sector and informal employment may represent a backward step by endorsing a low level of competitiveness for future generations.

Finally, in the Kenyan context most informal labour market activities especially those in urban areas are driven by the need to make ends meet (survival mechanisms) and are dominated by the poor (women mainly) desperate to eke out a living. To encourage such activities as part of a necessary coping strategy (thereby promoting the seeds of an entrepre-

neurship culture inherent in informal business and promoting self-employment as a best alternative to non-existing wage employment) is non-equivalent to encouraging the informal sector as a deliberate part of social and economic development, or relying on the sector to create those jobs that the ordinary economy cannot generate. More serious is the risk of skills erosion and the resulting inability to adapt to technology changes for large numbers of educated people forced by circumstances into the typically low-skilled activities in the informal sector. Among societal assets that most poor countries are striving to reach, are the high level of industrial development, technology, applied research and development capacity, technical skills and market know-how of the population. These assets are likely to be abandoned since the informal sector has essentially little need for such a heritage (Bateman 2003). In the background of currently very high urban unemployment rates among young graduates and first-time job seekers, informal businesses emerge among the few potential options for becoming economically active.

2.8 Gender and the Kenyan Labour Market

Gender composition of employment by occupational categories has remained relatively stagnant (Table 2.7). Although females constitute about 50.1 per cent of the total population, on average, they account for about 30 per cent[42] of the total formal sector wage employment and earn 33 per cent less than their male counterparts (Were and Kiringai 2004). Most women employed in the formal sector (about 58 per cent) work in the service industry (community, social and personal services). Women are least represented in sectors such as building and construction, manufacturing, electricity and water.[43] Even in the service industry of the formal sector (where the majority are engaged[44]) especially in the public sector, top jobs are male-dominated whereas women occupy the lower cadres. Female public sector employees constitute only about a quarter (Were and Kiringai 2004). In the male-dominated formal manufacturing sector, females account for only about 14 per cent and are mainly employed in export-oriented textile and garment industries under EPZ and in food and agro-processing industries requiring only low-level skills and education.

It should be emphasised here that since adjustment programmes typically encompass macroeconomic stabilisation policies in conjunction with trade reforms, a well-known consequence of these programmes, has

been the growth of an export-oriented sector. Export-oriented industries tend to be feminised, labour intensive and use unskilled labour. It has been widely documented through case studies that women have a higher chance than men to work in export-oriented industries whose labour intensive production nature requires little or no formal training (Blau and Ferber 1992; Cagatay and Berik 1991; Cagatay and Ozler 1995; Wood, 1991). Standing (1989) observes that with the advent of SAP and the pressure of global competition, employers prefer to hire women since women receive lower wages leading to a process of replacement of men. Trade reforms then draw women into the labour market because they are cheaper and more flexible workers.

Since the introduction of SAP in a number of developing countries, there has been increased attention to the effects of economic restructuring on women.[45] Although there is limited research on the impact of reforms along gender lines in Kenya, it is likely that the measures disproportionately affected women. Most women employed in the lower cadres of the public sector fell victims to the retrenchment programmes (ILO 1999a, Wanjala and Were 2009) while in the health sector, the introduction of cost sharing policies passed the burden of care from public health care providers to women (Wanjala and Were 2009). Furthermore, despite the fact that trade liberalisation appears to have had a positive gender impact (sex composition) by creating employment opportunities in the manufacturing sector (where the majority of employees are women), it has had some undesirable effects by way of increasing their economic susceptibility in that they are mainly employed as unskilled or less skilled casual labour, with low pay; long working hours; and exposure to occupational health risks (Amanda et al. 2007). For instance, women comprise between 65 and 75 per cent of all workers in the cut flower sector and roughly one-third of the estimated workforce in tourism. Women account for more than 75 per cent of workers in the textiles and clothing sector.[46] However, even with such a commanding position in the horticulture industry, they are under-represented in skilled employment (Amanda et al. 2007).[47] Education does not exclusively account for this because women are concentrated in casual and seasonal of labour that give rise to both income and employment uncertainties (Dolan and Sutherland 2002).

In general, women engage in activities traditionally dominated by females while the distribution of males is relatively even across sectors.

Education services, followed by agricultural and forestry industries have been the major female employers in the formal sector. Thus, despite a remarkable female LFPR improvement, they face limited access to formal employment. Assuming an absence of sex discrimination in the Kenyan labour market, perhaps their low levels of human capital hinders them from accessing modern wage jobs (Mariara 2003; Wambugu 2003).

Table 2.11
Education and sector by sex (persons in the labour-force)

Variable	Males					
	Formal		Informal		Unemployed	
	1986	1998	1986	1998	1986	1998
None	8.4	2.8	13.6	6.1	7.9	8
Primary	40.6	25.4	44.8	48.3	37.8	41.6
Secondary	46.5	64.6	35.5	42.4	53.7	48
University	4.5	7.2	6.2	3.1	0.6	2.4
Total	100	100	100	100	100	100

Variable	Females					
	Formal		Informal		Unemployed	
	1986	1998	1986	1998	1986	1998
None	9	2.5	29.1	12.8	20	11.4
Primary	32.9	22.9	50.5	46.3	41.8	46.3
Secondary	53.2	70.7	19.4	40	38	41
University	4.9	3.9	1	0.8	0.2	1.3
Total	100	100	100	100	100	100

Source: Computations from the 1986 and 1998 LFS data.

As shown in Table 2.11, high education levels enhance the chances of accessing formal sector employment for both sexes while low education levels are associated with informal sector employment. However, there remains a significant gender differential. Among females, unemployment strikes those with low education levels (primary level education or none). On the contrary, the proportion of unemployed males is highest among those with secondary level education and above in the 1986 sample. In the 1998 sample, the proportions are the same for those with secondary

level education and above and those with primary level education or none. Clearly, in both sample periods, most women engaged in informal sector employment and those that are unemployed have low education levels (primary level education or none). Similarly, most males engaged in informal sector employment have low education levels although a few also have secondary level education and above.

Most women in Kenya are engaged in the informal sector in a wide range of survival activities as own-account workers or unpaid family workers.[48] According to Amanda et al. (2007), 85 per cent of female-owned businesses are in the informal sector; women constitute 48 per cent of micro, small and medium enterprises; their businesses tend to be smaller; are less likely to grow; and are less capital-intensive than those owned by males. As noted above, the reforms process in Kenya has in general coincided with increased informality and precarious forms of employment with women becoming the most vulnerable group.

Under less favourable terms for women in the labour market and the existing gender disparities, gender-blind implementation of employment policies can perpetuate gender inequalities in development. Previous research on gender and employment outcomes in Kenya (Atieno and Teal 2006; Mariara 2003) have shown that increased access to education can ensure equality of outcomes in the labour market, but only in the public sector. Given that the direction of policy reform is towards increasing the role of the private sector, the challenge is how to reduce gender differentials in the, largely informal, private sector. As mentioned, in the face of plentiful labour, the economy has become more capital-intensive, which has been a concern for policy since the onset of SAP in the early 1980s.[49] Becoming more capital-intensive implies a demand for educated and skilled labour and is thus not surprising that most sectors are male-dominated. Furthermore, with the economy having become more liberalised, women are mainly employed as unskilled or less skilled casual labour with low pay.

Although some improvement has been made in the direction of improving women's position in the economy, gender differences persist and can be ascribed to diverse causes such as limited access and control over productive resources; access to financial services; limited access to education, skill acquisition and technology; cultural barriers, among others. All these hamper women's capability to join in effectively and benefit from economic progress. Furthermore, there is growing theoretical

literature demonstrating that gender disparities in education, employment, access to assets, and time burden have significant adverse impacts on economic growth. Particularly, gender disparities in access to education have been shown to have an important adverse effect on economic growth rates (Dollar and Gatti 1999; Forbes 2000; Klasen 2002; Knowles, Lorgelly, and Owen 2002; Yamarik and Ghosh 2003).[50]

The employment structure in the labour market mirrors the wider gender inequalities in society ranging from education to female work.[51] For instance, there are prevalent gender and regional differences in education participation as well as decreasing enrolment for females at the higher levels of education, which also means that education retention for women is low. Although gender imbalances in primary and secondary education enrolment have been reduced, transmission from secondary to university level remains low at about 12 per cent while gender discrepancies persist in tertiary education (technical and university); for example women constituted about 37.5 per cent of the enrolment in universities in the period 2005-2006 (Institute of Economic Affairs 2008a). In 2002, females constituted 33 per cent of total enrolment in public universities and 50 per cent in private universities.[52] Furthermore, there are significant gender inequalities in the selection of programmes, with arts-based courses always having high female student representation. The popular pessimistic notion that, girls by their very nature lack talent for sciences, adds to their low enrolment and poor performance in science subjects (Orchardson-Mazrui 2006).

In general, limited access to relevant skills and unjustified ideas about women's aptitudes and dispositions and their reproductive and domestic responsibilities as well as gender inequalities in human capital development hamper women's ability to participate in productive sectors and activities effectively. This is apparent in the labour market structure where women are under-represented in most major sectors but concentrated in low-skilled, low paying informal sector activities.

2.9 Conclusion

This chapter reviewed Kenya's economic performance with an emphasis on labour market outcomes during a period of structural adjustment. After an initial post-independence period of rapid growth, the situation deteriorated considerably and since the early 1980s, there have been several periods of poor, real GDP growth rate. The implementation of SAP dur-

ing the 1980s and the 1990s has been associated with low employment creation and there has been a massive shift from formal sector (modern wage) employment to the precarious informal sector employment where earnings are considerably lower and unstable. The standard of living has deteriorated and there has been a drastic increase in rural and urban poverty accompanied by widening inequality.

Kenya has also experienced a rapid increase in its labour-force and a swift expansion of education while the economy has not been able to generate enough jobs for a rapidly expanding and educated labour-force. This has exacerbated a long-existing underemployment problem. Furthermore, returns to education have declined rapidly over time.

In terms of gender differences, over the period 1986 to 1998, there was tremendous increase in urban female labour-force participation and unemployment rates. At the same time, women experienced a significant improvement in educational attainment and a positive link should be expected between their increased educational endowment and entry into the labour market. Despite these increases, a majority of women work in the informal sector where less education and skills are needed.

Against the foregoing picture, to reiterate, this thesis analyses three issues: 1) what are the factors that drive changes in women's labour force participation (employment) rate over time; 2) what are the factors that drive gender differences in unemployment; and 3) what are the factors that drive differences in access to formal/informal sector employment.

Notes

[1] See ILO (1972) for an extensive discussion of the unemployment and income inequality problems.

[2] Rapid increase in crude oil prices and other exports and, a widespread drought adversely affected agricultural production. The main outcome of these shocks was a decline in economic growth from 6.5 per cent in the early 1970s to 3.1 per cent in 1974/1975.

[3] World prices rose rapidly due to frost in Brazil and the price of tea, a close substitute to coffee, increased as well, giving a temporary boost to growth in 1977-78. Coffee revenue increased six-fold while tea export tripled. The increased revenue was passed on to farmers without any attempt to sterilise the monetary consequences of the inflow (Manda 1997).

[4] The fall-down of EAC significantly reduced Kenya's exports to Tanzania and Uganda. Coffee and tea prices had also declined and there was food importation due to the 1979 drought.

[5] This doubled the price of crude oil.

[6] Between 1970 and 2000, the incidence of poverty among Kenyans grew from 29 per cent to about 57 per cent.

[7]According to Milne and Nietzert (1994: 445), 'in 1969, the bottom 10 percent received only 1.8 percent of income while the top 10 percent received 56.3 percent of income. By 1980, the percent of income going to the bottom 10 percent had declined. In Nairobi, the poorest 40 percent of the population received 17.2 percent of income in 1969, 15.1 percent in 1974 and 14.3 percent in 1985. This indicates that over time, the income distribution is shifting toward the rich, an undesirable result'. In the period 1994 and 1999, income inequality in Kenya grew particularly worse ranking among the five most unequal countries of the world in 1999, with the wealthiest 10 controlling approximately 42 per cent of the total income and the poorest 20 per cent controlling only 1.5 per cent.

[8] The service sector is the main source of employment in the formal sector (accounting for about 55 per cent of total formal sector employment in 2007 followed by agriculture and the manufacturing sectors at 18 per cent and 14 per cent respectively). Similarly, the service sector (mainly wholesale and retail trade, hotels and restaurants) accounts for most of the informal sector employment (by more than 70 per cent in 2007 followed by the manufacturing sector at about 22 per cent). The informal sector is now second largest source of employment after agriculture. Most of the sector's activities are in urban areas. A majority of poor urban men and women derive their livelihoods from this sector.

[9] It is widely acknowledged that incomes in the informal sector are low and in most cases inadequate. In the Kenyan context, Mwabu et al. (2004) show that employment in the agricultural and informal sectors is associated with a higher than average probability of being poor. Zepeda (2007) finds that even after taking into account education, sex and other factors, paid employees in the modern sector earn significantly higher wages than those in the informal sector and farm or pastoral activities-wages in the modern public sector are highest followed by those in the modern private sector.

[10] Mwabu et al. (2002) explain that it is indeed difficult to isolate the role of economic reform or lack of it on poverty as it is possible that poverty could have risen even further without adjustment.

[11] More precisely, quick-disbursing aid to Kenya was cancelled due to poor implementation of economic reforms, rising levels of corruption, failure to correct macroeconomic imbalances caused by fiscal indiscipline, slow reforms in the civil service and the privatisation of public enterprises, lack of accountability of public

enterprises, failure to establish a supportive environment for the growth of the private sector and the slow pace of political reform. These conditions needed to be met before aid could be resumed.

[12] These include a general deterioration in the country's overall economic performance owing to a number of factors: a slowdown in the industrial production for export markets because the incentive structure favoured production for domestic markets creating an inward-looking industrial sector whose prospects were severely limited by the size of the domestic market; the collapse of the East African Community in 1977 made the situation worse; an erosion of fiscal discipline after the coffee boom in the late 1970s and worsened by a deterioration in the country's external terms of trade following the second oil shock in 1977; a strong bias against exports by the import substitution strategy; and creation of too few jobs by the import-substituting industries while many industries used inappropriate capital-intensive technologies that created a manufacturing sector heavily dependent on imported equipment and raw materials. Besides, the sector failed to develop strong linkages with the rest of the economy partly because of excessive importance of production of consumer goods at the expense of capital and intermediate goods.

[13] The export compensation scheme was to compensate exporters for government taxes on inputs (via cash rebates or tax concessions) thus offering incentives to local manufacturers in respect of certain locally manufactured goods exported from Kenya. Their purpose was to encourage trade and foreign exchange earnings, improve specific sectors of the economy and create economic opportunities. The manufacturing under bond programme was to encourage manufacturing for world markets. Under the programme, which was open to local and foreign investors, imported inputs were duty-free. To attract foreign investors into the export sector, an Export Processing Act in 1996 provided for the development of the Export Processing Zones Authority (EPZA). This led to the establishment of the export processing zones in Nairobi, Mombasa, Athi River and Nakuru. In early 1993, the Kenyan government scrapped an export compensation scheme, which reimbursed manufacturers whose products had less than 70 per cent import content. In its place, the government enacted a duty/value added tax remission facility, which allows exporters to purchase tax-free material inputs locally.

[14] Among the main features of the programme was full interest rate liberalisation (achieved in July 1991 after a gradual increase in nominal rates in the 1980s from relatively low levels. Prior to this, the government had followed a low-interest-rate policy whose main objective was to promote investment). The Central Bank, established in 1966 had only once adjusted the interest rates upwards in 1974 by one to two percentage points. In the first half of the 1980s, nominal deposit rates were increased by about 100 per cent and lending rates by about 50 per cent; lib-

eralisation of the treasury bills market in November 1990; setting up a Capital Markets Authority in 1989 to oversee the development of the equities market to enhance availability of investment resources on a long-term basis; abolition of credit guidelines in December 1993 (in existence since 1975 favouring of agriculture); and improving and rationalising the operations and finances of Development Finance Institutions (DFIs) against the wishes of some donors who urged for their dissolution or privatisation. In 1988 and 1994, the parastatal banks were partially privatised, selling 30 per cent of their shares to the public (see Brownbridge et al. 1998; Mwega 2002).

15 Before the public enterprise reform and privatisation programme was formally announced in 1991, about 240 state-owned enterprises (SOEs), popularly known as parastatals, existed. Of these 207 were to be divested (thus classified as non-strategic enterprises and constituting the government's privatisation programme) while the remaining 33 were to be retained by the government as 'strategic' (whereby the government retains ownership and active board participation in them). In 1994, Kenya started to implement a parastatal reform programme, which included: 1) the privatisation of at least 20 public enterprises (PE) out of the 207 earmarked for divestiture, and the liquidation of uneconomic PE; 2) improvement of the efficiency, profitability and accountability of the remaining PE by phasing out subsidies, establishing an improved corporate governance system, and dealing with excess indebtedness; 3) adoption and implementation of restructuring plans for five of the largest PE, which included partial privatisation; and 4) improvement in the efficiency and effectiveness of the Nairobi Stock Exchange (NSE).

16 Mwabu et al. (2000) explain that this arises from increased prices of various consumer items following the decontrol of prices in previously price-controlled economic regimes as in Kenya and the removal of subsidies on goods and services. Soon after liberalisation, prices tend to increase suddenly but in the medium- and long-terms, they tend to stabilise and even fall if various productive sectors respond sufficiently to market signals.

17 Mwabu et al. (2000) caution that must be observed in generalising the impact of SAPs on the poor noting that many poor groups benefited from economic reforms (for instance in Uganda and Ghana) while other poor households (for instance those living in remote conditions and those relying on subsistence food crop production and the unemployed) did not benefit.

18 The historical advancement of urban centres in Kenya relates to long distance trade, the early European explorers and traders as well as various ethnic groups as they met at central meeting points to conduct their business. During colonial times, the administration established administrative centres in different regions. The emergence of urban centres encouraged recruitment of the local labour-

force, dominated by men migrating from rural to urban areas. Their wives could not accompany them but remained in the rural areas. This trend explains why high sex ratio remains a characteristic feature of Kenyan's urban areas.

[19] Key sources of urban population growth include migration and natural growth. Migration between rural and urban areas is another means of adjustment in the labour market and may affect LFP and unemployment rates. In principal, most migrants are males of working age. Although a high sex ratio remains a characteristic feature of Kenyan's urban areas, the levels have consistently dropped. This suggests that the size of the female rural-urban migration has been on the increase.

[20] A famous International Labour Organisation (ILO) report (1972) documented this problem. Among the challenges developing countries in the 60s faced was what the ILO report described as, chronic and intractable unemployment. The main concern about Kenya then, was to explain the causes of persistent inequities and unemployment in spite of a rapid rate of economic growth. It highlights three distinct types of problems of fundamental concern with respect to employment situation in Kenya. '…the frustration of job seekers unable to obtain the type of work or the remuneration which they think is reasonable or which their education has led them to expect; the low level – in fact the poverty level of incomes obtained by many producers and their families as the return on their work, whether in self or family employment or in wage employment; and the underutilization and low productivity of the labour-force, both male and female, which reflects the inefficiency in the way labour is trained, deployed or supported with other resources' (ILO 1972: 1). The report emphasises poverty level returns from work (as pertains to the working poor) while cautioning that the existence of the urban informal sector with its low incomes undermined the true picture of unemployment. In essence, the ILO mission views the employment problem in Kenya as a combination of unemployment and low incomes.

[21] In total, women spend more time working than men do. In the urban areas, the average hours worked by employed persons in the labour-force is 51 for females and 50 for males based on the 1998 LFS data. In the 1986 urban LFS data, men in paid employment and self-employment work on average 9 and 8.4 hours per day respectively while women work 8.7 and 7.5 hours respectively. However, these figures mask a less obvious fact that women devote more time to household production than males do. For instance, analysis of the 1986 data revealed that when combining domestic chores with economic activities, women worked 50.9 hours per week, compared with only 33.2 hours worked by men (Mariara 2003).

[22] Odhiambo and Manda (2003) observe that most of the working poor people are in the private sector and disproportionately in the informal sector. It is esti-

mated that more than 68 per cent of the urban poor in Kenya are in the informal sector. These findings support those from other countries, which show that urban poverty and informal sector employment are closely related. In Latin America, Psacharopoulous et al. (2007) estimate the proportion of working urban poor in the informal sector at 66.2 per cent for Bolivia; 66.4 per cent for Brazil; 63.5 per cent for Costa Rica; 93.3 per cent for Guatemala; 84.9 per cent for Honduras; 87.1 per cent for Panama; 64.7 per cent for Paraguay; 18.3 per cent for Uruguay; and 57.4 per cent for Venezuela. The urban poor engage in diverse activities in the public and private (formal and informal) sectors. Most of the urban poor in Kenya are engaged in trade, both wholesale and retail, although the latter dominates. The poor are also in the manufacturing sector (mainly as paid employees), social services provision and construction. These activities have relatively low incomes, which are insufficient to push households out of poverty.

[23] According to the ILO, Labour-force Participation Rate (LFPR) is defined as the share of the working age population currently economically active-encompassing persons who are employed, self-employed or unemployed and actively seeking work (Hussmanns et al. 1990). It is a measure of a country's working-age population that is economically active and thus is an important dimension of labour supply. Working-age population refers to population aged 15-64.

[24] Unemployment rate is the percentage of the labour-force that is unemployed. Labour-force (economically active) refers to the number of people (aged 15-64) who are either employed or unemployed.

[25] At the time of independence, the shortage of skilled labour was a major constraint to the Government of Kenya. In the 1970s when the government was unable to meet the demand for secondary education, local communities pooled resources to increase the number of secondary schools (Wambugu 2003).

[26] Republic of Kenya (1999a, 1999b); Bedi et al. (2004).

[27] Defined as the share of population that left school to those who had ever attended school

[28] Employment rate is the proportion of the working-age population that is employed (including unpaid family workers).

[29] Computations based on the 1986 and 1998 labour force surveys, show that the proportion among females engaged in formal employment fell by 21.7 percentage points (chapter 5, Table 5.1). Likewise, that among males fell by 18 percentage points. However, the proportion among females engaged in informal sector employment increased by 8.6 percentage points and by 13.1 percentage points among the unemployed. The number among males engaged in informal sector employment increased by 16 percentage points and by only 2 percentage points

among the unemployed. Thus between the two periods, majority among females became increasingly unemployed while others joined the informal sector.

[30] Appleton et al. (1999); Bigsten (1984); Bigsten et al. (2000); Manda (1997); Milne and Nietzert (1994); Schultz (2003); Wambugu (2003); Zapeda (2007). As a result of differences in data (RPED: Regional Program on Enterprise Development surveys versus LFS (Labour Force Survey), time periods, specification of earnings functions, and measurement of variables, a comparison across these studies is not clear-cut. Despite this limitation, a comparison of studies does indicate a general trend.

[31] Zepeda (2007) finds that education premiums for workers increase rapidly with the level of education. For persons with primary level education, the premiums are 33 per cent higher than for those with no education. The premiums for workers with secondary level education are double those of the uneducated and are 740 per cent higher for those with university level education.

[32] In a previous study by Bigsten (1984) which he estimates returns to education using 1977/78 labour-force survey data and compares the results with those of studies undertaken in the 1960s, he finds that returns to primary and university education declined but remained high at the secondary level.

[33] The linkage and dissimilarity between formal and informal sectors is no longer as simple as it was in the 1970s and 80s when the formal sector was viewed as offering real jobs with fringe benefits, job security and superior prospects (Agesa and Agesa 1999; King 1996). Today, the sector (mostly the private sector) also employs informal labour arrangements such as casual work arrangements – uncertain macroeconomic environment can discourage investment both domestically and externally with an adverse affect on output and employment growth. Formal enterprises suffer, and consequently are enticed to perform informal business activities beside their official activities. The link between officially registered enterprises with various informal businesses or practices has become a common trend – informal activities in many developing countries are associated with a lack of opportunity in the formal economy and thus, they symbolise a coping strategy for survival.

[34] Based on the 1998/9 Integrated Labour-Force Survey.

[35] Between 1993 and 1997, the number of EPZ firms remained low but continued to grow. Likewise, the proportion of EPZ employment to total employment in the manufacturing sector although quite small remained more or less stagnant in the same period. However, the main growth occurred between 1998 and 2003. In the Kenyan context, many EPZ industries especially those specialising in garments and textiles often require dexterous female labour, not because it is cheaper than male labour. Besides, the government sets wages that are at-least non-discriminatory by sex. Most EPZ firms in Kenya are thus female-dominated.

In 2003 for example, 61 EPZ firms existed employing 34,139 persons: 24,764 females and 9,375 males.

[36] Note that 'employment in the informal sector' and 'informal employment' are now recognised as different aspects of 'informalisation' of employment. According to Hussmanns (2004: 1), the main gaps in the informal sector definition are that: 1) persons engaged in very small-scale or casual self-employment activities may not report in statistical surveys that they are self-employed, or employed at all, although their activity falls within the enterprise-based definition; 2) informal sector statistics may be affected by errors in classifying certain groups of employed persons by status in employment such as subcontractors, freelancers or other workers whose activity is at the borderline between self-employment and wage employment; and 3) an enterprise-based definition of the informal sector is unable to capture all aspects of 'informalisation' of employment, which has led to a rise in various forms of informal (non-standard, irregular, precarious) employment, in parallel to the growth of the informal sector.

[37]The term 'enterprise' refers to 'any unit engaged in the production of goods or services for sale or barter. It covers not only production units, which employ hired labour, but also production units that are owned and operated by single individuals working on own account as self-employed persons, either alone or with the help of unpaid family members. The activities may be undertaken inside or outside the enterprise owner's home, and they may be carried out in identifiable premises, unidentifiable premises or without fixed location. Accordingly, self-employed street vendors, taxi drivers, home-based workers, etc. are all considered enterprises' (Hussmanns 2004: 4).

[38] The domestic market within Kenya is the most important source of sales from NHE with about 90 per cent of them selling directly to consumers. Very few sell to the export market. The overwhelming majority of NHE (82 per cent) of the total number of firms derive their earnings by providing services, mainly retail trade - service providing enterprises comprise about 63 per cent of all NHE.

[39] Pollin et al. (2007) using integrated budget survey data of 2005-06 find that the median level of monthly earnings for all NHE is Ksh 2,370. This figure is 19 per cent below the overall urban poverty line of Ksh 2,913 per month in 2006. Given that, most household enterprise workers are unpaid family members. This means that, in a significant number of household enterprises, overall earnings in the range of Ksh 2,400 per month cater to a livelihood of more than one person working at the enterprise.

[40] One other important disparity between informal and formal enterprises lies in what they pay for licenses and taxes. Informal firms pay an average of 3.8 per cent of their total costs in licenses and taxes. Formal enterprises pay about 8.5 per cent. This means that informal firms would have to adjust their licenses and tax

obligations quite significantly to run as formal enterprises and receive the benefits of having a formal registration. The main policy question posed by Pollin et al. (2007) is to discern what benefits the informal sector firms would have to gain in order to join the formal sector given the large cost gap. Unless the benefits are significant, informal sector firms will opt to remain informal and face significantly lower costs in terms of obligations.

[41] The established survival pattern of the majority of informal sector activities in many developing countries indicates that these activities have limited potential to evolve into more formalised sectors and become incorporated into the conventional economy. As a result, their positive power to spur economic growth or to augment employment opportunities for others becomes modest.

[42] In 1980, the proportion of women employed in the formal sector was 17.6 per cent, about the same as 1983.

[43] Manufacturing absorbs 10 and 23 per cent of wage-employed women and men, while the agriculture sector accounts for 15 and 20 per cent respectively.

[44] Within the service sector, services absorb 75 per cent of total female wage labour and 57 per cent of total male wage labour.

[45] One set of literature deals with this in aggregate, examining the increasing disadvantage women face in the market primarily in terms of their limited mobility and access to resources, their increasing dependence on social services, which are being cut and the consequences of this and the job losses women experience due to their disproportional concentration in certain public sector jobs. From a different angle, the effects of economic restructuring (economic crisis in the context of SAP, in general) have been documented at the household level. The studies have dealt with changing household structures and household strategies focusing on how this has burdened members of the household disproportionately (especially increased women's overall workload) (Laier 1997).

[46] According to Amanda et al. (2007), in the textiles and clothing sectors, most employees are young women, either recent school leavers or single mothers and mainly employed in low-skilled jobs such as sewing and finishing. In contrast, men employed in the sector are generally older (30-40 years) and mainly employed as supervisors.

[47] In the cut flowers sector, women are concentrated in the labour-intensive production processes that are significant for the cosmetic quality of the final product. These consist of picking, packing and valued-added processing activities, which involve intense concentration and long periods of standing. More than half of female employees are young (20-24 years old). Men are mainly employed in management (including supervision) and in physical tasks such as spraying, irrigation, construction and cold storage. "The industry has been plagued with allegations of poor labour practices and reports of sexual harassment against female workers by

male supervisors in packhouses and greenhouses.....Women frequently face difficult working conditions with long working hours and job insecurity.....On many farms, overtime is compulsory and is particularly common for packers at certain times of the year (for example, Valentine's day) when there is pressure to meet large orders" (ibid:84).

[48] For example, Zepeda (2007) finds that in 1998, about 52 per cent of all employed women in the urban areas of Kenya worked in the informal sector (15 per cent as paid employees, 34 per cent as working employers, 30 per cent as own account workers and 22 per cent paid family workers). The remaining 40 per cent worked in the formal sector and 8 per cent in traditional farm and pastoralist activities including out of work seasonal workers.

[49] A structural change in both the pattern and process of growth towards a path with potential for employment generation and a more efficient structure of production was necessary. However, even after more than two decades of reforms, sustainable growth and employment creation have remained hard to pin down. Economic and trade liberalisation has overlapped with increased informality and precarious forms of employment-majority of the victims have been women.

[50] Using a sample of 90 countries and controlling for factors such as secondary education, Esteve-Volart (2000) investigates the link between growth in GDP and gender inequality in primary education and finds that a one per cent increase in female-to-male primary enrollment ratio, increases a country's growth rate on average, by 0.01 percentage point. Dollar and Gatti (1999), using data for more than 100 countries, estimate that an increase of one percentage point in the share of adult women with secondary education increases per capita income growth, on average, by 0.3 percentage point. Amanda et al. (2007), applying the cross-country estimates of Esteve-Volart and Dollar and Gatti to Kenya, calculate a yearly increase in the economy's growth rate of 0.07 percentage point if the female-to-male primary school enrollment ratio were to be at par (in 2004, Kenya's gross female-to-male enrollment ratio was 102:108); and 3.5 percentage points yearly growth in GDP if female and male secondary education enrollments were to be equalized (in 2004, 482,000 boys enrolled in secondary education versus 431,000 girls). Cross-country and cross-regional evidence also show that gender inequality in employment, in both access and type, similarly reduces economic growth (Besley,Burgess, and Esteve-Volart 2004; Klasen 1999; Klasen and Lamanna 2003). However, unlike the empirical research on the effect of gender inequalities in access to education, cross-country studies on the link between gender employment gaps and growth suffer more from problems associated with data (Amanda et al. 2007).

[51] The gendered notion of female work in the African context—the scientific and technological expertise they have had for centuries, for example brewing and dis-

tilling liquor, spinning, dying and weaving fabrics and mats and production of clay products, are often trivialised as minor in contrast with sculpture and masonry work done by men. Unconstructive cultural perceptions about women are impediments to gender equality and only perpetuate gender disproportions in education and human capital development with deep consequences for the labour market. In some communities, girls are viewed as economic resources (bride price, child labour) and boys as economic investment. The bride price enables the younger male sibling to wed or to receive formal education. Thus, most girls become victims of early marriages. Girls' education particularly in the rural areas is also affected by gender responsibilities obliging them to carry out domestic chores such as collecting firewood and water and looking after the younger siblings (Orchardson-Mazrui 2006). Not surprisingly, the percentage of rural males in school is higher than that for females (Agesa and Agesa 1999).

[52] Most university enrolment takes place in public universities where pass mark is quite high and only the very bright students are selected. Because entry to public universities is strictly on merit, those keen on university education but have missed the pass mark enrol in private universities where the pass mark is not only lower but is also based on ability to pay—private universities are quite expensive and only the children of the rich enrol. It is therefore not surprising that female enrolment in private universities is higher than in public universities and matches that of males.

3 Explaining the Rise in Women's Employment Rate in the Urban Areas of Kenya

Abstract: Focusing on urban Kenya, this chapter attempts to identify the sources of the temporal increase in women's employment rate between 1986 and 1998. The chapter relies on labour survey data, household responses to coping strategies and case studies. The analysis presented in the chapter shows that the bulk of the increase in women's insertion into the labour market comes from an increase in the work participation of married women. While women's higher educational endowments, particularly the increase in secondary education, account for an improvement in their employment prospects, the period also witnesses a sharp decline in the importance given to education in determining employment and by 1998, university graduates were just as likely to be employed as individuals with no education. As discussed in chapter 2, the period between 1986 and 1998 witnessed civil service reforms, restructuring of the private sector, firm closures and increasing job insecurity. Notwithstanding the role of education, declining opportunities for males, who in 1986 were the primary breadwinners and the accompanying income and employment insecurities within households seem to be the key factors prompting the sharp increase in the labour supply of (married) women.

3.1 Introduction

Women's propensity to participate in labour market activities has increased in most parts of the world. In the developed world, this trend has been optimistically linked to increased clerical and service jobs, improvements in education, public welfare provisions (for example, of childcare), and regulations against labour market discrimination (Cerrutti 2000; Joshi and Davies 1992; Oppenheimer 1976). In the developing

world, education, urbanisation, declining fertility rates and perhaps an increase in female labour force participation as a consequence of economic restructuring are some of the possible factors.[1]

Set against a weakening macroeconomic environment and rapid educational expansion, a striking feature of Kenya's urban labour market has been a steep increase in female labour force participation rate (FLFPR) between 1986 and 1998 (see Table 3.1) marking a near-convergence with that of males.[2] This substantial increase coincides with implementation of extreme economic reforms and structural adjustment policies (SAP). Due to the rise in female LFP, the urban employment rate (ER) of all women increased by 12.2 per cent while for men the figure was 2.4 per cent. Conditional on marital status, ER of married and single women increased by 15.3 per cent and by 7.4 per cent respectively. While in 1986, married women were less likely than single women were to be employed, by 1998 the ER for both married and single women converged (about 51 per cent). Accordingly, a larger proportion of the overall increase in women's employment rate was driven by the increase in employment of married women.[3]

While, at 51 per cent, the female ER in Kenya is relatively high by international standards it is lower than the rate found in other parts of sub-Saharan Africa (about 61 per cent in 1998).[4] In terms of convergence in the employment rates of married and single women, Kenya provides a similar situation to many developed countries such as the United States, United Kingdom, Australia and Finland. For example, Smith (2008) shows that over time, the employment rates of married and single women have converged in the United States and in 2007 were at about 71 per cent for both groups. In Finland, Gilbert (2006, 2005) and, Golden and Figart (2002) report that both single and married women (and men) work about the same number of hours and participate in the labour force at about the same rate. In the United Kingdom, the employment rate for married women (73 per cent in 2000) is higher than the employment rate for single women (61.7 in 2000). In contrast, in Spain, the employment rate for married women was 43.3 per cent in 1998 while for single women it was much higher at close to 71 per cent. While the situation in Kenya is similar to the more developed countries in terms of equal work participation rates for married and single women, the circumstances that led to this convergence are likely to be different.

Table 3.1
Labour force participation & employment rates
(% of relevant population group)

All Urban	1998 Sample Mean (%)	1986 Sample Mean (%)	% Change
LFPR	87.7	73.3	14.4
ER	63.8	58.9	4.8
Women			
LFPR	87.2	58.4	28.8
ER	51.4	39.2	12.2
Married Women			
LFPR	96.6	56.4	40.2
ER	51.5	36.2	15.3
Single Women			
LFPR	74.9	61.6	13.3
ER	51.3	43.9	7.4
Men			
LFPR	88.2	84.3	3.9
ER	75.9	73.5	2.4

Source: Computations from the 1986 and 1998 LFS Data; Republic of Kenya, Various Labour Force Survey (LFS) Reports – Integrated Labour-Force Survey (ILS)-1989/99; Economic Survey-2002; Urban Labour-Force Survey (ULFS)-1986.

The purpose of this chapter is to contribute to an understanding of the ways in which female labour supply reacts in a context of deteriorating economic conditions. More specifically, the chapter seeks to identify the characteristics of and reasons for the growth in women's labour market attachment in urban Kenya.

Although the increasing number of women in the Kenyan urban labour-force has been previously acknowledged (Milne et al. 1990; Manda 1997; Republic of Kenya 1986a; Republic of Kenya Economic Survey 2002), no study has systematically explored this trend. Furthermore, while this impressive rise in FLFPR (ER) may be seen as a positive development, the question is whether it is driven by increased opportunities for women (due to increased education levels or increased demand for female labour) or that women were pushed into the labour market owing to worsening economic conditions for urban households.

To be accurate, the focus of this chapter is on explaining the rise in women's ER and not on the increase in LFPR.[5] As shown in Table 3.1, in 1998, 87.2 per cent of women were participating in the labour-force while 12.8 per cent were inactive. In the 1986 sample, the corresponding numbers are 58.4 per cent and 31.6 per cent. Thus over time, women's

LFPR has increased immensely leading to a situation where nearly every woman is in the labour-force. While the distinction between being economically active and inactive was quite clear in 1986, a decade later, the distinction has blurred with near universal participation in economic activity. The fact that by 1998, nearly all women were in the labour-force and therefore may not understand the distinction between looking for a job and not looking for one, makes the differentiation between inactive and unemployed and active not particularly useful. For these reasons, it is reasonable to focus on ER (the proportion of the working-age population employed) instead of LFPR (the proportion of the working-age population in the labour-force). In short, the employment rate is treated as the effective labour force participation rate and the two terms are used interchangeably in the chapter.[6]

In terms of its approach, the chapter attempts to explain the increase in women's employment rate by decomposing the change into 1) a part that may be explained by changes in the average characteristics (such as experience, education, etcetera) of women between 1986 and 1998, referred to as the *composition effect* and 2) changes in the labour market valuation of these characteristics, for example, the importance given to different levels of education between the two periods in determining employment. This is referred to as the *structural effect* and reflects in part the demand for labour. The decomposition strategy outlined above is used to analyse two cross-section labour-force survey data sets gathered in 1986 and 1998, periods before and after the intensification of the various elements of the SAP. In addition to the decomposition, the chapter also relies on information drawn from a primary survey and case studies conducted in 2003.

The remainder of the chapter is as follows: section 3.2 outlines a conceptual framework for the study while section 3.3 describes the data. Sections 3.4 and 3.5 present estimates of the likelihood of being employed and the decomposition estimates, respectively. Section 3.6 concludes.

3.2 Conceptual Framework and Methodology

This section describes the conceptual framework utilised in this chapter, provides a discussion of an empirical model used to estimate the determinants of employment and outlines a methodology for decomposing the rise in employment.

3.2.1 Theoretical Considerations

Since this chapter treats ER as the real LFPR and given that the state of being employed is an aspect of labour-force participation (as described below), this chapter defines the main theoretical concepts and arguments under the neoclassical theory of labour supply, which despite limitations, is applied widely in empirical analysis of labour supply (Becker 1965; Gray et al. 2002, 2003; Heckman 1979; Killingworth 1983; Manda 1997; Van den Brink 1994). The theory is based on the assumption of utility maximisation subject to budget constraints. The theory assumes that economic agents make informed and rational decisions from information about prices and wages. Individuals are assumed to allocate time to market work and non-marketable activities (leisure). Utility is maximised by choosing a combination of goods and leisure hours subject to time, price and income constraints.

Labour-force participation (the state of being employed or unemployed) is one dimension of labour supply in that individuals not only make a choice of how many hours to work but also make a simultaneous decision of whether to work at all. As with hours of work, each individual must choose how to allocate time: that is whether to work in the market or spend time in non-market activities. The decision to work is influenced by the market wage and the reservation wage (the minimum wage at which a person is willing to enter employment). The market wage is the present value of wages offered in the market and the present value of future earnings losses caused by non-accumulation and depreciation of human capital (Even 1987). Hence, participation/employment depends on level of education, accumulated work experience and length of career breaks. When the market wage is less than the reservation wage, hours of work will be zero, since the utility loss from giving up even one hour of leisure to participate in the labour-force would be greater than utility gained from the income earned from market work.

Therefore in the neoclassical labour supply framework, individuals as rational actors maximise their utility and are willing to enter employment governed by the fundamental requirement that the market wage exceeds the reservation wage. How a variable affects women's employment decisions depends on how it affects the reservation and market wages or both.

A variable that increases the reservation wage such as young children, availability of non-labour income, changes in tastes and preferences to-

wards leisure and other non-market activities, the level of structural, cultural and incompatibilities between family and work (such as availability of childcare opportunities and attitudes towards working mothers) decreases the probability of being employed. On the other hand, a variable such as education strengthens women's attachment to the labour market by increasing their potential earnings.

In addition to the potential negative effect of young children on women's employment decisions, the existence and economic background of a husband or partner plays an important role especially when children are present. A conjecture of Becker's (1965) theory of household time allocation is that an increase in husband's income may encourage women to consume additional non-market time implying an inverse relationship between husband's income and women's employment decisions whereby the higher the husband's income, the lower the financial pressure of the family and the lower the propensity of the wife to enter employment.

The labour-force status of an individual as predicted by the neoclassical analysis is thus determined in a two-stage process. First, an individual decides whether to supply labour to market or not. Second, a combination of factors including labour demand (employers preferences: skills, experience, education, marital status and sex), incentives to search actively for work and to accept the available job offers determine whether they are employed or not.

Major drawbacks of the theory are that it ignores the interdependence of household members and therefore their decision-making, and that it fails to distinguish between productive and recreation activities (Van de Brink 1994).[7]

The empirical specification developed below will draw on the preceding discussion to aid model specification. However, since this chapter treats the employment rate as the effective labour force participation rate, it is important to view the observed outcome not only in terms of an outcome of factors that determine supply of labour but the interaction between supply and demand factors. As discussed above, participation in the labour-force involves a decision by an individual on how to allocate his/her time, and a decision on the part of the employer to offer an individual a job. This interaction of supply and demand determines whether a person effectively participates in the labour-force or not. Given data limitations, this chapter does not explicitly include factors that determine labour demand. However, the interpretation of the results

will be sensitive to labour demand issues and indeed, the analysis of key macroeconomic and employment trends as in chapter 2 provides a background for the demand-side without necessarily modelling it.

3.2.2 Empirical model for the determinants of employment

This chapter uses a probit model to calculate the probability of being employed, conditional on a given set of characteristics. The model is non-linear and provides predicted probabilities between zero and one.[8] An individual's dichotomous employment status is denoted by Y_i and $Y_i=1$, if an individual is employed and $Y_i=0$ if an individual is not (unemployed or inactive). The probability that Y_i=1 is defined as:

$$Probability\ (Y_i=1) = F(\beta_0 + \beta_1 X_{1i} + \ldots\ldots + \beta_k X_{ki}) \qquad (1)$$

that is, $F(X_i\beta)$

where, $F(.)$ is the standard normal cdf.

Given the objective of exploring whether the change (rise) in ER of women is explained by changes in the determinants of ER, the probit model is estimated separately for 1986 and 1998. The explanatory variables in the model are derived from the economic theory of labour supply behaviour or those considered important in previous empirical studies. To facilitate understanding of the effects of the probit coefficients, marginal effects or predicted probabilities (that is, change in the predicted probabilities associated with changes in the explanatory variables) are provided.[9] Marginal effects (ME) are evaluated at the sample mean.

The remainder of this section provides a rationale for the empirical specification used. As discussed above, the dependent variable is employed. An individual reporting any level of employment including unpaid family work is treated as employed. The likelihood of being employed is affected by personal and household characteristics. Personal characteristics include, age, level of education, marital status and household-headship, and wages in the market. Household characteristics include childcare responsibilities as captured by the number of young children below school age, the size of the household, and the presence of female relatives in a household.

Age is included to pick up lifecycle effects and as a measure of potential labour market experience. Age-squared is included as well to allow for non-linear relationship between age and the probability of employ-

ment. In addition to potential labour market experience, an individual's human capital is captured by years of schooling or highest level of formal education completed. According to the neoclassical theory of human capital, a rise in education attainment may lead to an increase in women's employment rate (or attachment to the labour market) for several reasons. First, earnings from work rise progressively with educational attainment, thus increasing the cost of time spent in non-market activities. Second, education may increase the probability of being employed as it changes an individual's tastes or attitudes regarding the desirability of homework versus market work. Third, if education is considered an investment in human capital, then the recipient has to work to recover the cost of education. Higher education is often undertaken as an investment in the sense that a person willingly suffers large direct costs (tuition) and opportunity cost (foregone earnings from work) of a college education with the anticipation that these costs will be recouped in the form of higher earnings and occupational attainment after graduation. For these reasons, it is natural to associate increasing employment rates of women (or their attachment to the labour market) with higher educational attainment

Partner's income and partner's employment status influence the labour supply decisions of women although the effect is not obvious. If partner's income is taken as exogenous under the assumption that the decision to participate is not simultaneously decided within a relationship, then it may be expected that increases in a partner's income reduces the probability of participation. In the context of worsening economic circumstances, women may be more inclined to work or search for work in order to augment a decline in partner's real income (hence an inverse relationship between the likelihood of being employed and partner's income) or as a precautionary measure against potential job-loss resulting from employment restructuring. Women, especially the better educated, may be more likely to work for reasons independent of partner's earnings such as the need for self-security or economic empowerment. Drawing on this discussion, the empirical models estimated here include partner's real income and education.

The structure of the family has an important role in explaining women's participation in the labour market. Scholarly consensus has been that marriage and children deter women's LFP in the context of labour division within households where husbands specialise in market

work and are the breadwinners, and women in child rearing and household work. Most empirical studies find a negative relationship between the number of children in the family and the probability of a woman's work participation (Kaufman 1994). The negative relationship is particularly associated with children of pre-school age. This standard gender analysis may break down in the Kenyan context where domestic service is affordable especially among educated women engaged in fulltime jobs or among those engaged in self-employment in the informal sector, which may often allow flexibility to combine productive and reproductive work.[10] Household size could have either a positive or a negative effect on the probability of being employed. On one hand, a large household may mean heavier household chores for a woman and therefore a higher reservation wage. In this case, the effect on the probability of being employed would be negative. On the other hand, a large household may mean an increase in the financial constraints of her household thus requiring her involvement in the job market. A large household with non-working adult members, especially females, may relieve women of some of the domestic responsibilities such as looking after young children enabling them to take up market work. Here, the effect on the probability of employment would be positive. Presence of female relatives in a household would be expected to increase the probability of being employed on the assumption that their presence reduces the burden of caring for children and domestic chores for other women in a household. While recognising the role of children and household size it is likely that both variables, especially, the number of children is endogenous to labour market participation as decisions to have children and to participate in the labour market may have been taken together. While the presence of young children is excluded from the specifications, control for household size and the presence of female relatives remains. Strictly speaking, household size should be treated as endogenous, however, as will be seen later, in practical terms this does not turn out to be relevant as household size appears to have no impact on female employment status. In addition, I did include the number of children in some of the specifications and the inclusion of such a variable did not have a large bearing on the estimates. Being a household head is included in the specifications as it is likely to increase the probability of being in employment regardless of sex or marital status.

Table 3.2
Variable description

Variable	Description
Employed	Dummy dependent variable taking the value '1'. If the respondent reported any form of employment including unpaid family work and '0' otherwise (for unemployed and the inactive together).
Age	Age in years
Age-squared (agesq)	Age in years – squared
Sex	Dummy variable:1=male; 0=female
Married	Dummy variable:1=married; 0=not married
Head of household	Dummy variable:1=Yes; 0=No
Household size (hsize)	Total number of household members (hsize)
Education (highest level completed)	Primary dummy variable:1=has primary level education; 0=otherwise; Secondary dummy variable:1=has secondary level education; 0=otherwise; University dummy: 1=has university level education; 0=otherwise; None/nursery (omitted category) dummy variable: 1=has no schooling including or has nursery level; 0=otherwise
Presence of female relatives in a household (relatives)	Dummy variable: 1 =Yes; 0=No
Partner's Income (Hus_earn)	Husbands real monthly earnings from both wage employment and/business earnings, computed using consumer price index (CPI) for urban areas with 1986 as base year.
Partner's Education (highest level completed)	Hus-Primary dummy variable: 1=has primary level education; 0=otherwise; Hus-Secondary dummy variable: 1=has secondary level education; 0=otherwise; Hus-University dummy variable: 1=has university level education; 0=otherwise; Hus-None /nursery (omitted category) dummy variable: 1=has no schooling/has nursery level; 0=otherwise

On wages in the market, recall that the theory underlying the participation decision stems from a standard neoclassical microeconomic model in which the difference between the market wage and the reservation wage along with other factors and assumptions determines an individual's decision to work. While theoretically this idea is straightforward, empirically, given that an individual's reservation wages is endogenous, it is hard to estimate such a structural model. Accordingly, analysis estimates reduced form employment equations. Table 3.2 provides a list of the variables used in the specification and their definitions.

3.2.3 Methodology for decomposing the rise in ER

Substantial research effort in the field of social sciences has been dedicated to unravelling the underlying causes of racial and gender differences in labour market, education, health and other outcomes. To decompose the sources of observed differences, an extension of the well-known Blinder-Oaxaca decomposition technique is the most widely used approach.[11] The technique enables decomposition of inter-group differences in mean levels of an outcome, into those due to different observable characteristics or 'endowments', and those due to different effects of characteristics (Fairlie 2003). The technique is particularly useful in the identification and quantification of separate contributions of group differences in measurable characteristics such as education to racial and gender differences in outcomes. This method is also useful in answering various questions such as why employment rates or participation rates in the labour market have changed over time or why these aspects are different by gender.

Within the statistical framework applied in this chapter, change in the probability of being employed between 1986 and 1998 can be attributed to two sources. One, changes in average characteristics of women between 1986 and 1998 could be responsible for changes in their respective ER levels. Two, there may be changes between 1986 and 1996 in the determinants of employment status, that is, the influence of different characteristics on employment status as measured by their estimated coefficients ('prices') may have changed. Coefficient estimates may change over time as labour market valuation of characteristics (for example, labour demand for educated workers or demand for experienced workers may change) is likely to evolve over time whereby people with same characteristics may receive different treatment. Thus, over time, the changes in the proportion of employed women may be disentangled into a change in the behavioural model (coefficients of the probit model) and change in the average level of the variables in the model (education, experience, partner's income, marital status). [12]

Using an extension of the Blinder-Oaxaca decomposition technique as proposed by Even and Macpherson, (1990, 1993)[13] it is possible to use the estimates of the determinants of ER for 1986 and 1998 to decompose the change in ER over that period into the characteristics' and coefficients' effects as follows.

To start with, for a linear regression, the standard Blinder-Oaxaca decomposition (for example, to isolate changes in wages over time), would be written in terms of changes in the average value of the dependent variable (call it *Y*) as:

$$Y_{98}-Y_{86} = (X_{98}- X_{86})\beta_{98} +(\beta_{98}-\beta_{86})X_{86} \quad (2.a)$$

where X_{98} and X_{86} are row vectors of average values of the independent variables and β_{98} and β_{86} are vectors of coefficient estimates for each year. Although mainly employed in the decomposition of continuous variables as in this example, the technique has been extended to accommodate discrete or binary choice models.

Temporal decomposition of a non-linear equation as in the case of the probit model used here, where,

$$Y= F(X\beta), \quad (2.b)$$

may be written as,

$$Y_{98}- Y_{86}= F(X_{98}\beta_{98}) – F(X_{86}\beta_{86}) \quad (3)$$

where Y_{98} is the mean predicted ER probability for 1998 using the characteristics (explanatory variables) of 1998 and Y_{86} is the mean predicted ER for 1986 using the characteristics of 1986.

Equation 3 expresses the predicted change in ER between the two points in time and this chapter endeavours to explain this change. Equation 3 can be decomposed as:

$$Y_{98}- Y_{86}=[F(X_{98}\beta_{98})-F(X_{86}\beta_{98})]+ [F(X_{86}\beta_{98})- F(X_{86}\beta_{86})] \quad (4)$$

F (for a probit model), is the cumulative distribution function from a standard normal distribution. β_{98} and β_{86} are vectors of parameter estimates associated with individuals in 1998 and 1986 respectively and X_{98} and X_{86} are vectors of individual characteristics in 1998 and 1986 respectively. This alternative expression for the decomposition is used because the average value of the dependent variable *(Y)* as in equation *(2.a)* does not necessarily equal $F(X\beta)$ as in equation *(2.b)* hence, equation 4 is a special case of the Blinder-Oaxaca decomposition. In equation 4, the first term in brackets corresponds to the part of the gap that is due to group differences in distributions of *X*, while the second part corresponds to the portion due to differences in the group processes determining the levels of *Y* (ER).

Following Fairlie (2003), an alternative expression of equation 4 is as follows:

$$Y_{98}- Y_{86}= F(X_{98}\beta_{98})- F(X_{86}\beta_{86})= [F(X_{98}\beta_{86})-F(X_{86}\beta_{86})] + [F(X_{98}\beta_{98})- F(X_{98}\beta_{86}) \quad (5)$$

Note that in equation 4, the 1998 coefficient estimates (β_{98}) are used as weights for the first term of the decomposition and the 1986 distributions (X_{86}) are used as weights for the second term. Contrastingly, in equation 5, the 1986 coefficient estimates (β_{86}) are weights for the first term of the decomposition and the 1998 distributions (X_{98}) are weights for the second term. This is because in equations 4 and 5, the terms, $F(X_{86}\beta_{98})$ and $F(X_{98}\beta_{86})$ respectively, have been added arbitrarily. For this reason, a familiar problem with the Blinder-Oaxaca decomposition technique known in the literature as *index number problem* arises from the fact that equations 4 and 5 yield different estimates. This is because the estimated sizes of the explained and residual components will depend on which ER structure (1998 or 1986 coefficient vector) is used as the non-discriminatory structure. Oaxaca and Ransom (1994) and, Neumark (1988) suggest a way to circumvent the index number problem whereby a pooled coefficient vector (in this case, 1986 and 1998) is taken as the non-discriminatory or neutral employment structure. This chapter follows their approach in which coefficient estimates from a pooled sample of the two groups/periods in consideration are weights for the first term.[14]

Let β^* be the neutral coefficient structure (estimates from a pooled sample of the two groups) that would prevail in the absence of behavioural differences in the returns to the employment status generating characteristics between the two groups/points in time. Based on this assumption, the probit estimates of the pooled sample represent the determinants of employment in the absence of unobserved group differences, and the difference between the average probability of being employed in 1998 as compared to the average probability based on the neutral structure is given by:

$$F(X_{98}\beta_{98})-F(X_{98}\beta^*) \quad (6)$$

A comparable expression for 1986 is:

$$F(X_{86}\beta^*) - F(X_{86}\beta_{86}) \quad (7)$$

Thus, the total gap in average 1998 and 1996 probabilities of being employed can be expressed as:

$$Y_{98} - Y_{86} = F(X_{98}\beta_{98}) - F(X_{86}\beta_{86}) = [F(X_{98}\beta^*) - F(X_{86}\beta^*)] + \{[F(X_{98}\beta_{98}) - F(X_{98}\beta^*)] + [F(X_{86}\beta^*) - F(X_{86}\beta_{86})]\} \quad (8)$$

The first term in equation 8 in [ ] uses the neutral-pooled employment structure to predict the employment probabilities of 1986 and 1998, but allows the characteristics of individuals in the 1998 sample to differ from those of the 1986 sample. This expression is the *characteristics' effect*, since it shows the gap in employment probability explained by differences in the individual characteristics of women between the two points in time. The second and third terms together in { } constitute the *coefficients' effect* or *structural part* of the total gap.[15] The second term shows the difference between returns to women's characteristics in 1998 and those that would exist in the context of a neutral structure, while the third term shows the difference between returns to women's characteristics in 1986 and those that would exist in the context of a neutral structure. The empirical discussion does not draw a distinction between the second and third terms and combines both of them to capture the change in the probability of employment due to changes in structural factors.

The next steps are to determine the contribution of each individual explanatory variable to the observed portion of the total gap (contribution of each of the *Xs* to the first term of equation 8) and the contribution of each of the coefficients to the unexplained portion of the total gap (second and third terms together). Yun (2004) and, Even and Macpherson (1990, 1993) suggest a detailed decomposition to identify these effects in binary choice models. Their method, applied in this chapter identifies the contribution of a specific variable '*k*' to the observed differential as follows:

$$Z_k\,[F(X_{98}\beta^*) - F(X_{86}\beta^*)] \text{ where } Zk = \frac{(\overline{X}_k^{98} - \overline{X}_k^{86})\beta_k^*}{(\overline{X}^{98} - \overline{X}^{86})\beta^*} \text{ and } \sum_{k=1}^{K} Z_k = 1. \quad (9)$$

The contribution of variable '*k*' to the coefficient effect[16] (unobserved differential) is derived as follows:

$$S_k\,\{[F(X_{98}\beta_{98}) - F(X_{98}\beta^*)] + [F(X_{86}\beta^*) - F(X_{86}\beta_{86})]\} \text{ and}$$

$$S_{K=}\frac{(\beta^{98}{}_k-\beta^{86}{}_k)\overline{X}^*_k}{(\beta^{98}-\beta^{86})\overline{X}^*} \text{ with} \sum_{k=1}^{K} S_k = 1. \qquad (10)$$

To recap, the equations estimated are equation 3 to obtain the predicted total gap/change in women's probability of being employed and equation 8,[17] to decompose the total gap into the characteristics' and coefficients' effects; and equations 9 and 10 for the contribution of a specific variable to each of these effects.

3.3 Data and Summary Statistics

The chapter uses LFS cross-sectional data of 1986 and 1998 and covers women in the age group 15 to 64. The 1986 survey sampled 2697 urban households and included 9605 respondents. The 1998/99 survey sampled 1938 households with 6646 respondents. After dropping observations with incomplete information and restricting the analysis to persons age 15 to 64, 5464 and 4008 observations remained from the 1986 and 1998 data sets respectively.

Table 3.3 provides mean characteristics for the entire sample of women in the working-age population (both employed and non-employed) while Tables 3.4 and 3.5 provide mean characteristics conditional on a woman's marital status.

Figures in Table 3.3 show no difference in the overall mean age between women in the 1998 and 1986 samples. This overall scenario differs between married and single women with single women having a lower mean age.

There is a drop in household size *(Hsize)* between the two periods. Some possible explanations for this are a rise in urban to rural migration in which some household members (mainly women and their children), are forced relocate to their rural home to help minimise the costs of urban living in the context of worsening economic conditions (as described in more details in Table 3.9, Section 3.4), and a general fertility decline particularly in urban areas.[18]

The proportion of married women in the working-age population decreases between the two periods. In spite of the declining fertility rates in both rural and urban areas, it continues to be true that by far, most women (men) marry. In the Kenyan context, most women marry between ages 20-24. However, Kenya's Demographic Health Survey (DHS)

and census statistics reveal a rising trend in the number of single women across all age groups, which might explain the drop in the proportion of married women in the working-age population. For example, the proportion of women aged 15-19, 20-25 and 25-29 who have never married increased from 55 per cent, 13 per cent and 5 per cent to 81 per cent, 38 per cent and 19 per cent respectively between 1962 and 1999. The observed increase in the proportion of single women at younger ages implies an increase in the age at marriage, perhaps and mainly because younger women now have to spend more time in school. This also means that the rate of household formation (children leaving their parental homes to set up their own households) has declined for the young owing to a lack of economic independence (this might partly explain the drop in the number of female-household heads in the sample of single women; Table 3.5). The increasing number of single women (and men) at lower age groups of the labour-force structure, longer periods of unemployment due to increased job search hence lack of economic independence can contribute to low household formation and therefore a decrease in the proportion of married women. Another probable reason for the drop in married women in the working age population is the rising trend in the number of family break-ups. From a perspective of household economic crisis, the likelihood is that more families break up. DHS reports (1989, 1993, 1998 and 2003) reveal a rising trend in the proportion of divorced persons from 2.7 per cent in 1989 to 6.0 in 2003 and that of widowed women from 2.0 per cent in 1989 to 5.4 per cent in 1999 and to 4.2 per cent in 2003.

The expectation, as with any patriarchal society is that women head few households. The average number of female household-heads is small although their prevalence is higher amongst single as compared to married women. Even so, another trend concurrent with declining fertility is the increase in the number of female-headed households. Tables 3.3 and 3.4, confirm this trend.[19] Among reasons that might explain this trend are: one, women live longer than men and thus are more likely to fend for themselves alone at an older age; two, an increased age at marriage particularly in urban areas; and three, the rising number of marital dissolutions (divorce and widows). [20]

The proportion of female relatives increased between the two periods and is much higher among single women. This might connote a need to increase the number of earners in a household where female relatives are

called to help with domestic work and childcare enabling other women in a household to take up market work.

In terms of education, there is a sharp increase in educational attainment between the two periods. The proportion of women with secondary education increases between 1986 and 1998 by ten percentage points from 36 to 46 per cent (Table 3.3). At the same time, the proportion of women with no education declines sharply from 20 to 9 per cent. The proportion of university-educated women remained stable during this period.

Regarding characteristics of male spouses (earnings and education), Table 3.4 reveals considerable improvement in spouse education levels (especially secondary level) and a sharp decline in earnings – among married women, their average real male spouse monthly earnings were about Ksh 4235 in 1986 and about Ksh 2059 in 1998 a decline in value of about 51 per cent.

Table 3.3
Descriptive statistics: All women

Variable	1998 Sample			1986 Sample		
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Age	1983	28.83	10.51	2319	28.38	10.12
Agesq	1983	941.21	723.79	2319	908.04	699.11
Married	1983	0.57	0.5	2319	0.61	0.49
Head	1983	0.21	0.41	2319	0.2	0.4
Hsize	1983	4.71	2.49	2319	5.44	3.1
None	1983	0.09	0.29	2319	0.2	0.4
Primary	1983	0.43	0.49	2319	0.42	0.49
Secondary	1983	0.46	0.5	2319	0.36	0.48
University	1983	0.02	0.13	2319	0.02	0.13
Relatives	1983	0.24	0.43	2319	0.19	0.39
LFP	1983	0.87	0.33	2319	0.58	0.49
Employed	1983	0.51	0.5	2319	0.39	0.49

Table 3.4
Descriptive statistics: All married women

Variable	1998 Sample			1986 Sample		
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Age	1131	31.14	9.4	1410	30.17	9.13
Agesq	1131	1057.85	676.53	1410	993.54	650.47
Head	1131	0.11	0.31	1410	0.09	0.29
Hsize	1131	4.62	2.13	1410	5.33	2.7
None	1131	0.1	0.31	1410	0.22	0.41
Primary	1131	0.41	0.49	1410	0.42	0.49
Secondary	1131	0.46	0.5	1410	0.34	0.47
University	1131	0.02	0.13	1410	0.02	0.15
Relatives	1131	0.16	0.37	1410	0.13	0.34
Hus-None	984	0.06	0.24	1235	0.12	0.33
Hus-Primary	984	0.3	0.46	1235	0.37	0.48
Hus-Secondary	984	0.57	0.5	1235	0.43	0.5
Hus-University	984	0.07	0.25	1235	0.07	0.26
Hus-Log Real Earnings	798	7.12	0.9	1124	7.46	1.05
LFP	1131	0.97	0.18	1410	0.56	0.5
Employed	1131	0.52	0.5	1410	0.36	0.48

Table 3.5
Descriptive statistics: Single women

Variable	1998 Sample			1986 Sample		
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Age	852	25.75	11.1	909	25.61	10.94
Agesq	852	786.37	0.4	909	775.43	749.79
Head	852	0.34	0.48	909	0.37	0.48
Hsize	852	4.82	2.89	909	5.61	3.62
None	852	0.08	0.27	909	0.17	0.38
Primary	852	0.44	0.5	909	0.42	0.49
Secondary	852	0.46	0.5	909	0.4	0.49
University	852	0.02	0.13	909	0.01	0.1
Relatives	852	0.34	0.48	909	0.29	0.45
LFP	852	0.75	0.43	909	0.62	0.49
Employed	852	0.51	0.5	909	0.44	0.5

3.4 Determinants of the Incidence of Employment

This section presents estimates of the determinants of employment in 1986 and 1998.[21] As underlined earlier, most of the rise in employment is due to an increased presence of married women in the labour market. Determinants of employment for married and non-married women are examined separately. Besides, these two groups confront different economic contexts and decisions on whether to work or not.

Probit results for the total sample of women without breakdown by marital status are presented for each year (Table 3.6), followed by estimates for married women (Tables 3.7a & 3.7b) and single women separately (Table 3.8). The discussion focuses on the estimates for 1986 and then highlights differences over time.

In 1986, the estimates in Table 3.6 show that the age and age-squared variables have the expected positive and negative signs and are statistically significant. This shows that older women have a higher likelihood of being employed, although beyond a certain peak (at the age of about 31) their probability of being employed declines. Married women are about 12 percentage points less likely to be employed as compared to single women while female heads of household are 36 percentage points more likely to be employed as compared to women who do not head their households.

In terms of the effect of education on employment status, as may be expected, women with any level of education are far more likely to be employed as compared to uneducated women with the marginal effect increasing with education level. Women with university education are about 51 percentage points more likely to be employed than uneducated women are while the marginal effect for women with secondary and primary education is 33 and 24 percentage points respectively. The patterns on the educational coefficients display the large payoffs with acquiring education. Other factors such as household size and the presence of relatives do not exert an effect on employment.

While there are similarities between the 1986 and 1998 estimates, there are some sharp differences. While the effect of age and being a household head are relatively unchanged, there is a sharp change in the effect of marital status on the probability of a woman working. From a negative marginal effect of 12 percentage points, the 1998 estimates show that being married has no statistically significant effect on employment status, in other words married and single women are equally likely to be

employed. There are sharp changes in the importance of education in determining an individual's employment status. While the importance of primary and secondary education in determining employment declines (about 10 percentage points), they continue to exert a statistically significant effect on the probability of finding employment. However, there is no gap between the marginal effects of the two levels of education suggesting the declining importance of education in securing employment. The drastic change in returns to university highlights this point. The large, 51 per cent effect of university education in determining employment in 1986 has been replaced by a zero effect. In other words, in 1998, women with university education are as likely to be employed as those with no education are. The declining importance of education shows that over time, the labour market increasingly places less value on education in determining employment.

Table 3.6
Estimates: Determinants of the incidence of employment all women

Variable	1998 Sample			
	Coef.	Std. Err.	ME	Std. Err.
Age	0.191***	0.018	0.076	0.007
Agesq	-0.002***	0	-0.001	0
Marital	-0.156	0.08	-0.062	0.032
Head	0.883***	0.105	0.325	0.033
Hsize	-0.011	0.014	-0.004	0.005
Primary	0.288*	0.113	0.114	0.044
Secondary	0.259*	0.114	0.103	0.045
University	0.208	0.248	0.082	0.095
Relatives	0.149*	0.075	0.059	0.03
Constant	-3.473***	0.281		
Number of obs.	1983			

Variable	1986 Sample			
	Coef.	Std. Err.	ME	Std. Err.
Age	0.186***	0.017	0.071	0.007
Agesq	-0.002***	0	-0.001	0
Marital	-0.312***	0.077	-0.12	0.029
Head	0.946***	0.093	0.364	0.033
Hsize	-0.016	0.011	-0.006	0.004
Primary	0.632***	0.088	0.24	0.033
Secondary	0.858***	0.091	0.327	0.033
University	1.533***	0.243	0.515	0.048
Relatives	-0.022	0.079	-0.009	0.03
Constant	-4.097***	0.274		
Number of obs.	2319			

Note: * p<.05; ** p<.01; *** p<.001.

Turning to married women and focussing on the results in Table 3.7b, while there are similarities between the results for married women and the overall sample of women, there are some notable differences. Over time, the importance of age (proxy for experience) in determining employment increases. At the same time, the importance of a woman's education in determining her employment status vanishes between the two periods. For example, in 1986, university education is associated with a 43-percentage point increase in the probability of being employed while in 1998, there is no statistically significant effect of university education

on securing employment. The same pattern applies for other levels of education. The declining importance of education may result from the increase in the supply of educated (married) women as well as the declining role of formal sector employment. In the 1970s and the early 80s, the public sector was the main employer hence the sharp link between education and employment in the 1986 estimates. However, by 1998 public sector employment opportunities had shrunk, the private formal sector did not expand as rapidly and the rise of the informal sector where educational levels are not particularly heavily rewarded probably explains the declining importance of education in determining employment.

The link between a husband's educational characteristics and a wife's employment status reveals some clear patterns. Similar to the effect of a wife's education, in 1986, women married to men that are more educated were more likely to secure employment; however, by 1998 this effect vanishes. The effect of husband's earning status is exactly the opposite. In 1986, a partner's real earnings had no bearing on a woman's employment, however, in 1998 there is a statistically significant negative effect indicating that higher spousal earnings are associated with a reduction in female employment. Thus, we see that in 1986, the decision to participate was heavily influenced by the educational characteristics of the woman and regardless of the earning capacities of their husbands', educated women sought out work. However, by 1998, this situation was remarkably different with all married women, regardless of their education levels seeking work and the decision to participate is certainly influenced by the earnings capacities of their husband's. A more detailed discussion of these issues is provided in the following section. Briefly, results for single women reveal patterns that are similar to the results for the overall sample of women (see Table 3.8).

Table 3.7a
Estimates: Determinants of the incidence of employment married women – excluding partner's characteristics

Variable	1998 Sample			
	Coef.	Std. Err.	ME	Std. Err.
Age	0.219***	0.027	0.087	0.011
Agesq	-0.003***	0	-0.001	0
Head	0.825***	0.151	0.3	0.046
Hsize	-0.007	0.021	-0.003	0.008
Primary	0.277	0.141	0.11	0.056
Secondary	0.543***	0.14	0.213	0.054
University	0.36	0.319	0.139	0.117
Relatives	0.222	0.115	0.088	0.045
Constant	-4.418***	0.464		
Number of obs.	1131			

Variable	1986 Sample			
	Coef.	Std. Err.	ME	Std. Err.
Age	0.187***	0.026	0.069	0.01
Agesq	-0.002***	0	-0.001	0
Head	1.237***	0.141	0.462	0.044
Hsize	-0.003	0.016	-0.001	0.006
Primary	0.542***	0.108	0.201	0.04
Secondary	1.008***	0.112	0.375	0.04
University	1.630***	0.283	0.552	0.057
Relatives	0.204	0.117	0.077	0.045
Constant	-4.697***	0.439		
Number of obs.	1410			

Note: * p<.05; ** p<.01; *** p<.001.

Table 3.7b
Estimates: Determinants of the incidence of employment married women – including partner's characteristics

Variable	1998 Sample			
	Coef.	Std. Err.	ME	Std. Err.
Age	0.226***	0.036	0.089	0.014
Agesq	-0.003***	0.001	-0.001	0
Hsize	-0.008	0.027	-0.003	0.011
Primary	0.02	0.21	0.008	0.083
Secondary	0.299	0.219	0.118	0.086
University	0.336	0.478	0.133	0.187
Relatives	0.2	0.143	0.08	0.057
Hus-Primary	0.198	0.256	0.078	0.102
Hus-Secondary	0.31	0.259	0.121	0.1
Hus-University	0.528	0.335	0.208	0.126
Hus-Real Earnings^	-0.040*	0.019	-0.016	0.007
Constant	-4.634***	0.622		
Number of obs.	795			

Variable	1986 Sample			
	Coef.	Std. Err.	ME	Std. Err.
Age	0.152***	0.032	0.053	0.011
Agesq	-0.002***	0	-0.001	0
Hsize	0.004	0.018	0.001	0.006
Primary	0.447**	0.137	0.157	0.048
Secondary	0.774***	0.156	0.277	0.056
University	1.136**	0.357	0.43	0.12
Relatives	0.247	0.136	0.089	0.051
Hus-Primary	0.193	0.17	0.068	0.06
Hus-Secondary	0.476**	0.18	0.166	0.062
Hus-University	0.835**	0.254	0.319	0.098
Hus-Real Earnings^	-0.007	0.017	-0.002	0.006
Constant	-4.417***	0.537		
Number of obs.	1103			

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places; Real earnings enter the regression in levels.

Table 3.8
Estimates: Determinants of the incidence of employment single women

Variable	1998 Sample			
	Coef.	Std. Err.	ME	Std. Err.
Age	0.175***	0.026	0.07	0.01
Agesq	-0.003***	0	-0.001	0
Head	1.168***	0.167	0.428	0.052
Hsize	-0.035	0.02	-0.014	0.008
Primary	0.106	0.202	0.042	0.08
Secondary	-0.401	0.208	-0.158	0.081
University	-0.341	0.415	-0.135	0.16
Relatives	0.09	0.103	0.036	0.041
Constant	-2.509***	0.413		
Number of obs.	852			

Variable	1986 Sample			
	Coef.	Std. Err.	ME	Std. Err.
Age	0.215***	0.026	0.084	0.01
Agesq	-0.003***	0	-0.001	0
Head	0.604***	0.149	0.236	0.057
Hsize	-0.054**	0.017	-0.021	0.007
Primary	0.745***	0.161	0.289	0.06
Secondary	0.577***	0.163	0.225	0.063
University	1.070*	0.49	0.386	0.133
Relatives	-0.266*	0.111	-0.103	0.042
Constant	-3.981***	0.423		
Number of obs.	909			

Note: * p<.05; ** p<.01; *** p<.001.

While estimates based on LFS data support the idea that in 1998 women in households where husband's have lower earnings are more likely to participate in the labour force, a more direct picture emerges from fieldwork conducted in Nairobi in 2003. In response to questions on how households cope with difficult economic circumstances, multiple responses were possible. As displayed below (Table 3.9), respondents provided a wide range of answers, but the most frequent response was the increasing labour market insertion of the spouse (about 45 per cent of the responses) followed by cuts in consumption (about 40 per cent of the responses).

Table 3.9
Copings strategies of household-heads
(frequency distribution of responses)

At least one of the Strategies	Middle Income Region	No.	Low Income Region	No.	Total
Work longer hours than usual	8 (11.9%)	67	5 (9.6%)	52	13 (10.9%)
Spouse started working or had to look for a job	19 (28.3%)	67	35 (67.3%)	52	54 (45.4%)
Children having to work	4 (6%)	67	1 (1.9%)	52	5 (4.2%)
Looking for another better paying job	3 (4.5%)	67	3 (5.8%)	52	6 (5%)
Looking for an additional job	9 (13.4%)	67	4 (7.7%)	52	13 (10.9%)
Starting another income generating activity besides usual job and engaging non-working household members	6 (9%)	67	11 (21.2%)	52	17 (14.3%)
Starting another income generating activity, and work during free time/multiple job holding	9 (13.4%)	67	5 (9.6%)	52	14 (11.8%)
Spouse, children forced to move back to the rural area	1 (1.5%)	67	6 (11.5%)	52	7 (5.9%)
Economising consumption/expenditure reduction	25 (37.3%)	67	23 (44.2%)	52	48 (40.3%)
Withdrawing children from school	1 (1.5%)	67	1 (1.9%)	52	2 (1.7%)
Increased reliance on remittances in kind	1 (1.5%)	67	1 (1.9%)	52	2 (1.7%)
Increased reliance on cash remittances from abroad	1 (1.5%)	67	0	52	1 (0.8%)
Sale of assets	2 (3%)	67	1 (1.9%)	52	3 (2.5%)
Sub-letting part of house for rent income	2 (3%)	67	2 (3.8%)	52	4 (3.4%)
Increased reliance on informal credit arrangements	13 (19.4%)	67	8 (15.4%)	52	21 (17.6%)
Increased reliance on informal support networks among households	3 (4.5%)	67	2 (3.8%)	52	5 (4.2%)
Diminished savings	5 (7.5%)	67	3 (5.8%)	52	8 (6.7%)
Increased reliance on formal loans	11 (16.4%)	67	1(1.9%)	52	12 (10.1%)
Increased reliance on farming activities	4 (6%)	67	2 (3.8%)	52	6 (5%)
Other unspecified strategies	2 (3%)	67	21 (40.4)	52	23 (19.3%)
None	2 (3%)	67	2 (3.8%)	52	4(3.4%)

Note: Interviews with 119 household-heads: 67 from the middle-income cluster and 52 from the low-income cluster.

Beyond the figures above, vivid illustrations of the increasing reliance on women and their role as breadwinners come from the following cases:

Box 3.1
Crisis and coping strategies

Case 1, middle-income household (Isaac, male age 53):

Isaac is a police officer, married to two wives and has 4 children. He moved to Nairobi in 1971 after completing secondary level education to look for a job. He joined police training and in 1972 after completing the training, he was hired. This is his first and current job. He rates his earnings in relation to cost of living for the following periods as, 'In the periods, 1975-79, 1980-85 and 1986-89, the cost of living was low but rising. Salaries were low also but the fact that the cost of living was relatively low especially in the 70s and early 80s as compared to later periods made life very cheap. I could even afford to marry a second wife! Thereafter, the cost of living increased drastically. In order to cope with tough economic times, I have had to diversify my income sources, first, by starting another income generating activity and engaging my first wife who resides in the rural area where she takes care of a transport and fish business; she sends fish to Nairobi for sale by my second wife who resides with me here in Nairobi. She also does some farming for subsistence and cash. My second wife has had to operate a second-hand clothes business in addition to her involvement in the fish business'.

Case 2, middle-income household (Margaret, age 40 and husband Ebrahim, age 50):

Married couple (monogamous marriage) and have four children all attending school. Margaret has secondary level education and is a paid employee in a private sector firm. She is the household's main breadwinner. Ebrahim was laid-off in 1997 at the age of 44. He says, 'I have tried to look for another job but could not find one. Jobs are not easy to come-by as in the past when I was first hired with only primary level education and with no additional training'. Ebrahim has moved back to the couple's rural home and engaged in farming. During the off-farming season, he comes to Nairobi to take care of the children.

Case 3, low-income household (Elizabeth, age 53 and husband Richard, age 63):

A polygamous household comprised of 2 wives and 9 children. Neither wives nor husband completed primary level education. After marriage, neither wife worked for cultural reasons and because there was no need. Richard first worked in the private sector from 1956 to 1962 and quit due to low pay. Since then, he has been self-employed running a fish and vegetable business. He rates his earnings in relation to cost of living for the following periods as follows: 'The period 1975-79 was very good due to low living costs and a small family size. I started the fish business with only Ksh.300 but today it requires Ksh.20,000-25,000. The period 1980-85 was good (sufficient) due to a low cost of living though it had started to rise. The periods 1986-89 and 1990-95 onwards have progressed from bad to worse due to increased living costs and a big family size'.

To cope with increasing living costs the household adopted various strategies; his wives started working in the family business, part of his family (wife with younger and more children) relocated to the rural area to cut down on the cost of living in Nairobi, withdrew children from school and increased reliance on informal credit arrangements.

3.5 Decomposition Analysis

The aim of this section is to identify the sources, structural and compositional, of the rise in the incidence of employment between these two periods. Results of the decomposition set out in equation 8 appear in Tables 3.10-3.12. The first row in each table contains the predicted differences in employment between 1986 and 1998. Between the two years, the gap is 12 per cent for women as a whole, 6.9 per cent for single women, and ranges from 12.8 per cent to 15.2 per cent for married women with and without controlling for partner's characteristics. These predicted differentials in employment are each decomposed into compositional and structural effects (rows 2 and 3).

Decomposition shows that the rise in employment for the sample of women, which does not distinguish between marital status (Table 3.10) and for single women (Table 3.11) may overwhelmingly be attributed to changes in the labour market valuation of various factors that influence employment status (structural effect) and accounts for about 68.3 per cent and 82.6 per cent of the rise respectively. The remaining 31.7 per cent and 17.4 per cent respectively, are due to changes in the observable characteristics (compositional). Amongst married women, the results differ and the increase in employment status of women may be equally attributed to compositional and structural effects.

Based on equations 9 and 10, considering the importance of individual variables and or groups of variables in influencing the compositional and structural effects may bring further insights. The remainder of this section is dedicated to this.

For the total sample of women, with regard to the compositional effect, women in 1998 had far more secondary education than women in 1986 and a large part of the compositional effect may result from the temporal increase in the educational endowment of women. Other variables such as household-head, marital status, household size and the presence of female relatives account for the remainder of the compositional effect.

Turning to the structural effect, all the education variables exert a negative effect on employment status (jointly reduce incidence by 151 per cent). Thus, although women in 1998 had a higher incidence of employment than in 1986, the importance given to women's education in determining employment declined and these variables worked towards reducing the probability of employment. While there was a decline in the

importance given to education in determining employment, the importance given to age increased suggesting that the labour market valued experience more heavily in 1998 than in 1986. The constant term has a positive sign and by far, displays the largest variation between the two time periods. It may be interpreted literally as the change in the probability of being employed for single, uneducated women who are not heads of households. A broader interpretation is that the constant captures the economy-wide increase in the tendency for women to join the labour force and seek employment, which may be driven by temporal changes in factors that influence the reservation wages for all women/households.[22]

Table 3.10
Decomposition analysis: Rise in the incidence of employment all women

Total Change	**12**	**100**		
Change due to Characteristics' Effect (CHE)	3.8	31.7		
Change due to Coefficients' Effect (COE)	8.2	68.3		
Variable	**Contribution to CHE**	**% Share**	**Contribution to COE**	**% Share**
Age	0.026	68.4	0.049	60
Agesq	-0.024	-62.8	-0.072	-88
Marital	0.003	7.8	0.028	33.6
Head	0.003	8.2	-0.004	-4.7
Hsize	0.006	14.5	0.007	8.8
Primary	0.001	3.5	-0.043	-52.9
Secondary	0.022	56.5	-0.074	-89.9
University	0	-0.4	-0.007	-8.4
Relatives	0.002	4.3	0.011	13.4
Constant			0.188	228
Sum	0.038	100	0.082	100

Among single women, most of the rise in employment may result from structural factors. In particular, once again education works towards reducing the probability of being employed while age/experience is more heavily valued and exerts a greater influence on being employed than it did in 1998. Although the compositional effect explains only 17 per cent of their total rise in employment, most of it is due to a less fa-

vourable structure in household-headship (by -40 per cent) and a more favourable structure in household size and education: primary, secondary, university levels together (by about 86 per cent and 60 per cent respectively). For example, if single women in 1998 had the same household-headship structure as in 1986, then the likelihood of employment in 1998 would be 40 per cent higher. Similarly, if single women in 1998 had the same education characteristics as in 1986, then the likelihood of employment in 1998 would be 60 per cent less. Hence, as far as the characteristics' effect is concerned it shows that the level of education increases the probability that a woman works while its place in the structural component shows that over time the importance attached to education in determining employment has declined.

Table 3.11
Decomposition analysis: Rise in the incidence of employment single women

Total Change	**6.9**	**100**		
Change due to Characteristics' Effect (CHE)	1.2	17.4		
Change due to Coefficients' Effect (COE)	5.7	82.6		
Variable	**Contribution to CHE**	**% Share**	**Contribution to COE**	**% Share**
Age	0.007	56.6	-0.256	-446.2
Agesq	-0.007	-58.6	0.023	39.8
Head	-0.005	-40	0.05	87.2
Hsize	0.01	85.5	0.024	41.2
Primary	0.003	25.8	-0.069	-119.5
Secondary	0.003	28.9	-0.105	-182.7
University	0.001	5.4	-0.005	-8.4
Relatives	0	-3.7	0.028	48.8
Constant			0.367	639.8
Sum	0.012	100	0.057	100

Tables 3.12a and b provide decomposition results for married women with and without controlling for partner's characteristics. As mentioned earlier, in contrast to single women, about half the increase in the employment rate of married women may be attributed to changes in composition and half to changes in structural factors. Focusing on the com-

position effect, the results in Table 3.12a show that the higher educational endowment of women in 1998 is responsible for a large proportion of the compositional effect (about 44 per cent – primary, secondary and university levels). The effect of their education is followed by the effect exerted by the higher educational endowment of their partners (about 32 per cent for primary, secondary and university levels together).[23] Changes in husband's real earnings account for nine per cent of the compositional effect. Since husband's real earnings have declined during this period, the estimates support the idea that a decline in husband's real earnings is associated with an increase in women's work participation.

In terms of the structural effect, the decomposition shows that employers are far more likely to seek experienced workers. Given the sharp increase in the labour supply of married women, it seems that employers are using experience as a device to screen potential employees and accordingly the importance of experience in determining employment status increases sharply between 1986 and 1998. As in the case of single women the effect of all levels of education in securing employment declines sharply (the proportion of women's own education in the structural effect is negative by about 162 per cent). With regard to partner's characteristics, reflecting the effect of lack of employment opportunities for educated individuals, partner's education is associated with a reduction in the probability of securing employment (a negative 44 per cent effect from partner's education primary, secondary, university levels together).

Turning to the effect of partner's earnings, the decomposition shows a 32 per cent decline in the role played by a spouse's earnings in determining a woman's employment status. To interpret this consider the probit results reported in the previous section, which show that in 1986, partner's earnings had no effect on a woman's employment status while in 1998, the effect was negative and statistically significant suggesting that lower levels of partner's earnings are associated with a higher probability of employment. One may interpret these numbers from both a demand and supply side perspective. From a demand-side perspective, these numbers suggest that in 1986, the earnings status of a woman's husband had no bearing on employer's hiring decisions. However, in 1998, employers were more likely to hire women married to husbands with lower earnings. From a supply-side perspective, in 1986, the earnings status of a woman's partner played no role in her decision to seek

work while in 1998 women married to partners experiencing income losses may have sought jobs more intensively driving the negative relationship between partner's earnings and women's employment status. Considering the composition and valuation effect together, it seems that changes in the level and valuation of partners' earnings are accountable for about 41 per cent (8.8+31.8) of the increase in female work participation between 1986 and 1998.

Table 3.12a
Decomposition analysis: Rise in the incidence of employment married women-including partner's characteristics

Total Change	**12.8**	**100**		
Change due to Characteristics' Effect (CHE)	6.2	48.5		
Change due to Coefficients' Effect (COE)	6.6	51.5		
Variable	**Contribution to CHE**	**% Share**	**Contribution to COE**	**% Share**
Age	0.028	45.3	0.6	908.4
Agesq	-0.019	-30.6	-0.299	-452.4
Hsize	0.003	4.4	-0.017	-25.9
Primary	-0.001	-2.3	-0.05	-75.3
Secondary	0.031	49.4	-0.054	-80.9
University	-0.002	-2.9	-0.004	-6.1
Relatives	0.003	4.4	-0.002	-2.5
Hus-Primary	-0.006	-9	0	0.7
Hus-Secondary	0.021	33.9	-0.023	-35.1
Hus-University	-0.001	-1.3	-0.006	-9
Hus-Real Earnings	0.005	8.8	-0.021	-31.8
Constant			-0.059	-90
Sum	0.062	100	0.066	100

Table 3.12b
Decomposition analysis: Rise in the incidence of employment married women – excluding partner's characteristics

Total Change	**15.2**	**100**		
Change due to Characteristics' Effect (CHE)	6.3	41.4		
Change due to Coefficients' Effect (COE)	8.9	58.6		
Variable	**Contribution to CHE**	**% Share**	**Contribution to COE**	**% Share**
Age	0.067	106	0.304	341.3
Agesq	-0.052	-81.9	-0.183	-205.7
Head	0.006	10	-0.013	-14.1
Hsize	0.004	6.9	-0.007	-8.1
Primary	-0.001	-1.1	-0.034	-37.9
Secondary	0.037	58.2	-0.056	-63.2
University	-0.002	-2.6	-0.008	-8.7
Relatives	0.003	4.5	0.001	0.9
Constant			0.085	95.5
Sum	0.063	100	0.089	100

3.6 Conclusion

Focusing on urban Kenya, this chapter attempted to identify the sources of the temporal increase in women's employment rate between 1986 and 1998. The chapter relied on labour survey data, household responses to coping strategies and case studies. The decomposition analysis presented in the chapter showed that over the period under scrutiny, women's higher educational endowments, particularly the increase in secondary level education, accounted for an improvement in the employment prospects of women. However, since the rise in women's educational endowments took place in a context of declining modern-wage employment opportunities, there was a sharp decline in the importance given to education in determining employment. Indeed, in 1998, university graduates were as likely to be employed as individuals with no education were.

Focusing on marital status, the analysis found that despite their probably higher burden of household duties and their ability to rely on a partner, married women were as likely to work as single women, over time. While in 1986, single women were 12 percentage points more likely

to be employed, by 1998, this difference had vanished and single and married women were equally likely to be employed. The increased entry of married (educated) women into the labour force at a time of declining job opportunities was probably responsible for the declining returns to education. At the same time, the increase in importance given to experience (age) in determining employment outcomes in 1998 may be attributed to the use of experience as a way of screening potential employees.

Finally, the analysis displayed that at least for married women, the decline in their husbands' real earnings as well as the role played by this variable in influencing employment outcomes may have accounted for about 41 per cent of the overall increase in married women's labour force participation. The fieldwork undertaken for this study also identified the increased insertion of (married) women into the labour market as the most common strategy in terms of coping with difficult economic circumstances.

Conventional explanations for the rising incidence of women in the labour market underline the effects of progress in female education, changes in cultural values and beliefs, expansion and diversification of occupational opportunities. While some of these factors such as the effect of increased educational endowment appear to hold in the current case, other factors such as better labour supply conditions or a diversification of the composition of work prospects accessible for women do not seem to play a role.[24] Indeed, as discussed in chapter 2, the period between 1986 and 1998 witnessed civil service reforms, restructuring in the private sector, firm closures and increasing job insecurities. Declining opportunities for males who in 1986 were the primary breadwinners and the accompanying income and employment insecurities within households seems to be a key factor prompting the sharp increase in the labour supply of (married) women.

Notes

[1] As one of the few sub-Saharan countries to experience remarkable declines in fertility in the last two decades, Kenya has seen its total fertility rate decline from 8.1 in 1978 to 4.8 in 2003. Between 1962 and 1977, total fertility rates increased from 5.3 to 8.1. Thereafter, they declined to 4.8 children per woman, a decline of 42 per cent over 25-years. Based on this cursory analysis of fertility trends in Kenya, the steepest drop occurred during the late 1980s and early 1990s and slowed during the mid-1990s. In terms of LFPR, owing to the eras of high fertility increase in the 1960s and 70s, the impact of those born then must have influ-

enced labour-force structures of the mid-1980s on, via an increase in the share of the working age population exerting pressure on the existing labour-force. An additional important trend to note is the rising number of childless women, implying an increase in the age at birth (based on Demographic Health Survey reports). Most childless women are in the 15-19 and 20-24 age groups and are probably still at school pursuing either secondary or higher education, or unemployed job seekers. After age 15-19, there is a sharp decline in the number of childless women, which is also linked to the age at first marriage. All together, the rising trend in the number of childless women in all age groups, and especially at younger ages, coupled with the fact that those who have children are having fewer of them is an indication of a rising shift towards productive activities vis-à-vis reproductive activities.

[2] LFPR is the proportion of employed and unemployed persons in the relevant working-age population. LFS data collection on Kenya has occurred at three distinct times: 1977, 1986 and 1998. According to reports based on these surveys, labour-force participation rose by 17 percentage points between 1977 (females 38.8 per cent; males 83.9 per cent) and 1986 (females 55.8 per cent; males 82.2 per cent) and by 30.1 points between 1986 and 1998 (females 85.9 per cent; males 86.9 per cent).

[3] These statistics showing high economic activity among women (and men) should be interpreted cautiously as they unfortunately mask the under-employed. Moreover, statistics on open unemployment give an incomplete image of labour market conditions because they do not factor in under-employment or more significantly, poverty-level employment (persons who claim to be employed but earn very low incomes) Pollin et al. (2007).

[4] In developed economies and the European Union (EU), ER is about 48 per cent, 49 per cent in Central and South Eastern Europe (Non-EU) and CIS (Commonwealth of Independent States – former Soviet Republics), 70 per cent in East Asia, 59.9 per cent in South East Asia and the Pacific, 36.7 per cent in South Asia and about 20-22 per cent in the Middle East and North Africa (ILO 2009). Cultural obligations, welfare benefits, women's attitudes towards motherhood and having children and education are some of the factors that explain these differences. In seven out of nine regions, female adult employment-to-population rate increased between 1998 and 2008. Although the largest increases occur in Latin America and the Caribbean, the Middle East and North Africa, the rates remain well below 30 per cent in the latter two regions. ER varies from country to country within a specific region. For instance the percentage of women in paid work is particularly high in the Scandinavian states (Denmark, 73.2 per cent; Sweden, 71.8 per cent; and Finland 68.5 per cent) and in the Netherlands (69.6 per cent). UK has the third highest rate of female employment in Europe with a record 70 per cent of women at work. In countries such as Spain,

Italy and Greece, ER is about 40 per cent. Malta has perhaps the lowest rate of women at work in Europe – about 36.9 per cent.

[5] Within a particular group, employment rate is the proportion of the working-age population that is employed (including unpaid family workers) while working-age population refers to population aged 15-64 years. Labour-force participation rate refers to the proportion of the working-age population that is in the labour-force while labour-force (economically active) refers to the number of people who are either in work or are available and actively seeking work (that is, employed or unemployed). The economically inactive (those not in the labour-force) refers to the number of people who are not in work and are either not available or not actively seeking work (that is, they are not employed and not unemployed). This includes for example, retired people, students and people at home with children.

[6] From a statistical point of view, LFPR and ER are dichotomous variables with two mutually exclusive states taking the value of one if one participates in the labour-force or if one is employed and zero otherwise (the base category). To estimate the determinants of LFPR or of ER would require estimating a probabilistic function such as a logit or a probit model. Estimating a LFPR function is difficult as in the 1998 sample nearly all women are in the labour-force.

[7] For instance, married women's labour supply decisions are typically made in the context of decisions taken by other members of the household or family. To overcome these objections, various extensions of the individual labour supply model have been made such as game theory models; individual utility models; bargaining models and new household economics models (see for example Haddad et al. (1997)). For simplicity, this study assumes that urban households pool-income, make joint decisions over expenditures and labour allocation. However, it is important to note that assuming income is pooled, implies income is equally shared among household members. This may not be the case as income is non-pooled in some instances and not equally shared due to unequal power relations within households). It is also possible that some women engage in paid work or income generating activities to enhance their power position in the household or due to a desire to have independent income or as a risk precaution measure in case a marriage/relationship breaks down or in case the main-income earner is unable to provide for the family as a result of joblessness or other natural calamities. Household composition and structure, and the cohesion of the family members determine its ability to mobilise additional labour. Households can also be seen as adaptive institutions for pooling income and other resources and for sharing both consumption modifying and income raising strategies.

[8] For the probit model, F ($Xi\beta$) in equation (1), is the cumulative standard normal distribution function, which rises from zero to one as Z goes from negative infin-

ity to positive infinity. The probit model employs an integral, making it computationally more difficult than the logit. For the logit model, F (Xiβ) is the logistic function that also rises from zero to one and employs an exponential function – where the logit transformation is the natural log of the odds ratio, the function used in probit is the inverse of the standard normal cumulative distribution function. A logistic regression is based on the assumption that the categorical exogenous reflects an underlying qualitative variable and uses the binomial distribution while a probit regression assumes the categorical dependent reflects an underlying quantitative variable and it uses the cumulative normal distribution. The logit is easier to interpret in terms of the odds ratios. Probit models have the drawback that probit coefficients are more difficult to interpret – interpretation of estimated coefficients from a probit model is not straightforward because there is no equivalent to logistic regression's odds ratios as effect sizes in probit. Hence, they are less used although the choice is largely personal preference. From an empirical standpoint, logit and probit models typically yield similar estimates of the relevant derivatives. This is because the cumulative distribution functions for the two models differ only slightly in the tails of their respective distributions. However, while the derivatives are usually similar, the parameter estimates obtained from the two models differ. Parameter estimates of both models can be made comparable by multiplying those from the logit by a factor, 0.625.

[9] See for example Greene (2003: 667).

[10] Manda (1997), found the relationship negative but statistically insignificant. He argues that there are perhaps social mechanisms of spreading the burden of rearing children, for instance, the presence of extended family members in a household.

[11] Both Blinder (1973) and Oaxaca (1973) first used the Blinder-Oaxaca decomposition in separate works on wage discrimination and gender wage differentials. In the analysis of wage differentials (continuous outcomes), the observed log of the wage gap between two groups is decomposed into a part explained by differences in the average individual characteristics and a part explained by differences in coefficients (ascribed to discrimination in the labour market).

[12] Clark and Drinkwater (2006) applied an extension of the Blinder-Oaxaca decomposition to analyse employment gaps of main ethnic groups in England and Wales between 1991 and 2001. Gutierrez-Domenech and Bell (2004) used it to analyse the rise in female labour-force participation in the UK between 1984 and 2002 and Gray et al. (2002, 2003) applied it to changes in employment and labour-force status of Australian women. In addition, Gomulka and Stern (1990) used the decomposition to analyse the employment of married women in the UK between 1970 and 1973.

[13] See also Blackaby et al. (1998, 1994); Fairlie (2003); Jensen and Nielson (1997); Nielsen (1998); Wen-Hao et al. (2005); Yun (2004).

[14] 'The choice across these alternative methods of calculating the first term of the decomposition is difficult and depends on the application with many studies reporting results for more than one specification' (Fairlie 2003: 3).

[15] The compositional (characteristics) effect captures the role of personal, human capital and other endowments in the likelihood of being employed or of getting a job while the structural effect captures an employer's valuation of these characteristics thus the demand-side of the labour market.

[16] As per Yun (2004).

[17] As noted decompositions are done using the weights from pooled samples (pooled 1998 and 1986 sample) for the changes in ER. Results for alternative decompositions (equations 4 and 5) are available upon request.

[18] Fertility has remained substantially higher in the rural areas than urban areas, a pattern that is evident at every age and widens with age. It is worth noting that although fertility has declined at both national and provincial levels, urban areas recorded the steepest decline between 1989 and 1999 (from a TFR change of 4.5 between 1979-89 to 2.7 between 1989-99 as compared to a TFR change of 7.0 between 1979-89 to 5.8 between 1989-99 for the rural areas).

[19] According to DHS and census statistics, the national proportion of female-headed households increased from 35 per cent in 1989 to 37 per cent in 1999 while male-headed households dropped from 65 per cent in 1989 to 63 per cent in 1999. In rural areas, the proportion of female-headed households dropped from 84 per cent in 1989 to 81 per cent in 1999, while that of urban areas increased from 16 per cent in 1989 to 20 per cent in 1999. Hence, the two per cent national increase in female-headed households was mainly because of the four per cent increase in the proportion of female-headed households in urban areas. The proportion of male-headed households in urban areas increased from 26 per cent to 29 per cent while that in rural areas dropped from 74 per cent to 71 per cent. The drop in the overall number of male-headed households was perhaps due to the drop in the number of male-headed households in rural areas.

[20] According to DHS and census reports, the mean age at first marriage for women in all age groups has risen in both rural and urban areas and remains consistently higher in urban areas. In the urban areas, it increased from 19.8 in 1989 to 21.4 in 2003 and from 18.3 to 19.3 for rural areas.

[21] Since one of the primary purposes of estimating separate probit models is to use the estimated coefficients as inputs within the decomposition procedure, neutral coefficient estimates from a pooled sample of the two periods are not reported in the interest of brevity.

[22] Estimating coefficients includes estimating the constant term and the coefficients effect normally incorporates the constant term's effect. Constant term's coefficients effect explains the gap in women's employment between 1986 and 1998, which is not attributed to measured variables and to omitted dummy categories among explanatory variables. It could also be interpreted as baseline differences between the two periods and as the overall change in the economic structure.

[23] In Table 11b in which husband's characteristics are excluded, main factors in the compositional effect are the negative effect of age variables (by about 24 per cent for age and age-squared together) and the positive effect of secondary level education (by about 58 per cent). Key variables determining the structural effect are the positive valuation of the age variables (by about 135 per cent for age and age-squared together) and of the constant term (by about 96 per cent).

[24] In-fact, the gender composition of employment by occupational categories has remained relatively stable. The proportion of women employed in the formal sector was about 18 per cent in the mid-1980s, rose to about 20 per cent in 1986 and remained relatively stagnant until the 1990s where the highest increase is observed. Thereafter, the levels stagnated to about 30 per cent.

4 Gender Differences in Unemployment in the Urban Areas of Kenya

Abstract: In recent years, there have been sharp changes in the Kenyan labour market. Most notably, as discussed in the previous chapter, remarkable increases in female labour force participation in urban areas over the period 1986 to 1998. The sharp increase in female LFPR has not been matched by an increase in their employment rate and consequently unemployment amongst women remains a pressing problem. In contrast, male unemployment rates are substantially lower and have not increased significantly over time. This chapter uses data from two time periods, 1986 and 1998, to identify the factors that influence the likelihood of being unemployed and to examine why women are more vulnerable to unemployment than men are. Using a decomposition framework, the chapter establishes whether the gender gap in unemployment is driven by differences in observable characteristics between women and men (a composition effect) or differences in the returns to these characteristics in the labour market (structural effect/discrimination). The analysis shows that the overall likelihood of being unemployed is heavily influenced by sex, marital status, household-headship and human capital characteristics such as experience and level of education. The decomposition estimates display that for both periods, gender gaps in unemployment are overwhelmingly, about 81 to 84 per cent, attributed to the composition effect.

4.1 Introduction

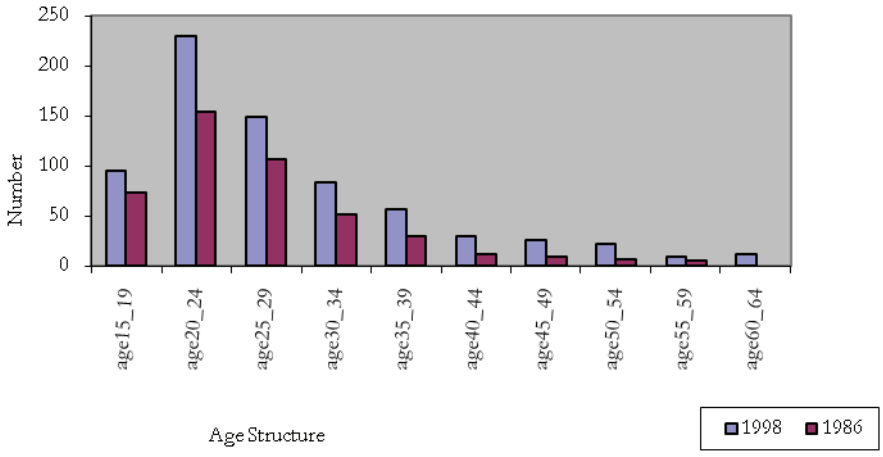
Globally, a recent trend observed in labour markets has been the increasing proportion of women in the labour-force.[1] Consequently, the gap between labour force participation rates for men and women has been decreasing in all regions and for some countries such as Kenya, labour force participation rates show almost no gender differences. However,

the increased entry of women into the labour market has not necessarily meant that those looking for work have been successful in finding it.

While for the world as a whole, female unemployment rate (UR) in 2003 was only slightly higher than male UR (6.4 per cent for female and 6.1 per cent for male), there are large gender gaps in some countries and some regions of the world.[2] At the same time, there are also regions, such as sub-Saharan Africa (SSA), and East Asia where female unemployment rates are *lower* than male unemployment rates. These overall patterns, however, do not draw a distinction between rural and urban areas and in particular the overall pattern for SSA is different from the situation in Kenya where, gender gaps in unemployment especially in urban areas are pronounced and women are far less likely to be employed than men are.

This chapter is restricted to the urban areas of Kenya where the overall urban unemployment rate rose from about 7 per cent in 1977 to 16 per cent in 1986 and to 25 per cent in 1998. However, as noted above, this overall trend is quite distinct by sex – for instance, male unemployment increased from 6.8 per cent in 1977 to 12.9 per cent in 1986 and marginally to 14 per cent in 1998 while female unemployment rate increased from 6.4 per cent in 1977 to 32.8 per cent in 1986 and to 41 per cent in 1998 (see Table 4.1). Clearly, the tremendous increase in female unemployment drove the sharp increase in overall unemployment. Going a little deeper, we see that for 1986 and 1998, years for which data are available, increases in unemployment appear among both young and married women in nearly all age groups (Figure 4.1). In 1986, 57 per cent of all unemployed persons in the labour force were women. By 1998, the proportion had risen to 74 per cent. As a result, over the period 1986 to 1998, gender gaps in the unemployment rate (measured as female unemployment rate minus the male unemployment rate) increased from 20 percentage points to 27 percentage points in 1998 (Table 4.1).[3] This gap is by far bigger than has been observed in a number of other countries (in 1999 the gaps in Spain, Greece, Italy, France and Czech Republic were about 12, 10, 7, 3.3, 3.2 percentage points respectively).

Figure 4.1
Female unemployment rate



Source: Obtained from the LFS data.

Table 4.1
Labour-force status by sex and marital status persons of age 15-64 (percentage proportion)

Unemployment Rate All Urban	19.6			27.3
	Females		**Males**	
	1986	1998	1986	1998
Employed	39.2	51.4	73.5	75.9
Unemployed	19.2	35.8	10.8	12.4
Inactive	41.6	12.8	15.7	11.8
Total	100.0	100.0	100.0	100.0
Unemployment Rate	32.8	41.0	12.9	14.0
Married	35.7	46.6	4.51	7.81
Single	28.8	31.5	35.1	31.4

Source: Computed from the LFS data.

In addition to gender gaps in unemployment, a notable feature in many SSA countries is the high rate of youth unemployment. At 21 per cent, youth unemployment in Africa is much higher than the worldwide

average (14.4 per cent). In 2002-03, the youth population in SSA was an estimated 138 million people, with 28.9 million (or 21 per cent) of them unemployed, the second highest rate in the world. The highest rate is found in Middle East and North Africa about 25.6 per cent, while East Asia has the lowest rate, about 7 per cent (UNECA 2005). Fertility rates in SSA are declining at a much slower rate than in the rest of the world and based on current trends, future increases in the youth labour-force will impose substantial pressure on the labour market. The youth labour-force in SSA is projected to grow by 28.2 per cent between 2003 and 2015, compared with a 3.8 per cent increase in South-East Asia and a decline of about 3.1 per cent in industrialised economies (including the transition economies). SSA is the only region where adult and youth labour-forces will grow at a similar rate, around 30 per cent with further unfavourable repercussions for the youth labour market (ILO 2004).

Table 4.2
Distribution of persons in the labour-force by gender and age (%): 1998 and 1986 – urban areas

Overall	**1998**			**1986**		
	Adult*	Youth**	Total	Adult*	Youth**	Total
% Unemployed in the Labour-force	35	65	100	22	78	100
Youth Only	**1998**			**1986**		
	Female	Male	Total	Female	Male	Total
% Proportion Unemployed: Total	76	24	100	54	46	100
Unemployment Rate	*49*	*24*	*39*	*42*	*24*	*31*

Note: * represents ages 30-64; ** represents ages 15-29. *Source:* Computed from 1998 and 1986 LFS Data.

There are notable gender differences in youth unemployment between Kenya and the rest of SSA. In SSA, the UR of young women (18.4 per cent) is lower than that of young men (23.1 per cent) while at the same time the LFPR of female youth is lower than that of their male counterpart.[4] However, in Kenya, in 1986, the LFPR of young men was

18 per cent higher than that of young women while by 1998, the LFPR of young women was 8 per cent higher than that of young men.[5] Consistent with their higher rates of LFPR, female youth unemployment is higher than the male youth unemployment rate, for instance, female youth UR in 1986 was about 42 per cent as compared to 23 per cent for males. More than a decade later, in 1998, female youth UR had increased to about 49 per cent while for males, it was still at the 1986 level. As shown in row 3 of Table 4.2, in 1998 and 1986, 65 per cent and 78 per cent, respectively, of all unemployed persons may be classified as youth. Youth unemployment in Africa also has a geographical aspect: it is generally higher in urban areas although lower youth unemployment figures in rural areas are likely to hide under-employment in low productivity smallholding agriculture—rural unemployment is high in countries with commercial farms and a formal agricultural wage sector, such as Kenya—about 33 per cent (Leibbrandt and Mlatsheni 2004).[6]

Economic theory points to a number of possible explanations for gender gaps in unemployment rates. On the demand side, discrimination, which may be defined as differences in unemployment rates after controlling for observed characteristics that have a bearing on employment, is suggested as one of the factors that may explain the higher female unemployment rate. Discrimination itself may be subdivided into two main sources: employer-driven prejudices, which may lead to a lower level of female employment and statistical discrimination, whereby employers, in the absence of perfect information, attribute the characteristics of a group to individuals and assume that all women have a lower level of labour market attachment and are less qualified than men are in terms of their unobserved productivity related attributes. On the supply side, rising female labour force participation combined with the inability of an economy's capacity to absorb new labour force entrants, lower attachment of women to the labour force reflected in higher transitions into and out of the labour force and lower job search intensity, are some of the factors which may be responsible for gender gaps in unemployment rates.

Empirical analyses of factors that drive unemployment in developing countries are the subject of many studies, starting with a well-known 1972 ILO study on Kenya. More recently, studies on developing countries include, Lachud (1994) on West Africa, Assaad et al. (2000) on Egypt, Kingdon and Knight (2000) and Mlatsheni and Rospabe (2002)

on South Africa, Echebiri (2005) on Nigeria, Kabbani and Kothari (2005) on the Middle East and North Africa. While some of these studies recognise the existence of a gender imbalance in unemployment, none has empirically examined why women are disproportionately more vulnerable to unemployment than men are. Indeed, while there is extensive developing country literature on gender gaps in labour-force participation and wages, despite the gender gaps in unemployment rates in many parts of the developing world, studies that investigate this gap are scarce.

In the context of developed countries, a survey of the literature on the United States shows that from 1950 to 1980, women's unemployment rate was higher than that of men.[7] Niemi (1974), in an early study concludes that the key reason for the relatively high rate of female unemployment was the extensive movement of women in and out of the labour force. As a result, Johnson (1983) argues that a large part of the observed gender gap in female-male unemployment rate is not a cause for concern as it has to do with the definition and methodology used in deriving unemployment statistics rather than to discrimination in productive opportunities. Johnson underlines that 'differences in male and female unemployment rates are not undesirable per se, and the simple fact that female rates exceed those of males is not evidence that female rates are too high. A strict comparison of unemployment rates by sex is confounded both by the predominant female option of the non-market occupation of homemaker and by the asymmetric treatment of 'non-market and market occupations in defining unemployment' (301). Lingle and Jones (1978) concerned about the gap in female-male unemployment rate since World War II and an apparent worsening of this difference during the 1960s draw a similar conclusion. A more recent study by Howe (1990) looks at the differences between unemployment rates of adult men and women, which was much higher in the late 1960s and 70s, but disappeared in the 80s (a decade of generally higher jobless rates). Howe examines the labour market dynamics that led to this change and finds that the probability of job loss had significant bearing on the rise in adult male unemployment during the past 20 years. Once unemployed, men have faced increasing difficulties in finding work, thus, contributing to the rise in their unemployment rate and the narrowing of the female-male unemployment rate gap. DeBoer and Seeborg's (1989) study on the disappearance of the female-male unemployment gap in the 1980s draws

a similar conclusion. They analyse trends in the probabilities of labour force transition between employment, unemployment and non-participation and find that about half of the narrowing of the unemployment rate differential during the 1968-85 period was due to the rising labour force attachment of women and the declining attachment of men. The authors attribute the other half primarily to the secular decline of male-dominated industries.

Azmat et al. (2006) study on Organisation for Economic Cooperation and Development (OECD) countries examines why the female unemployment rate is substantially higher than the male unemployment rate in many European countries with high unemployment rates.[8] Their analysis shows that this gender gap can neither be explained by the gender wage gap, nor by differences in the type of jobs men and women do, in benefit receipts, search intensity and labour market transitions caused by the allocation of domestic responsibilities. However, there does seem to be some correlation with social attitudes about whether men are more deserving of work than women are. They note that a large part (referred to as discrimination) of the gender-gap is not explained by differences in observed characteristics, which is akin to the literature on the gender pay gap. Thus, discrimination against women may explain part of the gender gap in unemployment rates especially in the Mediterranean countries where the gender unemployment gap is quite high.

Ham et al. (1999) examine the reasons for gender gaps in unemployment in the Czech and Slovak Republics. They find that differences in returns to characteristics account for most of the difference between men's and women's probabilities of exiting unemployment, suggesting that differences in the attitudes and practices of employers and institutions towards men and women explain most of the differences in exit rates from unemployment in both countries.[9]

In the Kenyan context, although high unemployment remains one of the key challenges facing the economy, analysis of the factors that determine unemployment and more specifically analysis of gender gaps in unemployment are lacking. This chapter endeavours to contribute to this gap in research.

More specifically, this chapter uses two cross-section data sets to identify the factors that determine the overall likelihood of being unemployed in the urban areas of Kenya.[10] It then goes on to examine gender differences in the probability of unemployment and finally to explore

whether gender differences in unemployment are due to different observable characteristics between males and females or whether they are driven by differences in labour market returns to these characteristics.

The rest of the chapter is as follows: section 4.2 outlines a conceptual framework for the study, section 4.3 describes the data while sections 4.4 and 4.5, respectively, present estimates of the likelihood of being unemployed and of the decomposition of the gender gap in unemployment. Section 4.6 concludes.

4.2 Conceptual Framework and Methodology

This section describes the conceptual framework utilised in this chapter. It begins by defining the terms unemployment and youth. This is followed by a theoretical discussion of the determinants of the gender gap in unemployment rates, and a discussion of the empirical models used to estimate the determinants of unemployment and decompose gender gaps in unemployment.

4.2.1 Defining unemployment

The *rate of unemployment* is widely used to indicate the well-being of a labour market and is an important measure of the state of an economy in general. While there is no dispute about the definition of the unemployment rate, which is defined in terms of the number of unemployed individuals as a proportion of the labour force in practice, categorising working-age persons as employed, unemployed or out of the labour-force is tricky. Individuals may be classified as unemployed using a narrow or a broad measure. The narrow definition treats the unemployed as jobless persons who looked for work in a given period.[11] This definition excludes discouraged workers. The broader measure includes those unemployed based on the narrow measure plus those who wanted to work but did not look for work in the reference period. This definition therefore includes discouraged workers. The concern is whether discouraged workers (people who wish to work but are not actively seeking a job since they see no possibility of obtaining gainful employment) should be excluded from the unemployed given that their condition outside the labour-force is driven by the prevailing conditions.

According to the discouraged worker hypothesis, such workers' job search is hampered by impediments such as poverty, cost of the search, long duration of unemployment and adverse local economic conditions

(Kingdon and Knight 2000). At high unemployment rates, unemployed persons may stop actively searching for work because they are discouraged by the high prevailing rate of unemployment or the long duration of their own unemployment. The perception that the probability of finding work is low depresses the perceived benefit-cost-ratio of the job search. In such circumstances, it would seem reasonable to treat those who do not have a job and are no longer looking for work because they are discouraged, as unemployed.[12] The data at hand contains information on whether an individual sought work in the last week and solicits information on reasons for lack of a job search. If individuals are seeking work or they respond that they do not seek work, as they believe no work is available, they are treated as unemployed (discouraged workers). Furthermore, following Wambugu et al. (2009), the broad definition, which relaxes the condition 'searching for work', is used mainly in countries where a large proportion of the population is made up of discouraged workers or is engaged in subsistence agriculture and informal activities. As this condition characterises many African economies, the broader definition would be more appropriate except where international comparisons are made with countries outside Africa. Hence, in this chapter, persons without work or available for work although they have not taken active steps to find work are treated as unemployed.

4.2.2 Defining youth

According to the standard UN (United Nations) definition, the *youth* comprises the age group between 15 and 24 thus the term 'adult' refers to those aged 25 and over. The operational definition of youth varies widely from country to country depending on cultural, institutional and political factors (O'Higgins 1997). Since children in Africa are often likely to be in school beyond the standard school-going age and/or are likely to start school late, it seems reasonable to lengthen the age category defined as youth.[13] Accordingly, in the Kenyan context, youth are defined as persons in the age group 15 to 29 (Republic of Kenya 2006).

4.2.3 Human capital, institutions and discrimination in explaining the gender gap in unemployment rates

Individual differences in employment status are a function of factors that influence the demand and supply of labour. Factors influencing the demand for labour include among others, the industrial structure (share of

primary, secondary and tertiary sectors) of a country's economy, its reliance on labour (capital) intensive industries, and technology. Factors that have a bearing on the supply side include personal characteristics such as age, sex, marital status, household-headship and education as well as the social and economic characteristics of the family or household in which one lives. Observed unemployment outcomes are a result of the interaction of these demand and supply factors and variations in outcomes across individuals with different characteristics – education, experience, sex, are a result of the supply of individuals with such characteristics and the resulting labour market valuation of such characteristics by employers.

More specifically in terms of gender gaps, while there is a limited literature on the differences in unemployment between men and women, a good starting point is the substantial literature on gender pay gaps in which the gap is seen as the result of 1) labour market attachment that leads to differences in human capital accumulation and 2) discrimination.[14] In the context of the human capital framework, it is possible to identify the proportion of the average wage difference between two sexes explicable by human capital characteristics and discrimination. According to this framework, discrimination would be said to occur if employers pay different wages to persons with the same stock of human capital. Labour market discrimination occurs when two people of equal productivity are paid different wages, hired into different jobs or given unequal training opportunities based on characteristics such as race, sex, religion or nationality. Sex discrimination can then be measured by the amount of wage gap between men and women, which is unexplained by male/female differences in human capital (i.e. education, training and experience).

Based on the context of industrialised countries, Anker and Hein (1986) note that the results from such decomposition analyses generally show that differences in human capital cannot explain a significant proportion of the male-female wage gap. More recently, Azmat et al. (2006: 5) observed that 'there remains some debate about how much of the gender pay gap can be explained by differences in human capital and that there is no longer any debate (as there once was) that this hypothesis has considerable explanatory power'.[15] In terms of magnitude, studies based on developed countries' data tend to show that a larger proportion of the wage gap may be attributed to differences in human capital characteris-

tics while for developing countries the unexplained proportion seems to dominate. For example, based on data from the US, 38 per cent of the gender wage gap remains unexplained (Blau and Kahn 1997). With respect to developing countries, Psacharopoulos and Tzannatos (1992) find that on average, the unexplained proportion of the wage gap accounts for about 88 per cent of the male advantage in pay in 15 Latin American countries. Studies on gender wage gaps in Africa are few and Weichselbaumer and Winter-Ebmer (2005) observe that only three per cent of all existing studies on gender wage gaps since the 1990s are on Africa. To mention a few, Glick and Sahn (1997) find that in Guinea Conakry, differences in characteristics account for 45 per cent of the gender wage gap in self-employment and 25 per cent of public sector employment while in the private sector women actually earn more than men do. A study by Temegesen and Zeufack (2002) based on manufacturing survey data pooled from four sub-Saharan countries find that only about 29 per cent of the gender wage gap is explicable by differences in human capital characteristics. Agesa (1999) finds that the relative wage for Kenyan urban women as a percentage of men's is 63 per cent out of which about 60 per cent is unexplained. A more recent study on Kenya (Mariara 2003) shows that 78 per cent of the differential in male and female mean log wages may be attributed to differences in returns.

Following the literature on gender gaps in wages, disparities in unemployment between men and women may arise because of differences in human capital and due to discrimination. Women's relatively weaker labour force attachment due to their role in child-bearing and child-raising may lead to lower levels of human capital attainment and in turn lower employment levels. The human capital aspect has been very important in pointing out some of the productivity-related differences between men and women, which account at least partially for the fact that men earn more than women do. For this reason, policies to improve the labour market position of women are often based on the need to improve women's human capital (education levels and training). Discrimination against women in hiring, defined in terms of a lower probability of being hired controlling for differences in human capital characteristics, may also contribute to high female unemployment levels and can result from a variety of causes related to sex specific stereotypes on the part of the employer or the customers of the firm, or an employer's inability to discern the true productivity of women.[16] Whatever the reason, gender dif-

ferences in employment do exist and as Kaufman (1994: 386) notes, 'Regardless of the cause, the result is that women are systematically denied employment in certain occupations because of their gender' (Kaufman 1994: 386).

Beyond discrimination, several labour market institutions may have an impact on women's employment rates. With respect to the role played by institutions in the connection between both the gender differences in human capital and in unemployment rates, evidence from 17 OECD countries has shown that labour market features such as minimum wage laws and trade unions that constrict the distribution of wages may undermine the incentives to employ workers with lower levels of human capital leading to higher unemployment rates for such groups.[17] Blau and Kahn (2003) find that these institutions have a substantial impact on the gender wage gap and it is therefore not surprising that they also have an important impact on gender gaps in unemployment rates. Bertola et al. (2007) report that high gender gaps in unemployment rates and high youth unemployment rates are connected with wider union coverage. Azmat et al. (2006) argue that institutions that lessen the turnover of labour (such as firing costs) and those that make it harder for workers who are weakly attached to the labour-force to stay employed (such as widespread enforcement of temporary contracts) are also prone to augment the gap in unemployment rates between workers with strong and weak levels of labour market attachment. For instance, firing costs can reduce the involuntary part of the flow out of employment mainly for workers with long job tenures but they can also be associated with reductions in the hiring rate. If the outflow rate for women is higher than for men, this cutback in hiring will be inclined to amplify the gender gap in the unemployment rate. Similarly in the presence of equal pay legislation, one way for employers to deal with the lower level of human capital of women may be through differential hiring rates which may be easier in countries where labour markets are slack (Azmat et al. 2006).

To conclude, the discussion and interpretation of results that follow draws on the idea that male-female differences in unemployment can be decomposed into a portion that may be explained by differences in human capital and other observed characteristics and an unexplained portion, which may be a result of labour market discrimination. While attributing the entire unexplained portion to discrimination may indeed be challenged, in this chapter, I follow the well-established literature on fe-

male-male gender wage gaps and treat the unexplained proportion as an *upper bound* of the extent of discrimination.

4.2.4 Model specification and variables: Determinants of unemployment

Following the above conceptual thinking, unemployment depends on the endowments of an individual and the value accorded to an individual's characteristics in the labour market. As outlined in chapter 3, this chapter relies on a probit model to estimate the determinants of being unemployed. To examine the determinants of unemployment we write the following function,

$$\text{Probability } (U_i=1) = F(\beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \ldots\ldots + \beta_k X_{ki})$$
$$\text{that is, } F(X_i\beta), \qquad (1.a)$$

where U_i the dependent variable of interest takes on a value 0 if an individual is employed and $U_i=1$ if an individual is unemployed. The probability that $U_i=1$ depends on a vector of individual and household attributes (X_i). This specification is estimated separately for 1986 and 1998.

In detail, characteristics that may influence the probability of being unemployed and which are included in the model are age, level of education, marital status, household headship, family size and presence of female relatives.

Unemployment is expected to be high among the youth and to decline with age. Thus, the risk of unemployment may be expected to exhibit a U-shaped pattern with respect to age whereby younger and older workers are at a greater risk of unemployment (Arulampalam and Stewart 1995; Blackaby et al. 1998, 1999) in comparison with prime-age workers. Younger labour-force entrants experience the highest rates of turnover (O'Higgins 1997[18]) while older workers are more likely to be unemployed or inactive because they have a lower re-employment probability especially if employers believe that they are more expensive to train and have poorer health and fitness. Age is included among the determinants of unemployment to pick up lifecycle effects and as a measure of potential labour market experience. Age-squared is included to allow for a non-linear relationship between age and the probability of unemployment.

The risk of unemployment may be expected to vary considerably with the level of educational attainment. Persons with more education are likely to have lower rates of unemployment, as they may be more valuable to potential employers; they are also less likely to drop out of the labour-force given the high cost of economic inactivity.

Household and family characteristics may be expected to have an influence on unemployment. The effect of marriage could be positive or negative and may differ across males and females. For instance, married males may be less likely to be unemployed as compared to those who are single due to added financial commitments and social pressures that come along with marriage. Among women, marital status may tend to increase their probability of being unemployed due to the reproductive burden.

An important factor that may have a bearing on unemployment is whether an individual is a household-head—defined in the surveys as the chief decision-maker of a household whose authority is acknowledged by other members of the household (Republic of Kenya 2003). Given these responsibilities, it may be expected that household heads are less likely to be unemployed and may engage in a more intensive job search as compared to non-household heads.[19] From the demand side, employers may be more likely to recruit household heads as they may use this variable as a proxy for the unobserved productive characteristics of an individual. Since there are fewer women than men household heads, differences in this variable may also be responsible for differences in gender unemployment rates.

Household characteristics also include childcare responsibilities: number of young children below school age, household size, and the presence of female relatives in a household. Women with younger children are more likely to be unemployed than those with no children or those with school age children. However, decisions to have children and to participate in the labour-force are endogenous hence; the presence of children below school age (0-6) is excluded from the model.[20] Presence of female relatives in a household would be expected to reduce the probability of unemployment among women, on the assumption that such relatives would offer assistance in caring for children and in domestic chores setting the women free to engage in productive work.

The effect of household size on the probability of unemployment is ambiguous. A large household could mean heavier household chores and

therefore a higher reservation wage of a woman. In this case, the effect on the probability of being unemployed would be positive. On the other hand, a large household could mean increased financial constraints requiring her involvement in the job market. A large household with non-working adult members, especially females, may free women from some of their domestic responsibilities such as looking after young children enabling them to take up market work. Here, the effect on the probability of being unemployed would be negative. Following the argument that the decision to have children is endogenous, in part, the family size variable may also be endogenous. While included in the specification, as will be seen later, dropping this from the specification will have little bearing on the estimates.

Table 4.3 provides a list of the variables included in the specification.

Table 4.3
Variable description

Variable	**Description**
Unemployed	Dummy dependent variable taking the value "1" one is unemployed and "0" otherwise.
Age	Age in years
Age-squared (*Agesq*)	Age in years-squared
Sex	Dummy variable:1=male; 0=female
Married	Dummy variable:1=married; 0=not married
Household-head (Head)	Dummy variable:1=Yes; 0=No
Household size(hsize)	Total number of household members (hsize)
Presence of female relatives in a household *(relatives)*	Dummy variable: 1 =Yes; 0=No
Education *(highest level completed)*	Primary dummy variable:1=has primary level education; 0=otherwise; Secondary dummy variable:1=has secondary level education; 0=otherwise; University dummy: 1=has university level education; 0=otherwise; None/nursery (omitted category) dummy variable: 1=has no schooling including/has nursery level; 0=otherwise

4.2.5 Methodology for decomposing the gender gap in unemployment

To identify the key factors that account for the disparity in male and female unemployment rates in each of the two survey years, the difference in male and female unemployment rates (gender unemployment gap) is decomposed using an extension of the Blinder-Oaxaca decomposition technique (as described in Chapter 3). The technique enables decomposition of inter-group differences in mean levels of an outcome, into differences that may be attributed to observable characteristics or "endowments" and differences that may be attributed to the valuation of these characteristics.

As depicted in equation (1.a), the probability of being unemployed is estimated using separate probit models for males and females and subsequently gender differences in unemployment rates are decomposed into an endowment and a characteristics effect.

In each period, the female-male unemployment gap can be expressed as:

$$U_f - U_m = F(X_f\beta_f) - F(X_m\beta_m) \qquad (3)$$

where U_f and U_m are the predicted unemployment probabilities for females and males respectively.

Equation 3 can be decomposed as:

$$U_f - U_m = F(X_f\beta_f) - F(X_m\beta_m) = [F(X_f\beta_f) - F(X_m\beta_f)] + [F(X_m\beta_f) - F(X_m\beta_m)]. \qquad (4)$$

where F (for a probit model), is the cumulative distribution function from the standard normal distribution. β_f and β_m are vectors of parameter estimates associated with females and males respectively (in each period). X_f and X_m are the vectors of individual characteristics (females and males respectively).

In equation 4, the first term in brackets corresponds to the part of the gap that is due to group differences in distributions of X, while the second part corresponds to the portion due to differences in the group processes determining the levels of unemployment.

Thus, within this statistical framework, the female-male unemployment gap is ascribed to two sources – differences in the average characteristics (education, marital status, household-headship) of females and males and, differences in the returns to these characteristics. Differences

in employment unexplained by differences in average characteristics are often viewed as resulting from sex discrimination in the labour market.

The decomposition sketched above is not unique and an alternative expression of equation 4 may be written:

$$U_f - U_m = F(X_f\beta_f) - F(X_m\beta_m) = [F(X_f\beta_m) - F(X_m\beta_m)] + [F(X_f\beta_f) - F(X_f\beta_m) \quad (5)$$

Due to the index number problem in which equations 4 and 5 yield different estimates owing to a random addition of the terms, $F(X_m\beta_f)$ *and* $F(X_f\beta_m)$ in 4 and 5, respectively, this study uses coefficient estimates from a pooled sample of males and females as a proxy for the structure that would prevail in the absence of discrimination.

Let β^* be the neutral coefficient structure (estimates from a pooled sample of the two groups) that would prevail in the absence of behavioural differences, in the returns to the labour-force status (the probability of being unemployed) generating characteristics between males and females. Deviations from the neutral structure (β^*) may arise from either *discrimination* or other *unexplained sources* of group differences. Based on the assumption that the probit estimates of the pooled sample represent the determinants of being unemployed in the absence of discrimination or unobserved group differences, the difference between the average unemployment probability among females and what their average probability of being unemployed would be without *discrimination* or *unobserved* influences in returns, is :

$$F(X_f\beta_f) - F(X_f\beta^*) \quad (6)$$

The comparable expression for males is:

$$F(X_m\beta^*) - F(X_m\beta_m) \quad (7)$$

Thus, the total gap in average female and male unemployment probability can be expressed:

$$U_f - U_m = F(X_f\beta_f) - F(X_m\beta_m) =$$
$$[F(X_f\beta^*) - F(X_m\beta^*)] + \{[F(X_f\beta_f) - F(X_f\beta^*)] + [F(X_m\beta^*) - F(X_m\beta_m)]\} \quad (8)$$

The first term in equation *8* in [ ] uses the neutral-pooled male-female unemployment structure to predict the unemployment probabilities of each sample, but allows the characteristics of females to differ from those of males. This expression is the *explained/observed* part of the total

gap or the *characteristic effect*, since it shows the gap in unemployment probability explained by differences in the individual characteristics of females and males.

The second and third terms together in { } constitute the *coefficient effect* or *the unexplained* part of the total gap in male-female unemployment.[21] The second term shows the difference between returns to female characteristics and those that would exist in the context of a neutral structure while the third term shows the difference between returns to male characteristics and those that would exist in the context of a neutral structure. The second term may be interpreted as the female disadvantage of being unemployed while the third term may be interpreted as the male advantage of being unemployed. The empirical discussion does not draw a distinction between the second and third terms and combines both of them to capture the gender gap in the probability of unemployment due to a difference in structural factors.

Equation 9 determines the contribution of each individual explanatory variable to the observed portion of the total gap (contribution of each of the Xs) and the contribution of each of the Betas (coefficients) to the unexplained portion of the total gap. The input *I* of variable *k* to the observed differential is calculated as follows:

$$Z_k\,[F(X_f\beta^*) - F(X_m\beta^*)] \text{ where } Zk = \frac{(\overline{X}_k^f - \overline{X}_k^m)\beta_k^*}{(\overline{X}^f - \overline{X}^m)\beta^*} \text{ and } \sum_{k=1}^{K} Z_k = 1. \quad (9)$$

The contribution of variable *k* to the coefficient effect is derived:

$$S_k\,\{[F(X_f\beta_f) - F(X_f\beta^*)] + [F(X_m\beta^*) - F(X_m\beta_m)]\}$$

$$\text{and } S_{K=}\frac{(\beta_k^f - \beta_k^m)\overline{X}_k^*}{(\beta^f - \beta^m)\overline{X}^*} \text{ with } \sum_{k=1}^{K} S_k = 1. \quad (10)$$

To recap, equation (3) will be estimated to obtain the total predicted male-female unemployment gap, equation *(8)* to decompose the gender gap in unemployment for each year into the characteristics' and returns' effects and *(9)* and *(10)* to estimate the contribution of a specific variable to each of the components of the gap.

4.3 Data and Summary Statistics

The chapter uses LFS cross-sectional data of 1986 and 1998 and covers persons aged 15 to 64.[22] For both years, Table 4.4 provides mean characteristics for the entire sample while Table 4.5 provides descriptive statistics conditional on employment status. Tables 4.6 to 4.9 contain information for males and females separately. The appendix contains summary statistics for the youth.

Figures in Table 4.4 show no difference in the mean age of persons in the labour-force (about 32) between 1986 and 1998. Males are a majority in the labour force although their share in the labour force was higher in 1986 (34 per cent) than in 1998 (48 per cent) reflecting an increase in female labour force participation between 1986 and 1998. At about 70 per cent, the marital status of labour force participants did not change much during the two periods. In 1986, 62 per cent of the labour force was classified as heads of household while this proportion drops to 55 per cent in 1998. This drop is consistent with the increase in female labour force participation of women less likely to be household heads. The average household size (about 4) of persons in the labour force was about the same in both periods. Although the proportion of female relatives was quite small, about 12 per cent in 1986, there was an increase of about 6 percentage points in 1998. In terms of educational distribution, educational attainment was certainly higher in 1998 as compared to 1986. The main change was decline in individuals with no education and primary education and an increase in individuals with secondary education. In 1986, 53 per cent of the labour-force had primary education or no education while the corresponding figure for 1998 is 45 per cent.[23]

There are clear differences in descriptive statistics conditional on employment status. As displayed in Table 4.5, the average unemployed individual in the labour force was about seven years younger in 1986 as compared to an employed individual, while in 1998, the corresponding age gap was about five years.

In both years, clearly, males were more likely to be employed. In 1986, males comprised 72 per cent of the employed as compared to 43 per cent among the unemployed. The corresponding figures in 1998 were 60 and 26 per cent. Marital status and employment status appear to be highly correlated and married individuals were far more likely to be employed (73 per cent of the employed in 1986 as compared to 47 per cent among the unemployed in 1986). In both years, household heads

are far more likely to be employed and comprise between 66 and 73 per cent of the employed as compared to 18 per cent among the unemployed. In terms of household size, employed individuals appear to belong to smaller families as compared to the unemployed. While there are clear differences between the two groups (the unemployed versus the employed) in terms of age, sex, marital status and household headship, the differences in educational characteristics across the two groups were not as pronounced, especially in 1986. For instance in 1986, the proportion of individuals with primary education as well as with secondary education was the same across employment status. In 1998, the picture changed somewhat, showing that individuals with secondary education were far more likely to be employed (52 versus 43 per cent among the employed and unemployed, respectively).

Table 4.4
Descriptive statistics: Labour-force – full sample

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	4007	31.86	9.85	3238	32.41	10.12
Agesq	4007	1111.89	713.96	3238	1153.09	730.25
Sex	4007	0.66	0.47	3238	0.52	0.5
Married	4007	0.68	0.47	3238	0.7	0.46
Head	4007	0.62	0.49	3238	0.55	0.5
Hsize	4007	4.27	2.97	3238	4.17	2.48
Relatives	4007	0.12	0.32	3238	0.18	0.38
None	4007	0.12	0.32	3238	0.07	0.26
Primary	4007	0.41	0.49	3238	0.38	0.49
Secondary	4007	0.44	0.5	3238	0.52	0.5
University	4007	0.04	0.19	3238	0.04	0.19
Training	4005	0.52	0.5	3528	0.36	0.48

Table 4.5
Descriptive statistics: Labour-force conditional on employment status - full sample

Variable	1986 All Unemployed		1986 All Employed	
	Mean	Std. Dev.	Mean	Std. Dev.
Age	25.82	8	33.33	9.69
Agesq	730.69	526.4	1204.91	722.84
Sex	0.43	0.5	0.72	0.45
Married	0.47	0.5	0.73	0.44
Head	0.18	0.39	0.73	0.45
Hsize	5.12	3.01	4.07	2.92
None	0.15	0.35	0.11	0.31
Primary	0.4	0.49	0.41	0.49
Secondary	0.45	0.5	0.44	0.5
University	0	0.06	0.04	0.21
Training	0.24	0.43	0.59	0.49
Relatives	0.16	0.37	0.11	0.31
Obs.	786		3221	

Variable	1998 All Unemployed		1998 All Employed	
	Mean	Std. Dev.	Mean	Std. Dev.
Age	28.69	10.67	33.59	9.96
Agesq	936.64	767.32	1227.37	727
Sex	0.26	0.44	0.6	0.49
Married	0.64	0.48	0.7	0.46
Head	0.18	0.38	0.66	0.48
Hsize	4.71	2.64	4.06	2.41
None	0.11	0.31	0.06	0.24
Primary	0.45	0.5	0.37	0.48
Secondary	0.43	0.5	0.52	0.5
University	0.02	0.12	0.04	0.2
Training	0.13	0.34	0.44	0.5
Relatives	0.22	0.42	0.17	0.37
Obs.	960		2557	

Turning to the sex-specific estimates, we see that across both years, the average male in the sample is about 33-34 years old (Table 4.6). Most males in the labour force are married (about 73 per cent in 1986 and 75 per cent in 1998) and a majority of them are household-heads (about 79 per cent in 1986 and 82 per cent in 1998). Averaging four persons, household size remains the same during the two periods. Trends in male

educational attainment appear quite similar to those of the overall sample characterised by higher educational attainment in 1998 as compared to 1986, a drop in the share of those with no education and those with primary education and an increase in those with secondary education (by about five per cent) and university education (by about one per cent). In 1986, 50 per cent of the labour-force had less than secondary level education (primary education or none) while the corresponding figure for 1998 was 40 per cent.

As displayed in Table 4.7, the average unemployed male in the labour force was nine years younger in 1986 compared to an employed male while in 1998, the corresponding gap was about five years. By marital status, most males employed in the labour force are married (80 per cent in 1986 and 79 per cent in 1998). Although the proportion of unemployed married men is small, it increased in 1998 by about 15 percentage points from 25 per cent in 1986. At 86 per cent, the proportion of employed male household heads did not change during the two periods while that of unemployed males increased by about 14 percentage points from 26 per cent in 1986. In terms of educational comparisons across employment status, figures in Table 4.7 show that in 1986 those with secondary education were in fact more likely to be unemployed. However, in 1998 the pattern reverses and those with secondary education were more likely to be employed.

Table 4.6
Descriptive statistics: Labour-force - males

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	2652	33.06	9.88	1691	34.44	10.09
Agesq	2652	1190.42	731.02	1691	1287.9	747.42
Married	2652	0.73	0.45	1691	0.75	0.43
Head	2652	0.79	0.41	1691	0.82	0.38
Hsize	2652	3.85	2.9	1691	3.88	2.48
Relatives	2652	0.08	0.27	1691	0.13	0.33
None	2652	0.09	0.29	1691	0.05	0.21
Primary	2652	0.41	0.49	1691	0.35	0.48
Secondary	2652	0.46	0.5	1691	0.55	0.5
University	2652	0.04	0.2	1691	0.05	0.22
Training	2652	0.59	0.49	1791	0.49	0.5

Table 4.7
Descriptive statistics: Labour-force conditional on employment status – males

Variable	1986 Unemployed		1986 Employed		1998 Unemployed		1998 Employed	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	25.4	7.99	34.19	9.63	30.23	12.29	35.04	9.77
Agesq	708.7	526.93	1261.51	730.14	1064.25	898.26	1323.18	733.51
Married	0.26	0.44	0.8	0.4	0.41	0.49	0.79	0.41
Head	0.26	0.44	0.86	0.34	0.44	0.5	0.86	0.34
Hsize	4.7	3.18	3.72	2.84	4.69	2.68	3.82	2.47
None	0.08	0.27	0.09	0.29	0.08	0.27	0.04	0.21
Primary	0.38	0.49	0.41	0.49	0.42	0.49	0.35	0.48
Secondary	0.54	0.5	0.45	0.5	0.48	0.5	0.55	0.5
University	0.01	0.08	0.05	0.21	0.02	0.15	0.05	0.23
Training	0.29	0.45	0.63	0.48	0.24	0.43	0.53	0.5
Relatives	0.09	0.28	0.08	0.27	0.18	0.38	0.12	0.32
Obs.	341		2311		250		1537	

Tables 4.8 and 4.9 provide summary statistics for females. Figures in Table 4.8 show that their mean age, about 30, remained unchanged during the two periods. A majority of the women in the labour force are married (about 59 per cent in 1986 and 65 per cent in 1998). Most women in the labour force are classified as non-household heads and there is a drop of about 5 percentage points during the two periods – the proportion of female household heads was about 30 per cent in 1986 and 25 per cent in 1998. In terms of education, there is a decline in the combined proportions of women with primary education and no education (from 57 per cent in 1986 to 51 per cent in 1998), mainly due to the decline in the proportion of women with no education. There is a rise in the combined proportions of women with secondary and university education (from 44 per cent in 1986 to 50 per cent). The increase is mainly due to the increase in the proportion of women with secondary level education.

In terms of gender differences, in both years, women are about four years younger than men are. They are far less likely to be married (59 to 65 per cent versus 73 to 75 per cent depending on the year) and far less likely to be household heads (25 to 30 per cent versus 79 to 82 per cent). As far as educational characteristics are concerned, in terms of education, men are more likely to have secondary education as compared to

women (46 versus 41 per cent in 1986 and 55 versus 48 per cent in 1998).

Table 4.8
Descriptive statistics: Labour-force – females

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	1355	29.51	9.34	1547	30.2	9.69
Agesq	1355	958.17	652.78	1547	1005.74	681.36
Married	1355	0.59	0.49	1547	0.65	0.48
Head	1355	0.3	0.46	1547	0.25	0.43
Hsize	1355	5.11	2.93	1547	4.48	2.45
Relatives	1355	0.19	0.4	1547	0.23	0.42
None	1355	0.17	0.38	1547	0.1	0.3
Primary	1355	0.4	0.49	1547	0.41	0.49
Secondary	1355	0.41	0.49	1547	0.48	0.5
University	1355	0.03	0.16	1547	0.02	0.13
Training	1353	0.38	0.49	1737	0.22	0.41

Table 4.9
Descriptive statistics: Labour-force conditional on employment status – females

Variable	1986 Unemployed		1986 Employed		1998 Unemployed		1998 Employed	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	26.15	8	31.16	9.51	28.14	9.99	31.4	9.86
Agesq	747.55	525.97	1061.17	683.57	891.71	710.81	1083	692.82
Married	0.64	0.48	0.56	0.5	0.72	0.45	0.57	0.5
Head	0.12	0.32	0.38	0.49	0.09	0.28	0.34	0.47
Hsize	5.45	2.83	4.94	2.96	4.71	2.63	4.43	2.27
None	0.2	0.4	0.16	0.36	0.11	0.32	0.09	0.29
Primary	0.42	0.49	0.39	0.49	0.46	0.5	0.41	0.49
Secondary	0.38	0.49	0.42	0.49	0.41	0.49	0.48	0.5
University	0	0.05	0.04	0.19	0.01	0.11	0.02	0.14
Training	0.21	0.41	0.47	0.5	0.09	0.29	0.3	0.46
Relatives	0.22	0.41	0.18	0.38	0.24	0.43	0.23	0.42
Obs.	445		910		710		1020	

4.4 Determinants of Unemployment

Table 4.10 presents estimates of the determinants of urban unemployment for the full sample. Tables 4.11 and 4.12 contain results for males and females, respectively. The discussion focuses on the estimates for 1986 and then highlights differences over time.

In 1986, the estimates in Table 4.10 show that the age and age-squared variables (measures of experience) have the expected negative and positive signs and are statistically significant. The sign configuration shows that older individuals have a lower likelihood of being unemployed, although beyond a peak (at the age of about 49) their probability of being unemployed increases.[24] The coefficient of the sex variable is negative and shows that men are about four per cent points less likely to be unemployed as compared to women. While a more formal analysis appears later, the relatively small employment advantage for males as compared to the unconditional unemployment gap of about 20 per cent suggests that the bulk of the unemployment gap may be attributed to differences in observed characteristics. In terms of other personal characteristics, married persons are about five per cent less likely to be unemployed while household-heads enjoy a 25 per cent employment advantage. Household size does not exert an effect on unemployment. The size of the household-head effect is remarkable and probably reflects the combined effect of the greater job-search intensity displayed by household heads as well as serves as a signal of unobserved productivity and motivation. Prospective employers may use household-head status as a signal of an individual's unobserved productivity-related characteristics and may be more inclined to hire such individuals.

As may be expected, persons with primary and secondary level education are far less likely to be unemployed as compared to uneducated persons. The marginal effect of education increases with the level of education. Persons with secondary level education and above are about 11 percentage points less likely to be unemployed than uneducated persons. The marginal effect for persons with primary education is nine per cent.

Turning to the estimates for 1998 (Table 4.10), we see that the effect of age continues to display a similar pattern. As individuals age they are more likely to be employed, although beyond a peak of 39 years, the probability of being unemployed increases. While this is a sharp decline of 10 years (in comparison with the peak age in 1986 of about 49), the patterns continue to show that the youth (age group 15 to 29) are far less

likely to be employed as compared to older individuals. In other words, it means that the youth find it much harder to find employment since they are competing with older, better-skilled and more experienced persons. The importance of sex increases by about five percentage points and in 1998, women were about nine per cent less likely to be employed compared to males. From a negative marginal effect of five percentage points, the 1998 estimates show that being married has no statistically significant effect on unemployment status and that married and single persons are equally likely to be unemployed. Household size retains a zero effect. The importance of both levels of education in determining unemployment increases slightly (about one percentage point). However, there is no change in the gap between the marginal effects of the two levels of education suggesting that there is limited change in the effect of education in determining employment.

Table 4.10
Estimates: Determinants of unemployment full sample

Variable	1986			
	Coef.	Std. Err.	ME	Std. Err.
Age	-0.113***	0.018	-0.024	0.004
Agesq^	1.155***	0.244	0.246	0.053
Sex	-0.171**	0.057	-0.038	0.013
Marital	-0.220***	0.06	-0.049	0.014
Head	-1.027***	0.067	-0.249	0.017
Hsize	0.007	0.009	0.001	0.002
Primary	-0.462***	0.087	-0.094	0.017
Secondary_plus	-0.521***	0.087	-0.11	0.018
Constant	2.487***	0.289		
Number of Obs.	4007			

Variable	1998			
	Coef.	Std. Err.	ME	Std. Err.
Age	-0.108***	0.015	-0.033	0.005
Agesq^	1.416***	0.202	0.426	0.061
Sex	-0.295***	0.06	-0.089	0.018
Marital	0.11	0.06	0.033	0.017
Head	-1.007***	0.073	-0.303	0.021
Hsize	-0.014	0.011	-0.004	0.003
Primary	-0.327***	0.095	-0.096	0.027
Secondary_plus	-0.394***	0.095	-0.119	0.029
Constant	2.116***	0.253		
Number of Obs.	3517			

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

Turning to the gender-specific estimates (Tables 4.11 and 4.12), we see that in 1986 and 1998, and for both males and females the age variables have the expected configuration and indicate that older individuals (up to a certain threshold) have a lower likelihood of being unemployed. The peak age of unemployment for males was about 42 in 1986 and 34 in 1998 while for females 55 in 1986 and 40 in 1998. Although, over time there is an increase in the probability that a younger individual will gain employment, for the youth (as defined), it is clear that they are less likely to be employed compared to the non-youth, irrespective of gender.

In 1986, married women were about 7 percentage points more likely to be unemployed as compared to single women while in 1998, the marginal effect doubled to 14 percentage points highlighting the increasing difficulty that married women experience attempting to find a job compared to single women. While married women are more likely to be unemployed than single women, the opposite is true for men and married men are between eight and ten percentage points more likely to employed as compared to their single counterparts. Employers may prefer single to married women to avoid the costs associated with maternity benefits and to avoid replacement costs owing to unforeseen interruptions if there is need to care for young children or to give birth.[25] As far as married men are concerned, their marital status may increase their job-search motivation while at the same time may be viewed as a signal of their unobserved productivity related characteristics by employers. The pattern that marital status increases the employment probability of men while reducing the employment probability of women is consistent with the gender wage-gap literature, which show that married women have lower wages while married men have higher wages (Adamchik and Bedi 2003; Mariara 2003). For instance, Mariara's (2003) study on Kenya finds that being married is associated with higher wages for men in modern wage employment while married women earn less than their unmarried male counterparts do.

In both years and for both males and females, being a household head is associated with a sharp reduction in being unemployed. The marginal effects range from 21 to 27 percentage points and tend to increase over time. Across both years, the importance of education in ensuing access to employment is much higher for females than males. For example, in 1998, secondary education was associated with a marginal effect of 14.5 percentage points for women while the corresponding figure for men was about half that (7.9 percentage points). This pattern suggests that in order to compete successfully with men, women need to have higher levels of education.

Table 4.11
Estimates: Determinants of unemployment by sex 1986

Variable	Males 1986			
	Coef.	Std. Err.	ME	Std. Err.
Age	-0.105***	0.027	-0.015	0.004
Agesq^	1.246***	0.36	0.173	0.051
Marital	-0.593***	0.099	-0.1	0.02
Head	-1.028***	0.095	-0.212	0.026
Hsize	0.017	0.013	0.002	0.002
Primary	-0.247	0.139	-0.033	0.018
Secondary_plus	-0.243	0.139	-0.034	0.019
Constant	1.932***	0.452		
Number of Obs.	2652			

Variable	Females 1986			
	Coef.	Std. Err.	ME	Std. Err.
Age	-0.119***	0.024	-0.041	0.008
Agesq^	1.075***	0.348	0.373	0.121
Marital	0.211*	0.093	0.072	0.031
Head	-0.654***	0.114	-0.208	0.032
Hsize	0.008	0.014	0.003	0.005
Primary	-0.599***	0.116	-0.199	0.036
Secondary_plus	-0.743***	0.116	-0.247	0.036
Constant	2.529***			
Number of Obs.	1355			

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

Table 4.12
Estimates: Determinants of unemployment by sex 1998

Variable	Males 1998			
	Coef.	Std. Err.	ME	Std. Err.
Age	-0.088***	0.026	-0.016	0.005
Agesq^	1.291***	0.327	0.239	0.061
Marital	-0.374**	0.123	-0.077	0.028
Head	-0.895***	0.131	-0.223	0.04
Hsize	0.001	0.017	0	0.003
Primary	-0.399*	0.171	-0.069	0.028
Secondary_plus	-0.408*	0.168	-0.079	0.034
Constant	1.507**	0.459		
Number of Obs.	1787			

Variable	Females 1998			
	Coef.	Std. Err.	ME	Std. Err.
Age	-0.116***	0.02	-0.045	0.008
Agesq^	1.447***	0.275	0.556	0.106
Marital	0.362***	0.082	0.137	0.03
Head	-0.773***	0.107	-0.27	0.032
Hsize	-0.013	0.014	-0.005	0.005
Primary	-0.270*	0.116	-0.103	0.044
Secondary_plus	-0.380**	0.117	-0.145	0.044
Constant	2.078***	0.31		
Number of Obs.	1730			

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

4.5 Decomposition Analysis

The aim of this section is to identify the sources (structural and compositional) of the gender gap in the incidence of unemployment for 1986 and 1998. Results of the decomposition set out in equation *8* appear in Table 4.13. The first row of the table contains the predicted gender differential in unemployment, which was about 20 per cent in 1986 and 27 per cent in 1998, an increase of about 7 percentage points. These predicted differentials in unemployment are decomposed into compositional and structural effects (rows 2 and 3).

In both periods, an overwhelming proportion of the gender differential in unemployment may be explained in terms of the different characteristics of women compared to men. Differences in characteristics accounted for about 84 per cent of the gender differential in unemployment in 1986 and about 81 per cent in 1998. These figures may be interpreted as follows: if on average, both females and males have similar labour market characteristics (for example, similar levels of education, experience, proportion of household heads and other characteristics), 84 per cent of the unemployment gap between men and women would have disappeared in 1986 and 81 per cent in 1998.[26]

Correspondingly, the impact of gender differences in the valuation of these characteristics in influencing the unemployment gap is relatively small and accounts for 16 to 19 per cent of the gender gap. To the extent that this component of the decomposition is a measure of discrimination in the labour market, the estimates show that a small proportion of the gap may be attributed to discrimination. However, as indicated earlier, while traditionally the unexplained portion has been treated as a measure of discrimination this may be misleading as there may be several gender differences in unobserved productivity or personality (for example, motivation, ability to work with colleagues, congeniality) related attributes that may have little to do with discrimination. The main point is that even if we treat the entire unexplained proportion as an upper bound of the extent of discrimination it is quite small relative to the influence of observed characteristics. Given the substantial contribution of the compositional effect, further insights can be gained by considering the importance of individual variables and/or groups of variables in determining the employment gap. Results for 1986 as reported in Table 4.13 show that the largest part of the compositional effect may be attributed to household-headship (about 71 per cent), followed by experience as proxied by age (about 17 per cent), education (about 6 per cent) and marital status (about 4 per cent). Broadly, decomposition results for 1998 are similar to the 1986 estimates. The explained proportion of the gap is dominated by the effect of household headship (91 per cent), followed by experience (9 per cent), and education (4 per cent). As these numbers indicate, over time, education and experience work towards reducing the unemployment gap while the role of household headship registers an increase.

Similar to the results for the full sample, youth specific estimates for 1986 (Table A.1.9 of the appendix) show that different attributes between females and males on average, accounted for about 76 per cent of the gap in 1986 and 85 per cent in 1998. This means that 76 per cent of the gap in 1986 and 85 per cent of the gap in 1998 would have disappeared if both female and male youths had similar characteristics. The impact of gender difference in the effectiveness/valuation of these characteristics is small, about 19 per cent in 1998 and 16 per cent in 1986. Once again, household-headship is responsible for about 80 per cent of the compositional effect.

Table 4.13
Decomposition analysis: Gender gap in the incidence of unemployment

	1986 Sample		1998 Sample	
Total Differential	**19.8**	**100**	**27.1**	**100**
Component due to Characteristics' Effect (CHE)	16.7	84.3	21.9	80.8
Component due to Coefficients' Effect (COE)	3.1	15.7	5.2	19.2
Variable	**Contribution to CHE**	**% Share**	**Contribution to CHE**	**% Share**
Age	0.089	53.3	0.133	60.7
Agesq	-0.06	-35.7	-0.115	-52.4
Marital	0.006	3.8	-0.004	-1.8
Head	0.119	71.3	0.199	91.2
Hsize	0.002	1.5	-0.003	-1.5
Primary	0.001	0.8	-0.008	-3.5
Secondary_plus	0.008	5	0.016	7.4
Constant				
Sum	0.167	100	0.219	100

4.6 Conclusion

While high unemployment remains one of the key challenges facing the Kenyan economy, it has not received adequate attention. More specifically, there are sharp gender differences in unemployment. Women constitute a majority of the unemployed and over time, their unemployment rate has risen substantially. In contrast, the male unemployment rate is

much lower than that of females, but has also remained stable over time. The factors associated with this large gender gap have hardly been studied.

Based on cross-sectional labour force data gathered in 1986 and 1998, this chapter examined the incidence of urban unemployment as well as the sources of the persistent and large gender gap. The analysis displayed that for both, men and women, age, a proxy for experience heavily influences the likelihood of being unemployed, and that the youth are far less likely to be employed as compared to older individuals. This pattern supports the idea that given the limited demand for labour, employers may be using experience to screen potential employees. As expected, education is associated with a lower probability of being unemployed for both men and women. Other factors such as the marital status of men and women exerted opposite effects with married men more likely to be employed while married women were more likely to be unemployed. Across both years and for men and women, being a household head exerts a large positive effect (about 20 to 27 percentage points) on the probability of being employed.

To explore gender unemployment gaps, the chapter decomposed the gap into a proportion that may be accounted for by differences in observable characteristics between males and females, and differences in the manner in which male and female characteristics are valued in the labour market.

The analysis showed that for both years, differences in observed characteristics accounted for an overwhelmingly large proportion of the gender disparity in the incidence of unemployment - 84 per cent in 1986 and 81 per cent in 1998 for the overall sample and 76 per cent in 1986 and 85 per cent in 1998 for the youth. The substantial percentage of the gender employment gap, which may be attributed to differences in observed characteristics, is in sharp contrast to differences in gender wage gaps, where 60 to 78 per cent of the gap remains unexplained (Agesa 1999; Mariara 2003). Taken literally, these patterns suggest that while hiring decisions are based on differences in observed characteristics, wages are influenced to a greater extent by unobserved characteristics including discrimination. This seems reasonable as it is difficult for employers to have much information on an individual's unobserved attributes (such as hard work and motivation) at the time of hiring, however, wage rates are certainly more likely to reflect the influence of unobserved attributes.

In terms of the specific observed characteristics, about 9 to 17 per cent of the explained proportion of the gender unemployment gap may be attributed to the additional experience that men have and about 4 to 6 per cent to their higher levels of education. The most important factor in determining the gender gap appears to be household headship with differences in the incidence of household headship between men and women (82 per cent versus 25 per cent in 1998) accounting for 71 per cent of the observed employment differential in 1986 and 91 per cent in 1998.

Thus, women are more vulnerable to unemployment than men are because of differing personal and human capital endowments, which disfavour women and, not primarily, because of how the market values these endowments. The importance of observed characteristics and household-headship in determining the gender gaps in both years suggests that at least based on the decomposition framework used in this chapter, at most about 16 to 19 per cent of the employment gap may be directly attributed to gender-based discrimination. Prima facie, the results suggest that employers may not hire women not because they are women but because they are not household heads.

The importance of household headship in determining employment outcomes is probably a reflection of demand and supply side effects. Individuals who are household heads may search for jobs more intensively and may have a lower reservation wage. From the demand side, household headship may act as a signal of a greater work commitment and increase the likelihood of being hired by potential employers compared with non-household heads who may be more likely to interrupt work due to domestic responsibilities.[27] The large payoff to being a household head prevails for both males and females. While the returns associated with this variable may be a reflection of both demand and supply side effects as discussed above, an alternative is that household head status and employment status may be simultaneously determined - that is, although societal norms often influence the head of household status, it may well be that in some cases, especially in the case of households headed by females, the status of a woman is determined by her employment position. To the extent that household head status and employment status are determined jointly, it is possible that the analysis presented here overestimates the role of household status in determining

employment. Given the data set available, it is not possible to identify the extent to which such a possibility may influence the estimates.

Notwithstanding this caveat, the estimates presented here show that while there is limited direct evidence of gender-based labour market discrimination at least in terms of employment, the fact that women are far less likely to be household heads as compared to men does translate into substantially lower female employment rates. Furthermore, the small proportion of women who are considered the chief decision-maker in households reflects far deeper-rooted pre-labour market differences in attitudes, treatment and societal expectations of women than are manifested in the labour market.

Notes

[1] The labour-force or active population (aged 15 years and over) is made up of the employed and the unemployed populations.

[2] According to Azmat et al. (2006), male and female unemployment rates are very similar in some OECD countries. In others, female unemployment is much higher than male – in 1999 for example, unemployment rate in Austria was 3.7 per cent for males and 3.9 per cent for females and 4.1 and 4.3 for the US. In Spain, Greece Italy, France and Czech Republic (with the highest rates among the OECD countries), UR (per cent) for males and females: 11 and 23; 7.6 and 17.9; 8.7 and 15.7; 9.7 and 13; and 7.3 and 10.5 respectively. In countries such as Japan, Sweden, Norway, Hungary, Australia, UK, Canada, New Zealand and Ireland, male unemployment exceeds female unemployment but only marginally – see Azmat et al. for the exact figures.

[3] This gap is by far bigger than has been observed in a number of other countries (in 1999 the gaps in Spain, Greece, Italy, France and Czech Republic were about 12, 10, 7, 3.3, 3.2 percentage points respectively).

[4] The lower UR and LFPR for female youth is attributable to a number of factors: A large number of young women work in households where their labour is unaccounted for in the system of national accounts. This situation is especially common in urban areas where the share of women working exclusively in the household is higher than in rural areas. In many African countries, cultural norms and the lack of apt role models impede young women from actively searching for a paid job. Many young women are not counted in unemployment statistics because they have never aggressively searched for a job in the formal sector. Informal sector participation among women is so high because women find it easier to combine work in the informal sector with their household duties. If more women were to start actively looking for formal sector jobs, their recorded unemploy-

ment rate would be higher. Women are also under-represented in higher education, where the number of young men enrolled outweighs that of women. Accordingly, while many young men are studying, women of the same age support the family and work in the household. Literacy rates for young men are therefore higher than for young women in the same age group. Women's limited access to education limits their prospects for jobs in the formal labour market.

[5] In 1986, the LFPRs for male and female youth were 72 per cent and 54 per cent respectively. Corresponding figures for 1998 were 73 per cent and 81 per cent.

[6] Numerous factors explain the existence of high youth unemployment levels: most notably is low economic growth, manifested in low economic activity and low investment. Low economic activity necessitates low overall job creation – there exists a vicious circle of low growth, which reduces availability of assets leading to even lower growth. Others are: limited availability of assets such as education, experience, health and finance. The most commonly cited causes of youth unemployment are insufficient aggregate demand, lack of skills among young people and the relative size of the youth labour-force (Blanchflower and Freeman 2000). Under sustained population growth rates, labour markets are unable to absorb all the new entrants resulting in job scarcity, which leads to employers favouring more education and experience. Youth struggle to obtain these attributes thus a combination of low economic activity and high population growth generates job shortages implying that competition for scant jobs is necessarily high in favour of those with experience and education. Even in times of economic gains, lack of work experience combined with lack of assets places young people at a disadvantage for new job opportunities. During economic downturns, the 'last-in, first-out' measure disproportionately affects young people. Rural-urban migration further exacerbates urban youth unemployment. Rural migrants have the notion that more jobs and social opportunities are available in urban areas (Linden 1996; Ogbu and Ikiara 1995; Sommers 2003). This has created a rapid growth in urban population and intensified competition in the urban labour market (Schoumaker and Beauchemin 2002).

[7] Azmat et al. (2006) observe that there was literature on the subject in the US in the 1970s and early 1980s but few current papers, which they argue is perhaps because the female and male unemployment rates in the US are more or less at par but this has not happened in all countries.

[8] Spain, Greece, Italy, France, Benelux countries, Germany, Denmark, Portugal, Finland, USA, Austria, Ireland, UK.

[9] Ham et al. (1999) use a duration model to analyse the determinants of unemployment spells in the Czech Republic and in the Slovak Republic. They perform separate analyses for both those who receive and those who do not receive unemployment benefits. They also apply the Oaxaca decomposition of the differ-

ences in the expected length of unemployment spells of men and women. In both republics, and for both recipients and non-recipients, the differences in the estimated coefficients are more important than the differences in observed characteristics in explaining women's longer unemployment spells. In the Czech Republic most of the gender difference in unemployment spells (-6.1 points) among recipients is over-explained by the coefficients/returns (about 101 per cent). Similarly in the Slovak Republic, returns over-explain the gender gap (-13.5 points) by about 114 per cent among the recipients while for the non-recipients, most of the -45 point gap is due to returns (about 55 per cent).

[10] Note that to detach participation from unemployment decisions may not be simple in practice due to possible feedbacks between the two. For instance, the anticipation of higher future unemployment is likely to dampen both human capital accumulation efforts and labour supply in a similar way as other anticipated interruptions to market work (Azmat et al. 2006: 3).

[11] According to this definition, the unemployed are persons who during the reference period were 'without work'. That is, were not in paid employment or self-employment as specified by the international definition of employment; 'currently available for work', that is, were available for paid employment or self-employment during the reference period; or 'seeking work', that is, had taken specific steps in a specified recent period to seek paid employment or self-employment. This definition excludes discouraged workers. The ILO recommends adoption of the narrow measure of unemployment that excludes those not actively seeking work to maintain objectivity and international comparability. The International Conference of Labour Statisticians adopted this definition of the unemployed as an international recommendation in 1982. This definition regards 'unemployed' as people who have not worked more than one hour during a short reference period (previous week or day) but who are available for and actively seeking work (active definition).

[12] Note that in developing countries the number of workers covered by unemployment insurance or other assistance is limited. Under these conditions, very few people can afford to be unemployed for any length of time. The majority of the population must be engaged at all times in some economic activity, however inadequate it may be. Thus, although they may also be seeking other or additional work, they will not be counted as unemployed. Women, who more often than men are engaged in activities within the household, grow food in the family plot or work as seasonal agricultural workers, are economically active and should be counted as 'employed' according to the standard definition of economic activity. However, their situation in terms of income, use of skills and productivity might be closer to unemployment than to employment.

[13] In Kenya, according to the Analytical Report on Education Volume 3:2 (1999a) of the census '…only around half of all 6-year-olds are in school, although 6 years is the recommended age for starting primary school. About one out of every three children aged 7 years and a quarter of the children aged 8 years are not in school'.

[14] Major sources of male-female pay differential identified in the literature include differences in human capital endowments such as education and experience; differences in pay within the same occupations (caused by direct discrimination and dual labour markets); differences in pay for work of 'equal value' caused by the relationship between pay level in an occupation and the degree to which it is feminised; differences in job desired; differences in jobs available; unequal distribution of men and women among occupations; differences in employment structures (since different jobs have different levels of pay); and differences in the average number of working hours-normal and over time (Anker 1997; Anker and Hein 1986; Kaufman 1994). Economists trying to discover the reasons for these differentials in earnings among occupations and between men and women are concerned with such issues as whether the gender gap in earnings is due to productivity differences or differences in tastes for particular occupations or whether discrimination against women is the major explanation.

[15] See Altonji and Blank (1999); Polachek (2004).

[16] See Kaufman (1994), for a detailed discussion of the theories of discrimination.

[17] See Bertola, Blau and Kahn (2002).

[18] O'Higgins (1997) provides three possible reasons why younger labour-force entrants experience the highest rates of turnover: First, on the supply side, the likelihood of young people quitting their jobs is higher than for older workers. Initial experiences in the job market are likely to involve a certain amount of searching as long as circumstances permit, to find a suitable occupation. The foregone cost for this behaviour is lower for young people than for adults. Young people tend to have fewer skills and lower wages and are less likely to need a job to support a family. If such voluntary quitting or shopping around behaviour is less cyclically sensitive than job availability, one result will be that when job opportunities became scarce, unemployment will increase more among those groups with a higher likelihood of quitting their jobs. Voluntary quitting will also tend to fall during recessions. Second, on the demand side, the opportunity cost to firms of firing young people is lower than for older workers since being less skilled means lower levels of investment by firms in training and this implies a smaller loss to firms if they are made redundant. In addition young persons are less likely to be subject to employment protection legislation in that such legislation requires a qualifying period before it can be implemented while compensation for redundancy increases with tenure. Hence, employees hired recently will

be cheaper to fire and this will obviously affect younger persons. Third, during economic downturns, firms cease hiring before commencing the expensive procedure of redundancies. Since young people comprise the highest share of jobseekers, they will be affected by a freeze in new hires more significantly.

[19] The relationship between the household-headship variable and employment status may be endogenous in the sense that labour market participation in a particular sector may also determine who is regarded as the household head. It is important to remember this when interpreting this variable.

[20] Other sources of the endogeneity bias are the presence of female relatives in a household and marital status – female relatives might come to live with a relative who is employed while marital status may also depend on the job – persons without jobs may not have the resources to marry or stay married.

[21] The compositional (characteristics) effect captures the role of personal, human capital and other endowments in the likelihood of being unemployed or of getting a job while the structural effect captures an employer's valuation of these characteristics thus the demand-side of the labour market.

[22] See Chapter 3 for details about sample sizes.

[23] In tables 4-15, since education level is generated, as a dummy variable comprised of the 4 levels of education, the sum of the mean levels of these 4 education categories add up to 1 (100 per cent).

[24] Peak age is obtained by differentiating the dependent variable UR with respect to the ME of age and equating the result to zero.

[25] After controlling for effect of the presence of female relatives on women's unemployment status, results (not shown here) for both sample periods indicate that the presence of female relatives (tested only in the female samples) is unimportant. In other words, women who have other female relatives in their households and those who do not are equally likely to be unemployed.

[26] The coefficients' effect is interpreted as differences in the effectiveness of characteristics to reduce unemployment. Since the probability of being unemployed is being computed, a positive value for the coefficients effect implies that the influence of unemployment reducing power of a characteristic among females is weaker than that among males. It could be argued that differences in unemployment mitigating power result from discrimination. In a broad sense, it could be argued that a positive value for the characteristics' effect may reflect discrimination if the opportunities for obtaining human capital such as education are themselves limited due to discrimination outside and within households (See Gang et al. 2006).

[27] In related evidence, Mariara (2003) finds marked differences in the process generating the gender wage gaps in the private and public sectors of the Kenyan

labour market where preferential treatment towards men is pronounced in all sectors owing to expected lower productivity of women of childbearing age.

5 Determinants of Formal and Informal Sector Employment in Urban Kenya

Abstract: As discussed in the previous chapter, between 1986 and 1998 there was a sharp decline in formal sector employment and a corresponding increase in informal sector employment. This chapter examines the role played by various factors in influencing the sorting of individuals into different sectors of employment in urban Kenya. It examines whether factors influencing the location of individuals in different sectors change over time and differ across gender and thus contributes to an understanding of gender differences in job attainment. The chapter complements the issues addressed in chapters 3 and 4. As may be expected, in both periods, experience and education are highly valued in the formal sector. Over time, the importance of education in securing labour market access increases by about eight percentage points. However, there are sharp gender differences. For men, the importance of education increases while for women it declines suggesting the presence of labour market segregation. Over time, the negative effect of marital status on female formal sector participation declines reflecting the increasing insertion of married women in the labour market. Underscoring the use of the informal sector as a last resort option, I find that declines in husbands' real earnings are associated with a sharp increase in women's participation in the informal sector. The increasing participation of women in the vulnerable informal sector is consistent with the feminist version of the structuralist characterisation of the informal sector.

5.1 Introduction

Urban labour markets in developing countries are widely recognised as having two distinct sectors, a regulated or protected formal sector[1] and an unregulated or unprotected informal sector (Pradhan and van Soest

1992).[2] Lachaud (1994) and Mazumdar (1989) describe an urban labour market structure in a typical developing country as being subdivided into three main categories: the formal sector (public and private); the informal sector – comprising the informal sector wage labour, self-employed, paid domestic workers, those earning a monthly salary or those working on casual basis; and the unemployed.[3] This categorisation ignores unpaid workers (people who work without pay in an economic enterprise operated by a related person), who form a significant proportion of the urban and rural labour-force.[4]

Among the most important challenges facing governments in developing countries, is the task of identifying development strategies that can generate new employment and income opportunities and reduce underemployment and unemployment. The higher rate of labour-force growth than population growth underscores the urgent need to create employment opportunities. According to Fox and Gaal (2008), wage and salary employment in Kenya increased by half a million between 1983 and 1996 while, the economy's labour-force grew by half a million people yearly. A similar situation exists in other sub-Saharan African countries. For example, in Zambia, nearly 25 per cent of the population was employed in salaried and wage employment around the 1970s, but by 2005, this share had dropped to less than 10 per cent. Between 1991 and 1998, in Ghana, wage and salary employment grew by 2.5 per cent annually while the labour-force grew at 3.3 per cent. However, there are countries in SSA that display a pattern of higher employment growth than the growth of their labour force. For instance, in Senegal, the labour-force grew by 2.8 per cent annually between 1994 and 2001 while wage and salary employment grew at a rate of 4.9 per cent per year. In Burkina Faso, after a long period of economic decline, wage and salary employment grew by 3.6 per cent yearly against labour-force growth of 1.8 per cent between 1998 and 2003. In most of these countries, the share of women in wage and salary employment increased but they still account for only about a quarter of these jobs. More specifically, the percentage of female workers in the formal sector is about 30 per cent in Kenya, 23 per cent in Cameroon, 26 per cent in Uganda, 18.5 per cent in Mozambique, 25.4 per cent in Ghana, and 36.6 per cent in Senegal (Fox and Gaal 2008).

In Kenya, the persistence of slow economic growth combined with the higher rate of labour force growth, has forced many individuals, including those who have left school and college graduates to marginal ac-

tivities in small-scale agriculture and in the urban informal economy. In the 1970s and 1980s, Kenya experienced rapid public sector employment growth. However, in the 1990s, consistent with the limits on fiscal spending, public sector employment declined. At the same time, job creation in the private sector did not match declines in public sector employment.

Thus, the background and context of this study is one where the size of the labour-force has been growing much faster than the rate of growth of formal sector jobs.[5] In developed economies, sluggish job growth compared to the supply of labour is likely to show up as unemployment. However, in the developing world, increases in urban informal employment are likely to emerge instead of open unemployment (Fox and Gaal 2008). Thus, as discussed in chapter 2, a growing rate of informalisation has magnified the incidence of poverty, as earnings in the informal sector are much lower than in modern wage employment (Mwabu et al. 2004). Furthermore, as analysed in chapters 3 and 4 and shown in Table 5.1 (below), there was a huge increase in the level of female labour force participation between 1986 and 1998 and as may be expected, given sluggish job creation, a sharp increase in the rate of female unemployment. While the previous chapter examined factors that drive the probability of female unemployment compared to male unemployment, this chapter focuses on the quality of female employment as captured by the participation of women in the formal and informal sectors of the economy.

As shown in Tables 5.1 and 5.2, in 1998, 46 per cent of women in the labour force were unemployed while 23 per cent worked in the formal sector and about 31 per cent in the informal sector. The corresponding figures for men are 15 per cent, 53 and 32 per cent respectively. In terms of their relative shares in each sector, 71 (53) per cent of the workers in the formal (informal) sector are males and women account for 74 per cent of the unemployed. A comparison of the figures between 1986 and 1998 shows that while the share of women in formal and informal sector employment increased between the two years analysed, large gaps continue to exist.

Table 5.1
Employed & unemployed persons by sex and sector (% of relevant population group)

Labour-force	1986			1998		
	Female	Male	All	Female	Male	All
Formal	45.1	71.3	62.4	23.4	53.2	38.9
Informal	22.1	15.8	17.9	30.7	32.1	31.4
Unemployed	32.8	12.9	19.6	45.9	14.8	29.7
Total	100	100	100	100	100	100
Working Age Population						
Formal	26.3	60.1	46.8	20.1	46.6	33.8
Informal	12.9	13.4	13.2	26.4	28.1	27.3
Unemployed	19.2	10.8	14.4	39.4	13	25.7
Inactive	41.6	15.7	27.7	14.1	12.3	13.3
Total	100	100	100	100	100	100
LFPR	58.4	84.3	73.3	87.2	88.2	87.8

Labour-force	Change		
	Female	Male	All
Formal	-21.7	-18.1	-23.5
Informal	8.6	16.2	13.5
Unemployed	13.1	1.9	10
Total			

Source: Own Computation from the LFS data.

Table 5.2
Gender gap in employment (by sector) & unemployment (percentages)

	1986				1998			
	Female	Male	Total	Gap Male-Female	Female	Male	Total	Gap Male-Female
Formal	24.4	75.6	100	51.2	28.7	71.3	100	42.6
Informal	41.6	58.4	100	16.8	46.7	53.3	100	6.6
Unemployed	56.6	43.4	100	-13.2	74	26	100	-47.9
Total	33.8	66.2	100	32.4	47.8	52.2	100	4.4

Source: Own Computation from the LFS data.

Against this setting, conditional on labour force participation, this chapter examines the role played by various factors (human capital, individual and household characteristics) in influencing the sorting of individuals into different sectors of employment in Kenya's urban labour market. The chapter also examines whether factors influencing the location of individuals in different sectors changes over time and differ by gender. It thus contributes to an understanding of gender differences in job attainment in the Kenyan urban labour market. In terms of specific contribution, this chapter provides an assessment of factors that play a role in sorting men and women into various sectors and ensuring access to better quality employment. In so doing, it complements the findings of the question addressed in chapter 4 on why women are disproportionately more vulnerable to unemployment than men are where the focus was on the quantity of (un)employment rather than the quality.

The chapter also endeavours to shed light on the factors important for job attainment among married women as most of the increase in female ER/LFPR is due to their influx into the labour market. This is important for corroborating the results in chapter 3, in which male spouse earnings are important for explaining the rise in female employment rate (ER) unconditional on the sector of employment. The current chapter sheds light on whether the added worker effect is observed in both sectors.

The empirical analysis presented in the chapter is based on two cross-section labour-force surveys conducted in 1986 and 1998 and relies on a multinomial logit model to analyse sector sorting.

The remainder of the chapter is as follows: section 5.2 outlines a conceptual framework and methodology for the study including specification of the MNL model and variables to be estimated. Section 5.3 describes the LFS data. Results are reported in Section 5.4. Section 5.5 concludes.

5.2 Conceptual Framework and Methodology

The literature shows researchers have used a number of approaches to conceptualise and define the informal sector. This section provides a discussion of the main theoretical perspectives that have informed the debate on the informal sector and a methodology for estimating the determinants of formal and informal sector employment.

The term 'informal sector' (also, informal economy, hidden economy or underground economy) is used to describe a heterogeneous group of economic arrangements that are not subject to regulation by the state in an environment where similar activities are (Peterson and Lewis 1999: 472; see also Menke 1998 for a succinct discussion of the evolution of this concept). Use of the term goes back to the 1970s, when the enormous population growth of many cities in developing countries was accompanied by increasing unemployment and low-income employment. During this period, the concept of informal sector first came into use and was synonymous with the economic activities of the urban poor.[6] There are four broad theoretical perspectives identifiable from the literature: 1) dualist perspective; 2) neoliberal approach; 3) underground economy approach and 4) structuralist perspective. In addition, there is a feminist perspective on the informal sector, which draws on elements from each of the approaches listed above. A brief elaboration of these perspectives as well as the feminist approach as pertains to the gender aspect of the informal sector appears below.

Dualist perspective (associated with ILO), takes a positive view of the sector and emphasises its potential for creating employment opportunities in developing countries. This view can be traced to an ILO (1972) mission report on Kenya that identified the informal sector as a subsector of the Kenyan labour market that coexisted with modern wage employment (formal sector) in the face of the fact that its activities were unaided, unregulated and unrecognised by the state. This perception of economic dualism differentiated the formal and informal sectors in terms of surplus labour supply and suggested that those unable to find work in the formal sector fashioned their own work in the informal sector. As mentioned in Chapter 2, among the development challenges facing many developing countries in the 1960s was what the ILO report described as chronic and intractable unemployment. As a result, ILO launched a World Employment Programme in 1969. Its mandate (with the help of other United Nation agencies) was to study the causes of unemployment in countries with particular types of problems and to identify what needed to be done internationally as well as nationally. Kenya was a pilot country for the programme. The main concern about Kenya then, was to explain the causes of persistent inequities and unemployment in spite of rapid economic growth. Thus, between the late-1960s and early 1970s, the country attracted a number of visiting development economists who

developed analytic models explaining the labour market of the 1960s. The report pointed out the high incidence of working poor or low returns from work while cautioning that the existence of the urban informal sector with its low-income employment led to an underestimate of the extent of unemployment.[7]

The neoliberal approach assumes that enormous state intervention, which is accompanied by 'abundant and complex laws and regulation culminates into the emergence and expansion of the informal economy' (Menke 1998: 35). Similarly, according to Peterson and Lewis (1999: 473), 'The IMF and WB are adherents to neo-classical strand of the dualist view in which the informal sector is seen as a product of excessive government controls in the formal sector such as minimum wage laws and labour regulations'. Its policy lesson is that the informal economy should be legalised within the formal economy based on market competition. The resemblance between this approach and the underground economy and structuralist approaches is that they both share the notion that informal activities take place outside the existing regulatory and legal framework. The neoliberal approach differs from them in that it considers the informal sector as originating from inefficient bureaucracy and inadequate legislation.

The underground economy approach attributes the expansion of the informal economy to a variety of processes, some of which were at work prior to the 1970s particularly in less developed economies – 'the responses of both workers and enterprises to the power of organised labour, a reaction of formal enterprises to escape regulations; international competition, which forces capital to reduce costs by shifting enterprise locations to low cost countries and finally, the impact of the restructuring and particular the austerity policies of international financial institutions' (Menke 1998: 46). The approach perceives the systematic linkages between informal and informal economies as 'an integral component of the national and global economy rather than a marginal appendix' (ibid: 34). Hence, policies should aim at linking consistent activities at the grassroots level with broader social economic processes.

In fact, the starting point of institutional and labour market segmentation theories is the role played by institutions in which some labour market segmentation theories explain segmentation as resulting from institutional factors such as unionisation or labour legislation. This reflects the underground economy approach whereby large formal enterprises cir-

cumvent costs on minimum wage and taxes by employing unprotected labour. Thus, changes in the employment structure and poverty are influenced by lack of protection, which is the principal criterion for informality according to the underground approach.

Structuralist perspective contends that labour surplus is structurally rather than policy induced owing to global restructuring and the resulting technological innovations. This perspective takes a negative view of the informal sector and labour employment in the informal sector is seen as vulnerable. This view rebuffs the dualist approach rationalisations in favour of structural ones drawing on Marx's notion of *petty production* to characterise informal sector activities (petty producers refer to production for the market by independent producers who own the means of production such as artisans). Structuralists contend that instead of a differentiation between formal and informal sectors, there exists a variety of production processes that can be separated by their relationships to the capitalist sector whose mode of production involves production for the market by owners of the means of production with services from a class of workers. According to the structuralist view, the informal sector is seen as the result of an incomplete transition to advanced capitalism, it employs those who are the most socially and economically vulnerable to serve the interests of capitalist production in the formal sector rendering them reliant and subordinate to that sector (Moser 1984; Peterson and Lewis 1999). Structuralists contend that global rivalry has induced the modern economy to look for cheaper, more flexible modes of production thus shifting more of their production to the informal sector in the form of piecework and contract work. A consequent policy contention of the structuralist view is that government policy should be used to assist the transition of informal sector to advanced capitalism (formal sector) causing the eventual disappearance of the informal sector (Peterson and Lewis 1999: 473).

Menke (1998) explains that excess labour further suppresses labour incomes giving rise to survival economic activities that are not integrated with the modern economy. This is one of the approach's major differences with the underground approach, which again, stresses the linkages between informal grassroots survival activities and the formal economy. A commonality between the two approaches is the linkage of the expansion of the informal sector to global economic processes as well as decentralisation and reorganisation of production and labour relations. In-

formalisation is therefore seen as a means to reduce labour costs and enhance flexibility in production forcing many enterprises to evade laws and regulations.

In terms of the *feminist approach*, Peterson and Lewis (1999: 473) note, 'a feminist sociologist (MacEwen Scott: 1995) observes that early research on the informal sector focused almost exclusively on men's activities and Mazumdar (1975) was the first to mention women in relation to the informal sector but only did so in the context of defining informal sector labour by its low opportunity cost'.[8] Based on the premise that women who chose to work in the informal sector were not considered giving up their time spent on home production and leisure activities for productive activities, their labour was considered to have very little value (Peterson and Lewis 1999). Subsequent research showed women's heavy involvement and remuneration in the informal sector. Benaria (1989) observes that most people employed in the informal sector in developing economies tend to be poor; they belong to certain marginalised groups (women, the young, immigrants) and are disproportionately represented in this sector. In sum, the discovery of women's involvement in the informal sector provoked feminist scholars to explore the rationale for this. Part of their research efforts were directed at certain groups of women (street vendors, domestic servants; Benaria and Roldan 1987; Moser 1977) and partly on the theoretical significance of women's work for the family, society and economy. Many of the feminist studies suggested that patriarchal norms in the family might help explain women's status in the formal sector.

According to feminist economists, the growing evidence of women's participation in the informal sector 'was both further evidence and ammunition against the gender bias inherent in mainstream development economics which consistently underestimated women's economic contributions, a flaw that became more apparent as feminist economists undertook case studies of women in developing countries' (Peterson and Lewis, 1999: 474). As heavy participation by women in income generating activities in the informal sector became more obvious, the meaning of their economic contributions to the household also became apparent and this confronted the traditional view of the household and household decision-making with its assumptions of a male head. A significant contribution of women to household income became visible as well as the fact that women's income had more beneficial effects than did male in-

come on the family in general and in children in particular (Folbre 1986). As a result, the policy debate began to see earning opportunities of women as the most direct way of promoting not only their own welfare, but also their children's welfare and more broadly, economic development. Thus, the *invisible hand* of women changed from being invisible or unproductive to being a dynamic force for promoting development. As Peterson and Lewis (1999: 474-475) explain, a debate emerged among feminist economists on the subject of women in the informal sector, in the background of this revolutionary thinking about women and development.

As a preliminary point, some feminist economists accepted pragmatically the dualist view – the feminist version of the dualist view accepts that women work in the informal sector because they lack other income generating activities and suggests that if women are mainly working in the care economy, the informal sector can be beneficial to them. According to Peterson and Lewis (1999), the feminists' dualist view of the informal sector has inspired considerable literature on women and micro-enterprise development. The literature has principally stressed women's participation in productive activities and the obstacles they face as women in earning a decent income. These hurdles include socially defined limits to their mobility and discrimination by formal sources of credit. In reality, their right to obtaining credit has turned out to be one of the fundamental concerns in promoting micro-enterprises of women (Berger 1989; Berger and Bulvenic 1995; Dignard and Havet 1995).

Feminist economists who challenge the feminist dualistic view of the informal sector approach it from the structuralist perspective and emphasise issues concerning women's intense participation in the most vulnerable sector of the economy (Benaria 1989; Moser 1978, 1984; Scott 1995). Feminist economists view the informal sector, from the structuralist perspective, as reliant and inferior to the formal sector and maintain that a development strategy based on informal enterprise will do little to help women because it ignores certain essentials. For example, that enterprises belonging to women have low levels of human capital and backward technology level (Peterson and Lewis 1999).

Most women in Kenya are engaged in the informal sector in a wide range of survival activities as own account workers or unpaid family workers. According to Amanda et al. (2007), 85 per cent of female-owned businesses are in the informal sector; women constitute 48 per

cent of micro, small and medium enterprises; their businesses tend to be smaller; are less likely to grow; and are less capital-intensive than those owned by males. As noted, the reforms process in Kenya has coincided with increased informality and precarious forms of employment with women becoming the most vulnerable group.

According to the feminist version of the dualist view, the fact that women work in the informal sector because they lack other income generating activities and that the sector can be beneficial to them if they are mainly working in the care economy is to a certain extent relevant for Kenya. Implied in this view is that the flexible nature of working conditions in the informal sector enables women to juggle between care and productive work but, this notion seems oblivious of the fact that this sort of juggling favours certain groups of women and not others. The informal sector favours women with fewer children, those with children above school-age, those that can afford to hire a maid or accommodate a female relative to assist with caring for children and other household chores and those that have the resources to set up their own business. Adjustment and crisis have induced a major shift in employment from modern wage employment to informal sector employment while deteriorating economic circumstances of urban households have fuelled women's intensive participation in this most vulnerable sector of the economy with the nature of their work mainly revolving around non-wage labour in precarious activities. In addition to the fact that enterprises belonging to women have low levels of human capital and backward technology, perhaps because of this, it appears that women operating such enterprises in Kenya earn less than men do in equivalent situations (Pollin et al. 2007). This makes the structuralist feminist perspective also relevant as it emphasises the vulnerable conditions of women's work in the informal sector. Thus, the dualist version of the feminist approach adopts a somewhat positive view as it sees the informal sector as beneficial to women who are also participating in the care economy while pointing out the obstacles they face as women in earning a decent income. The structuralist version takes a more negative view in the sense that it highlights the vulnerable conditions of work in the informal sector (as concerns women) and considers it reliant and inferior to the formal sector. Of course, it is likely that both these views are relevant and applicable to the Kenyan case.

This chapter assesses the factors responsible for situating individuals in different sectors, with particular attention to the role of women. To interpret and understand the estimates, it draws upon the various perspectives outlined above, especially the feminist characterisation of the informal sector.

5.2.1 Empirical model for the determinants of sectoral choice

This study uses a multinomial logit model (MNL), which sorts individuals into three different states – formal sector employment, informal sector employment and unemployed. The model allows the dependent variable to take three mutually exclusive and exhaustive values, j=1, 2 and 3 defined as follows:

$$\text{Probability}(Y_i = j) = \frac{e^{\beta_j X_i}}{\sum_{m=1}^{3} e^{\beta_m X_i}}, \text{ where,}$$

y_i=1 if an individual works in the formal sector
y_i=2 if an individual works in the informal sector
y_i=3 if an individual is unemployed (base category).[9]

Thus, the dependent variable has three categories/outcomes. In order to facilitate understanding of the effects of the estimated coefficients, marginal effects or predicted probabilities (that is, changes in the predicted probability associated with changes in the explanatory variables for each of the three outcomes[10]) are developed based on the MNL model. Marginal effects (ME) are evaluated at the sample mean. The independent variables include personal and household characteristics as well as other socioeconomic variables. Personal characteristics include – age, level of education, marital status and household-headship. Household characteristics include variables that capture childcare responsibilities – number of young children below school age, the size of the household, and the presence of female relatives in a household. Details on the definition of the variables and their expected effects appear in Table 3.2 of chapter 3.

5.3 Data and Descriptive Statistics

This chapter uses LFS cross-sectional data of 1986 and 1998 and covers the age range 15 to 64. Mean characteristics for the entire labour force sample and for males and females appear separately and are discussed in chapter 4. Descriptive statistics conditional on sector are provided in Tables 5.3, 5.4 and 5.5 for the entire sample while figures conditional on sex and sector are in Tables 5.6, 5.7 and 5.8 for males and in Tables 5.9, 5.10 and 5.11 for females.

Across the three outcomes, there are clear differences in some of the characteristics. As displayed in Tables 5.3, 5.4 and 5.5, an average formal sector worker was about two years older in 1998 compared to 1986 while an average informal sector worker was about three years younger in 1998 (about 33) as compared to 1986. However, the key difference is that the average unemployed worker was about five years younger than workers in the formal or informal sector were. In terms of the level of education in relation to the sector of employment, in 1998, 72 per cent of formal sector workers had secondary level education or above, which is 24 per cent higher than the corresponding figure for 1986. While this is partly due to the general increase in education level of the labour force, it also reflects increasing competition for formal sector jobs and/or increasing demand for educated labour in the formal sector. As may be expected, informal sector workers are less educated than formal sector workers are (in 1998, 43 per cent have secondary education or more as compared to 72 per cent of formal sector workers). However, over time, reflecting the overall increase in educational supply, the percentage of workers with secondary or more education increased even in the informal sector (from 33 to 43 per cent).

At about 64 per cent in both sample periods, most persons engaged in formal employment have acquired some form of training (mainly technical/vocational/professional rather than on-job training). However, a majority of those in informal sector employment did not have any training (59 per cent in 1986 and 74 per cent in 1998). The scenario is worse among unemployed persons where 76 per cent of the sample in 1986 and 87 per cent of the sample in 1998 had no training.

In terms of gender composition, 76 per cent of formal sector workers in 1986 were male, which dropped to 71 per cent in 1998. For the informal sector, corresponding figures are 58 per cent in 1986 falling to 53 per cent in 1998 while for the unemployed category the proportions are

43 per cent in 1986 falling to 26 per cent in 1998. Thus, while men dominated the two sectors, women comprised a majority among the unemployed. By marital status, the proportion of married persons working in the formal sector increased from 72 per cent in 1986 to 77 per cent in 1998. Similarly, their proportion among the unemployed increased by a large magnitude from 47 per cent in 1986 to 64 per cent in 1998. In contrast, their proportion in the informal sector dropped from 77 per cent in 1986 to 69 per cent in 1998. The changes in the overall sex and marital status composition across the three outcomes reflect the general increase in female labour force participation of married women.

In 1986, 74 per cent of the individuals working in the formal sector were household heads while this proportion increased to 78 per cent in 1998. Matching figures for the informal sector are 69 per cent in 1986 and 61 per cent in 1998. At about 18 per cent, the proportion of household heads did not change among the unemployed. Thus, persons classified as household heads are far more likely to be employed as compared to non-household heads.

Table 5.3
Descriptive statistics: Labour-force (full sample) by sector breakdown - formal

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	2502	32.65	9.22	1261	34.63	8.77
Agesq	2502	1150.99	671.02	1261	1276.05	641.22
Sex	2502	0.76	0.43	1261	0.71	0.45
Married	2502	0.72	0.45	1261	0.77	0.42
Head	2502	0.74	0.44	1261	0.78	0.42
Hsize	2502	3.92	2.85	1261	3.74	2.33
Relatives	2502	0.1	0.3	1261	0.16	0.37
None	2502	0.09	0.28	1261	0.03	0.16
Primary	2502	0.39	0.49	1261	0.25	0.43
Secondary	2502	0.48	0.5	1261	0.66	0.47
University	2502	0.05	0.21	1261	0.06	0.24
Training	2500	0.64	0.48	1261	0.64	0.48

Table 5.4
Descriptive statistics: Labour-force (full sample) by sector breakdown - informal

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	719	35.71	10.85	1017	33.18	10.19
Agesq	719	1392.53	854.05	1017	1204.96	753.39
Sex	719	0.58	0.49	1017	0.53	0.5
Married	719	0.77	0.42	1017	0.69	0.46
Head	719	0.69	0.46	1017	0.61	0.49
Hsize	719	4.57	3.12	1017	4.19	2.42
Relatives	719	0.12	0.33	1017	0.15	0.36
None	719	0.2	0.4	1017	0.09	0.29
Primary	719	0.47	0.5	1017	0.47	0.5
Secondary	719	0.29	0.45	1017	0.41	0.49
University	719	0.04	0.2	1017	0.02	0.14
Training	719	0.41	0.49	1017	0.26	0.44

Table 5.5
Descriptive statistics: Labour-force (full sample) by sector breakdown - unemployed

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	786	25.82	8	960	28.69	10.67
Agesq	786	730.69	526.4	960	936.64	767.32
Sex	786	0.43	0.5	960	0.26	0.44
Married	786	0.47	0.5	960	0.64	0.48
Head	786	0.18	0.39	960	0.18	0.38
Hsize	786	5.12	3.01	960	4.71	2.64
Relatives	786	0.16	0.37	960	0.22	0.42
None	786	0.15	0.35	960	0.11	0.31
Primary	786	0.4	0.49	960	0.45	0.5
Secondary	786	0.45	0.5	960	0.43	0.5
University	786	0	0.06	960	0.02	0.12
Training	786	0.24	0.43	959	0.13	0.34

Across the three outcomes, there are sharp differences by sex. An average formal sector male worker was about four years older (about 34 in 1986 and 36 in 1998) than a female worker. Turning to the informal sector, an average male worker was about three years older in 1986 (about 37) and two years older in 1998 (about 34) as compared to a female worker. What is common in both groups is an increase in the average age among formal sector workers (from 34 in 1986 to 36 in 1998 for males and from 30 to 32 for females) suggesting an increase in demand for experienced workers in the formal sector. While the average age of an unemployed male increased by about five years from 25 in 1986 that of a female increased by about two years from 26 in 1986; there was a 4 to 5 year gap between employed and unemployed individuals regardless of sex. The overall increase in the age of individuals in the labour market may be linked to increase time spent acquiring education. At the same time, the higher age of the employed (formal or informal sector) also supports the idea that the youth find it harder to get jobs in either the formal or the informal sector.

By marital status, although evidence shows an increase in the proportion of married persons in the formal sector in both male and female samples, the proportion is considerably higher among males than females (79 per cent in 1986 and 85 per cent in 1998 for males and 50 per cent in 1986 and 55 per cent in 1998 for females). In the informal sector, the proportion of married persons is decreasing among both males and females, although it remains higher among males (84 per cent in 1986 and 75 per cent in 1998 as compared to 69 per cent in 1986 and 63 per cent among women). The higher proportions of married males in both sectors reflect a societal obligation assigned to married men to provide for their families financially. Thus, a married man regardless of education, skills or ability cannot afford to be unemployed – the unemployed category shows a sharp increase in the proportion of unemployed married males (of about 15 percentage points from 26 per cent in 1986). The proportion of unemployed married women is far higher than for males and it increased less sharply (by 8 percentage points from 64 per cent in 1986). The risk of unemployment is likely to be higher among married women than among married men for the reason explained above. Thus, although unemployment is remarkably higher among women, the increase in unemployment is highest among men.

In 1986, 86 per cent of males working in the formal sector were classified as household heads, which increases to 92 per cent in 1998. The proportion of male household heads in the informal sector lies in the same range. The main difference is the far lower percentage of household heads amongst the unemployed. Although this proportion increased from 26 per cent in 1986 to 44 per cent in 1998, it is clear that male household heads are far less likely to be unemployed as compared to non-household heads. In terms of temporal trends, the increase in the proportion of male household heads among the unemployed may have triggered a greater need to work amongst married women to compensate for the loss in spouse's income due to unemployment or the general decline in real earnings. As a matter of fact, male spouse's average real monthly earnings were about Ksh 4,235 in 1986 and about Ksh 2,059 in 1998, a decline in value of about 51 per cent. As sketched out in chapter 2, this mirrors the real wage losses particularly during the first half of the 1980s and early 90s.

Although the proportion of women classified as household head in 1986 was higher in the informal sector (about 37 per cent) than in the formal sector (about 41 per cent), it increased to 42 per cent in 1998 in the formal sector while it dropped to 36 per cent in the informal sector. As argued earlier, this may reflect an improvement in women's productive characteristics (experience and education) from the labour demand point view. The proportion of unemployed female household heads although quite smaller than in the male sample (about 26 per cent in 1986 and 44 in 1998) dropped from 12 per cent in 1986 to 9 per cent in 1998.

In terms of the level of education in relation to gender and sector of employment, the proportion of male formal sector workers in 1986 with primary level education or none and with secondary level education or above were about the same (49 per cent and 51 per cent respectively). There is a clear increase in male educational attainment over time and in 1998, about 72 per cent of male formal sector workers had secondary level education or above. A majority among male informal sector workers had primary level education or none (59 per cent in 1986 and 54 per cent in 1998). In 1986, the proportion of unemployed males was higher for those with secondary level education or above (55 per cent) those with primary level or none (46 per cent). In 1998, the proportions were equal for the two education levels.

Among women, about 58 per cent of formal sector workers had secondary education or above in 1986, which increased to 75 per cent in the 1998 sample. However, a majority of female informal sector workers had primary level education or none (80 per cent in 1986 and 59 per cent in 1998). Similarly, a majority among unemployed females had primary level education or none (62 per cent in 1986 and 58 per cent in 1998).

Thus as in the case of males, there is a sharp increase in the proportion of highly educated persons in the formal sector, which as noted reflects the increasing competition for formal sector jobs and/or the increasing demand for educated labour in the formal sector. An important difference by sex is noted: among women, unemployment and informal sector employment strikes those with a low education level (primary level education or none) heavily. Even so, there has been a sharper increase in the supply of women with secondary level education or above in the informal sector (from a proportion of about 20 per cent in 1986 to 41 per cent in 1998) compared to men (from a proportion of about 41 per cent in 1986 to 45 per cent in 1998). This implies a highly competitive labour market for the scarce number of jobs available in the formal sector. This may also partly account for the increase in the proportion of women with secondary level or above among the unemployed. As the formal sector becomes increasingly informalised, this can trigger demand for highly educated labour, which may account for the rise in the supply of workers with secondary level education in the informal sector.

Overall, descriptive analysis points to greater demand for highly educated, skilled and experienced labour in the formal sector, despite its sluggish ability to generate employment.

Table 5.6
Descriptive statistics: Labour-force (males) by sector breakdown – formal

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	1891	33.57	9.18	899	35.74	8.71
Agesq	1891	1211.03	681.77	899	1353.03	655.14
Married	1891	0.79	0.41	899	0.85	0.35
Head	1891	0.86	0.35	899	0.92	0.27
Hsize	1891	3.62	2.79	899	3.6	2.34
Relatives	1891	0.07	0.26	899	0.12	0.33
None	1891	0.08	0.28	899	0.03	0.16
Primary	1891	0.41	0.49	899	0.25	0.44
Secondary	1891	0.47	0.5	899	0.65	0.48
University	1891	0.04	0.21	899	0.07	0.26
Training	1891	0.66	0.47	899	0.66	0.47

Table 5.7
Descriptive statistics: Labour-force (males) by sector breakdown – informal

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	420	36.98	11.03	542	34.24	10.54
Agesq	420	1488.77	882.69	542	1283.03	794.42
Married	420	0.84	0.37	542	0.75	0.44
Head	420	0.89	0.31	542	0.83	0.38
Hsize	420	4.18	3.03	542	3.98	2.54
Relatives	420	0.1	0.29	542	0.11	0.31
None	420	0.14	0.34	542	0.06	0.24
Primary	420	0.45	0.5	542	0.48	0.5
Secondary	420	0.35	0.48	542	0.42	0.49
University	420	0.06	0.24	542	0.03	0.17
Training	420	0.52	0.5	542	0.35	0.48

Table 5.8
Descriptive statistics: Labour-force (males) - unemployed

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	341	25.4	7.99	250	30.23	12.29
Agesq	341	708.7	526.93	250	1064.25	898.26
Married	341	0.26	0.44	250	0.41	0.49
Head	341	0.26	0.44	250	0.44	0.5
Hsize	341	4.7	3.18	250	4.69	2.68
Relatives	341	0.09	0.28	250	0.18	0.38
None	341	0.08	0.27	250	0.08	0.27
Primary	341	0.38	0.49	250	0.42	0.49
Secondary	341	0.54	0.5	250	0.48	0.5
University	341	0.01	0.08	250	0.02	0.15
Training	341	0.29	0.45	249	0.24	0.43

Table 5.9
Descriptive statistics: Labour-force (females) by sector breakdown - formal

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	611	29.81	8.77	362	31.88	8.31
Agesq	611	965.17	600.15	362	1084.85	562.13
Married	611	0.5	0.5	362	0.55	0.5
Head	611	0.37	0.48	362	0.42	0.49
Hsize	611	4.86	2.84	362	4.09	2.27
Relatives	611	0.19	0.39	362	0.25	0.43
None	611	0.09	0.29	362	0.02	0.16
Primary	611	0.33	0.47	362	0.23	0.42
Secondary	611	0.53	0.5	362	0.71	0.46
University	611	0.05	0.22	362	0.04	0.19
Training	609	0.57	0.49	362	0.58	0.49

Table 5.10
Descriptive statistics: Labour-force (females) by sector breakdown - informal

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	299	33.92	10.34	475	31.99	9.64
Agesq	299	1257.34	794.05	475	1115.88	693.83
Married	299	0.69	0.46	475	0.63	0.48
Head	299	0.41	0.49	475	0.36	0.48
Hsize	299	5.12	3.18	475	4.44	2.25
Relatives	299	0.16	0.36	475	0.2	0.4
None	299	0.29	0.45	475	0.13	0.33
Primary	299	0.51	0.5	475	0.46	0.5
Secondary	299	0.19	0.4	475	0.4	0.49
University	299	0.01	0.1	475	0.01	0.09
Training	299	0.25	0.43	475	0.16	0.37

Table 5.11
Descriptive statistics: Labour-force (females) - unemployed

Variable	1986			1998		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Age	445	26.15	8	710	28.14	9.99
Agesq	445	747.55	525.97	710	891.71	710.81
Married	445	0.64	0.48	710	0.72	0.45
Head	445	0.12	0.32	710	0.09	0.28
Hsize	445	5.45	2.83	710	4.71	2.63
Relatives	445	0.22	0.41	710	0.24	0.43
None	445	0.2	0.4	710	0.11	0.32
Primary	445	0.42	0.49	710	0.46	0.5
Secondary	445	0.38	0.49	710	0.41	0.49
University	445	0	0.05	710	0.01	0.11
Training	445	0.21	0.41	710	0.09	0.29

5.4 Results and Discussion

For each year, multinomial logit estimates are provided for the entire sample in Tables 5.12 and 5.13 followed by estimates for males and females separately (Tables 5.14 and 5.15 for males and Tables 5.16 and 5.17 for females). In view of the fact that most of the rise in urban FLFPR is due to increased presence of married women in the labour-force, determinants of sectoral choice are presented for married women separately (Tables 5.18 and 5.19). The discussion focuses on the estimates for 1986 and highlights disparities between formal and informal sectors and over time.

For 1986, the estimates in Table 5.12 show that the age and age-squared variables (proxy for experience) have the expected positive and negative signs and are statistically significant in both formal and informal sectors. However, the marginal effect (ME) of age is higher in the formal sector (about two per cent) and quite small in the informal sector (even if the coefficient of age is positive in the informal sector, its ME is negative, -0.3 per cent). This shows that older persons have a higher likelihood of being employed in the formal sector (in other words younger persons find it harder to obtain employment in both sectors) although beyond a peak (about 40 for the formal sector) the probability of being employed declines. Experience has a more important bearing in the formal than in the informal sector.

The coefficients of the sex variable indicate that men are far more likely to be working in the formal sector than women are. Estimates indicate that men are about 17 percentage points more likely to be employed in the formal sector than women are while they are about 14 percentage points less likely to be employed in the informal sector and about 4 percentage points less likely to be unemployed than women are. The sorting of men into the formal sector may be a result of various factors. First, formal sector work is likely to be less flexible and call for fixed work hours compared to informal sector work and given their household responsibilities, women may select the informal sector to cope with other demands on their time. Second, despite similar observed educational characteristics, employers may be less willing to hire women due to lower levels of unobserved human capital and experience and/or the expectation that women may not be able to meet the demands of the job because of competing needs on their time (statistical discrimination).[11]

Marital status does not seem to be associated with employment in the formal sector while it works towards increasing the probability of working in the informal sector (about six percentage points) and reducing that of being unemployed (about five percentage points). This effect is covered in more detail in the examination of sex-specific estimates below.

Household heads are about 17 percentage points more likely to be employed in the formal sector, about 8 percentage points more likely to be employed in the informal sector and 25 percentage points less likely to be unemployed. As explained, a person classified as head of a household in Kenyan families as in other parts of the world, has an important cultural role and obligation to provide for the family economically and is expected to work, regardless of the sector. Accordingly, the strong effect of the household headship variable on employment may be because a person identified as the head of a household is expected to be the family's breadwinner and for such a person, the job search is more intensive than for a person who is not. From the demand side, while employers per se, may not care whether one is a household head or not it may signal a person's job commitment and reflect his/her productivity related attributes.

In terms of the effect of education, individuals with primary education are about 14 percentage points more likely to be employed in the formal sector than persons with no education are. The effect for those with secondary education is about 23 percentage points. The gap between the marginal effects of the two levels of education is large and highlights the importance of education in securing formal wage employment.

While there are similarities between the 1986 and 1998 estimates, there are also some sharp differences. While the effect of age (Table 5.13) is negligible in the informal sector, in the formal sector, from a positive marginal effect of two percentage points, the 1998 estimates show that age increases the likelihood of employment by about five per cent (the peak age in 1998, 39, is a year lower than in 1986). Whereas the positive effect of the sex variable on formal sector employment is relatively unchanged, its negative ME in the informal sector dropped from about 14 per cent to about 4 per cent in 1998 suggesting a decline in the importance attached to sex in finding an informal sector job. The negative effect of the marital status variable in the formal sector and its positive effect in the informal sector are replaced by a zero effect in 1998. In

other words, married and single persons are equally likely to be employed in any of the two sectors.

While both levels of education continue to exert a statistically significant effect on the probability of finding formal sector employment, there are sharp changes in the magnitude (importance) of education in accessing formal sector employment. The effect of secondary level and plus education increases remarkably by about 16 percentage points while that of primary level increases by 5 percentage points. The increase in the importance of education may reflect an increase in demand for more educated labour while at the same time; given the overall decline in modern wage employment, it suggests the increasing use of education as a way of screening entry into formal sector employment.

Table 5.12
Determinants of formal and informal employment 1986 – full sample

Variable	Formal				Informal			
	Coef.	Std. Err	ME	Std. Err	Coef.	Std. Err	ME	Std. Err.
Age	0.202***	0.034	0.024	0.005	0.149***	0.039	-0.003	0.004
Agesq^	-0.210***	0.048	-0.03	0.007	-0.116*	0.053	0.009	0.006
Sex	0.539***	0.104	0.171	0.019	-0.391**	0.136	-0.135	0.019
Marital	0.320**	0.112	-0.018	0.019	0.723***	0.143	0.064	0.015
Head	1.853***	0.126	0.173	0.021	2.065***	0.16	0.079	0.016
Hsize	-0.022	0.018	-0.008	0.003	0.03	0.021	0.007	0.002
Relatives	0.256	0.144	0.031	0.024	0.179	0.178	-0.006	0.021
Primary	1.046***	0.165	0.135	0.024	0.653***	0.178	-0.035	0.018
Secondary+	1.219***	0.162	0.226	0.024	0.217	0.182	-0.117	0.019
Constant	-5.038***	0.551			-5.104***	0.649		
Number of obs	4007							

Variable	Unemployed	
	ME	Std.
Age	-0.021	0.004
Agesq^	0.021	0.005
Sex	-0.036	0.012
Marital	-0.046	0.013
Head	-0.252	0.018
Hsize	0.001	0.002
Relatives	-0.025	0.013
Primary	-0.1	0.016
Secondary+	-0.109	0.017
Constant		
Number of obs		

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

Table 5.13
Determinants of formal and informal employment 1998 – full sample

Variable	Formal				Informal			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.349***	0.035	0.053	0.007	0.204***	0.031	-0.002	0.006
Agesq^	-0.453***	0.047	-0.067	0.01	-0.275***	0.041	0	0.009
Sex	0.917***	0.127	0.161	0.023	0.369**	0.121	-0.043	0.023
Marital	-0.012	0.129	0.008	0.024	-0.077	0.12	-0.016	0.023
Head	1.937***	0.15	0.206	0.026	1.740***	0.145	0.137	0.025
Hsize	-0.048*	0.025	-0.016	0.005	0.035	0.022	0.015	0.004
Relatives	0.351*	0.144	0.093	0.03	-0.06	0.136	-0.065	0.026
Primary	1.066***	0.243	0.187	0.05	0.449*	0.185	-0.054	0.04
Secondary+	1.888***	0.239	0.389	0.04	0.187	0.186	-0.209	0.037
Constant	-8.490***	0.626			-4.506***	0.519		
Number of obs	3238							

Variable	Unemployed	
	ME	Std. Err.
Age	-0.051	0.005
Agesq^	0.067	0.007
Sex	-0.118	0.02
Marital	0.008	0.02
Head	-0.344	-0.023
Hsize	0.001	0.004
Relatives	-0.028	0.021
Primary	-0.133	0.031
Secondary+	-0.18	0.032
Constant		
Number of obs		

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

Turning to males and females separately and starting with the results for males in Tables 5.14 and 5.15, the discussion again focuses on the estimates for 1986 and then highlights differences between the two sectors, over time and by gender.

Male estimates for 1986 (Table 5.14) show that the substitute for experience (age) exerts the expected positive sign in the formal sector and is statistically significant (with ME of about two per cent). This shows that older men have a higher likelihood of employment in the formal sector. This likelihood begins to decline at the age of 35. As in the previous results, although the coefficient of age is positive in the informal sector, its ME is negative (about one per cent). Married men are about seven percentage points and two percentage points more likely to be employed in the formal and informal sectors respectively than single men are. Male heads of household are 13 percentage points and 7 percentage points (respectively) more likely to be employed in the formal and informal sectors compared to men who do not head their households. Household size exerts a zero effect.

In terms of the effect of education on sectoral choice, both primary, and secondary and above (higher) education exert a statistically significant effect on the probability of finding employment in the formal sector (about five per cent and seven per cent respectively) while their effect in the informal sector is zero.

Turning to the 1998 estimates (Table 5.15), the peak age of formal sector employment increased by four years to 39 (from 35 in 1986). This may be due to increased educational attainment thus capturing a longer duration spent at school acquiring education. Moreover, given the structural changes that have characterised the Kenyan economy in recent years, shifts in demand in favour of skilled and highly educated labour affected the labour market. Accumulation of skills, education and experience takes time causing the peak age of formal sector employment to increase.

The positive effect of primary education rose by about four percentage points between 1986 and 1998. From a seven per cent positive effect of secondary level and above education on the probability of finding employment in the formal sector, the importance of education increased enormously to a 31 per cent effect in 1998. The zero effect of primary level education in the informal sector is replaced by a statistically significant but a negative effect of about one per cent. Secondary level retains a nil effect in the informal sector. Thus, increasing importance of experienced and highly educated males is observed in formal sector employment.

Table 5.14
Determinants of formal and informal employment 1986 – males

Variable	Formal				Informal			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.224***	0.051	0.024	0.006	0.123*	0.061	-0.011	0.006
Agesq^	-0.276***	0.07	-0.034	0.008	-0.113	0.08	0.019	0.007
Marital	1.080***	0.187	0.07	0.027	1.088***	0.24	0.016	0.023
Head	1.844***	0.178	0.126	0.03	2.187***	0.247	0.07	0.02
Hsize	-0.022	0.024	-0.008	0.003	0.037	0.028	0.008	0.003
Primary	0.547*	0.278	0.046	0.028	0.394	0.311	-0.015	0.024
Secondary+	0.482	0.276	0.07	0.029	0.119	0.312	-0.043	0.025
Constant	-4.282***	0.858			-4.715***	1.024		
Number of obs	2652							

Variable	Unemployed	
	ME	Std. Err.
Age	-0.013	0.003
Agesq^	0.015	0.004
Marital	-0.085	0.018
Head	-0.196	0.026
Hsize	0.001	0.001
Primary	-0.031	0.016
Secondary+	-0.026	0.017
Constant		
Number of obs		

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

Table 5.15
Determinants of formal and informal employment 1998 – males

Variable	Formal				Informal			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.271***	0.054	0.05	0.01	0.09	0.051	-0.031	0.009
Agesq^	-0.375***	0.068	-0.064	0.013	-0.152*	0.065	0.036	0.012
Marital	0.943***	0.245	0.111	0.042	0.688**	0.25	-0.013	0.039
Head	1.762***	0.254	0.171	0.047	1.671***	0.261	0.084	0.041
Hsize	-0.06	0.034	-0.017	0.006	0.014	0.032	0.014	0.005
Primary	0.944**	0.365	0.091	0.066	0.739*	0.342	-0.014	0.06
Secondary+	1.409***	0.355	0.307	0.06	0.187	0.337	-0.215	0.058
Constant	-6.010***	0.981			-2.302*	0.917		
Number of obs	1691							

Variable	Unemployed	
	ME	Std. Err.
Age	-0.02	0.005
Agesq^	0.028	0.006
Marital	-0.097	0.031
Head	-0.254	0.045
Hsize	0.003	0.003
Primary	-0.077	0.027
Secondary+	-0.092	0.035
Constant		
Number of obs		

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

Estimates for females are in Tables 5.16 and 5.17. Beginning with the 1986 sample, estimates in Table 5.16 show that for both sectors, the age and age-squared variables are statistically significant and have the expected signs. The peak age in the formal sector is about 53, which is much higher than the peak age for males. The greater importance of experience in determining female access to formal sector employment suggests that there is a greater competition amongst females for a limited range of formal sector positions.

Married women are about 24 percentage points less likely to be employed in the formal sector compared to single women and 15 percent-

age points more likely to be employed in the informal sector. On the one hand, married women may be more susceptible to discrimination in the labour market as employers try to safeguard productive costs such as mandatory and paid maternity leave and anticipated interruption from work due to care work or to give birth. On the other hand, due to reproductive responsibilities and care work, married women (especially the less educated) may seek refuge in the informal sector where it may be possible to combine productive and care work as hours of work are not fixed.

Women who head a household are 5 percentage points and 17 percentage points more likely to be employed in the formal and informal sectors respectively compared to those who do not head their households. These effects may be contrasted with effect for male household-heads (7 and 13 per cent respectively). Thus, while there is a household-head effect for both males and females, the effect of this variable in securing male household access to formal sector employment is much greater than for females. The presence of female relatives and household size exert a zero effect.

Regarding the effect of education on the choice of sector, women with any level of education are far more likely to be employed in the formal sector as compared to uneducated women with the marginal effect increasing with the level of education (about 27 per cent for primary level and 49 per cent for secondary level and above). These results are quite distinct from those of men where the ME is much smaller – about five per cent for the primary level and seven per cent for the secondary level and above. The higher effect of education among women may reflect the higher barriers to entry imposed on women's access to formal sector jobs. While education is not as important for men to secure a formal sector job, it seems that unless a woman is educated, it is very unlikely that she can access a formal sector job.

In 1998 (Table 5.17), age continued to exert a statistically significant effect in terms of influencing access to both formal and informal sector employment. The 24 per cent negative marginal effect associated with marriage dropped sharply to about ten per cent in 1998. This sharp decline supports the idea that over time, married women are increasingly likely to insert themselves in the labour market and to compete for jobs against single women. In terms of employment in the informal sector, in 1986, estimates indicated that married women were 15 percentage points

more likely to work in the informal sector, however, over time, they lose this advantage and in 1998, married and single women were equally likely to work in the informal sector. These patterns suggest that over time, while married women are more likely to work in the formal sector their increased presence in this sector combined with shrinking jobs in this sector has led single women to seek work in the informal sector. With the result that the informal sector, which in 1986 may have been viewed in terms of allowing married women to combine care and productive work, no longer serves this purpose and has become equally likely to serve as an employment outlet for single women who are less likely to have childcare responsibilities.

There are sharp changes in the importance of education in determining formal and informal sector employment; although both levels continued to wield a positive effect on formal sector employment, the marginal effects declined by about six percentage points for the primary level and by ten percentage points for those with at-least secondary level education. The declining importance of education is probably a reflection of the increase in the proportion of educated women entering the labour force. Despite the decline, the importance of education in determining female access to formal labour market jobs remained very high at 21 percentage points for primary education and 39 percentage points for secondary education.

Table 5.16
Determinants of formal and informal employment 1986 – females

Variable	Formal				Informal			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.191***	0.047	0.03	0.01	0.188***	0.053	0.011	0.007
Agesq^	-0.170*	0.068	-0.028	0.014	-0.152*	0.074	-0.008	0.01
Marital	-0.803***	0.172	-0.244	0.035	0.513*	0.218	0.151	0.026
Head	0.938***	0.215	0.049	0.043	1.598***	0.244	0.174	0.037
Hsize	-0.019	0.027	-0.006	0.006	0.017	0.032	0.005	0.005
Relatives	-0.304	0.178	-0.054	0.039	-0.236	0.23	-0.009	0.032
Primary	1.413***	0.238	0.273	0.047	0.724**	0.225	-0.026	0.029
Secondary+	2.061***	0.236	0.487	0.04	-0.192	0.246	-0.208	0.028
Constant	-4.697***	0.738			-5.571***	0.875		
Number of obs		1355						

Variable	Unemployed	
	ME	Std. Err.
Age	-0.041	0.009
Agesq^	0.036	0.014
Marital	0.093	0.033
Head	-0.223	0.034
Hsize	0.002	0.005
Relatives	0.063	0.038
Primary	-0.247	0.039
Secondary+	-0.28	0.037
Constant		
Number of obs		

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

Table 5.17
Determinants of formal and informal employment 1998 – females

Variable	Formal				Informal			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.361***	0.055	0.041	0.008	0.255***	0.042	0.032	0.009
Agesq^	-0.461***	0.079	-0.052	0.012	-0.333***	0.058	-0.043	0.012
Marital	-0.681***	0.192	-0.098	0.03	-0.235	0.171	-0.002	0.034
Head	1.523***	0.233	0.115	0.036	1.620***	0.212	0.236	0.041
Hsize	-0.042	0.036	-0.009	0.005	0.033	0.029	0.01	0.006
Relatives	0.267	0.184	0.048	0.029	-0.039	0.167	-0.028	0.033
Primary	1.333***	0.4	0.208	0.067	0.277	0.222	-0.038	0.049
Secondary+	2.464***	0.394	0.391	0.057	0.124	0.226	-0.144	0.045
Constant	-8.658***	0.914			-5.206***	0.668		
Number of obs	1547							

Variable	Unemployed	
	ME	Std. Err.
Age	-0.073	0.009
Agesq^	0.094	0.013
Marital	0.1	0.037
Head	-0.352	0.035
Hsize	-0.001	0.007
Relatives	-0.02	0.036
Primary	-0.17	0.057
Secondary+	-0.247	0.053
Constant		
Number of obs		

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

As discussed in chapter 3, most of the rise in urban FLFPR during the period 1986-98 was driven by an upsurge of married women in the labour-force; determinants of sectoral choice are presented below for married women separately (Tables 5.18 and 5.19). As in chapter 3, the aim is to examine the link between a household's financial situation proxied by husband's earnings and employment characteristics in determining sector sorting.[12]

As shown in the tables, over time, the importance given to age in determining married women's prospects for formal sector employment declined – from a ME of about eight per cent in 1986 to five per cent in 1998. Their peak age in the formal sector was 53 in 1986 and 40 in 1998. The importance of a woman's education in determining her prospects for formal sector employment also fell steeply – from a positive marginal effect of 21 per cent, the 1998 estimates show that having primary level education had no statistically significant effect on formal sector employment while the positive ME of secondary level education declined by about 16 percentage points.

In 1986, husband's earnings had no bearing on a woman's labour market status; however, in 1998, the picture was quite different. Estimates show that a decline in husband's real earnings is associated with an increase in a wife's employment in the informal sector but has no bearing on entry into the formal sector. This pattern supports the idea that constrained economic circumstances faced by households have forced women to insert themselves into the labour market and turn to the informal sector for employment. As far as the effects of partner's education are concerned, while in 1986, women married to partners with higher levels of education had a higher probability of working in the formal and informal sector, consistent with the decline in positions for educated labour we see that in 1998, husband's education levels played no role in securing better access to jobs. Thus, women married to husbands with better education are equally likely to work in the formal/informal sector compared to women married to less educated men.

The patterns revealed by the estimates are consistent with the macro picture outlined earlier and strongly confirm the conclusions drawn in chapter 3 on the rise in FLFPR in urban areas of Kenya. Chapter 3 shows that the average education level of women rose whereas job opportunities in the formal sector declined and therefore, the massive growth in informal sector employment where remunerations for education are not high in practice, may partly explain the declining importance of education and experience in securing a formal sector job. Chapter 3 also shows that in 1998 as husbands' earnings increased, their wives were less likely to secure employment. The results in this chapter show that in essence, the decline in real earnings in particular spousal earnings prompted married women to join the labour-force in large numbers and take up informal sector employment. This may explain the importance of

male earnings on women's choice of informal sector employment in 1998. Thus, the worsening of economic conditions from the 1990s onwards resulted in more women especially married women joining the informal sector due to economic need.

Table 5.18
Determinants of formal and informal employment 1986 – married women

Variable	Formal				Informal			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.396***	0.099	0.08	0.019	0.102	0.089	-0.014	0.015
Agesq^	-0.358*	0.144	-0.079	0.027	-0.008	0.13	0.029	0.021
Hsize	-0.086	0.051	-0.021	0.01	0.016	0.048	0.01	0.008
Relatives	0.624	0.34	0.156	0.074	-0.09	0.386	-0.071	0.054
Primary	1.144**	0.44	0.206	0.092	0.6	0.347	0.009	0.061
Secondary+	2.263***	0.46	0.471	0.078	0.13	0.4	-0.161	0.061
Hus-Real Earnings	-0.006	0.009	-0.001	0	-0.003	0.008	0	0
Hus-Primary^	0.45	0.505	0.004	0.106	1.007*	0.44	0.16	0.091
Hus-Secondary+	1.402**	0.501	0.217	0.092	1.030*	0.462	0.079	0.076
Constant	-10.63***	1.636			-4.753**	1.448		
Number of obs	607							

Variable	Unemployed	
	ME	Std. Err.
Age	-0.065	0.02
Agesq^	0.05	0.029
Hsize	0.01	0.01
Relatives	-0.085	0.07
Primary	-0.214	0.076
Secondary+	-0.31	0.074
Hus-Real Earnings	0.001	0
Hus-Primary^	-0.164	0.086
Hus-Secondary+	-0.296	0.091
Constant		
Number of obs		

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

Table 5.19
Determinants of formal and informal employment 1998 – married women

Variable	Formal				Informal			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.616***	0.126	0.049	0.011	0.319***	0.081	0.046	0.016
Agesq^	-0.759***	0.183	-0.061	0.016	-0.370**	0.117	-0.052	0.023
Hsize	-0.136	0.075	-0.013	0.007	0.01	0.051	0.006	0.01
Relatives	0.671*	0.333	0.067	0.041	0.217	0.288	0.019	0.056
Primary	1.382	0.949	0.146	0.114	0.086	0.393	-0.031	0.081
Secondary+	3.069**	0.948	0.313	0.105	0.157	0.416	-0.072	0.081
Hus-Real Earnings	-0.034	0.03	-0.001	0	-0.078*	0.036	-0.015	0.01
Hus-Primary^	-1.381	0.803	-0.114	0.046	0.453	0.495	0.131	0.108
Hus-Secondary+	-0.684	0.759	-0.09	0.089	0.526	0.506	0.123	0.089
Constant	-13.51***	2.17			-7.238***	1.342		
Number of obs	724							

Variable	Unemployed	
	ME	Std. Err.
Age	-0.095	0.018
Agesq^	0.113	0.025
Hsize	0.007	0.011
Relatives	-0.087	0.063
Primary	-0.115	0.106
Secondary+	-0.241	0.102
Hus-Real Earnings	0.016	0.01
Hus-Primary^	-0.017	0.11
Hus-Secondary+	-0.032	0.11
Constant		
Number of obs		

Note: * p<.05; ** p<.01; *** p<.001; ^ Estimated parameters multiplied by 1000 to avoid zero entries after rounding off the estimates to 3 decimal places.

5.5 Conclusion

This chapter assessed the main attributes associated with formal and informal sector employment in 1986 and 1998. This period witnessed a number of macroeconomic changes, a tremendous increase in FLFPR (particularly of married women) and an increase in educational attain-

ment. The analysis shows that in both periods, experience and education were highly valued in the formal sector, and while both characteristics were important for males and females, they had a much higher impact on securing formal labour market access for women. The temporal patterns show the importance of education in securing labour market access increased by about eight percentage points for both primary and secondary education levels. However, there are sharp gender differences. For men, the importance of education increased (from 7 to 31 percentage points for secondary education) while for women it declined (from 49 to 39 percentage points for secondary education). As far as men are concerned, over time, there are minimal increases in labour force participation and the greater importance attached to education may reflect the use of educational qualifications and experience as a way of screening employees hence the greater importance of education in securing access to a formal labour market job. As far as women are concerned, there has been significant increase in labour force participation of (educated) women, which in turn may have worked towards reducing the importance of education in determining entry into the formal sector. The sharp gender differences in the role of education in determining formal labour market access despite an overall pattern of increasing supply of educated workers (mainly women) suggests the presence of labour market segregation, with women being restricted to certain types of jobs in the formal sector. This is also reflected in the discussion and figures in chapter 2 (Table 2.7), which show that women are restricted to certain sectors and to certain occupations within sectors. For example, in 2007, education services accounted for 27 per cent of female employment, followed by trade and manufacturing at about ten per cent each. In contrast, men were more evenly spread across sectors and in 2007, education, trade and manufacturing accounted for 14, 11 and 16 per cent of male employment.

For both years, the analysis showed that marital status (a proxy measure of domestic burdens), undermined women's prospects of working in the formal sector while it enhanced the employment prospects of men in both sectors. However, there were sharp and interesting temporal differences. Over time, the negative effect of marital status on formal sector participation declined by 14 percentage points reflecting the increasing insertion of married women in the labour market. The substantially higher informal sector participation rate of married women, at least in

1986, supports the feminist version of the dualist view that the informal sector allows women who have a higher domestic burden to combine reproductive and productive work. While this interpretation seems valid for 1986, in 1998, marital status no longer played a role in determining access to the informal sector and both single and married women were equally likely to be working in this sector. This suggests that over this ten-year span, the informal sector may no longer have been characterised only as a sector that allows women to combine domestic and market activities but as one that provides a last resort – that is, a sector, which offers vulnerable low quality employment and one heavily populated by women. Underscoring the use of the informal sector as an employer of last resort the estimates show that while in 1986 there was no effect of husbands' earnings on their wives labour market status, in 1998 there was a clear effect of husbands' earnings. Over the period under scrutiny, on average there was a decline in monthly real earnings of nearly 50 per cent (in real terms, a decline in monthly earnings of Ksh 4,235 in 1986 to about Ksh 2,059 in 1998). The estimates suggest that this decline is associated with nearly 30 percentage points (Ksh 2,000 times the marginal effect of 0.015-Table 5.19) increase in women's participation in the informal sector.

The shift in employment from formal to informal sector employment and the deteriorating economic circumstances of urban households appears to have driven women's participation in the most vulnerable sector of the economy. This pattern is consistent with the feminist version of the structuralist view of the informal sector, which emphasises the vulnerable conditions of women's work. As discussed and shown in chapter 2, in Kenya, a majority of informal sector paid employees are hired as casual workers and the formal sector (mostly private sector) also employs informal labour arrangements primarily in the form of casual work – women are mainly employed in export-oriented cut flower horticulture, textile and garment industries (Were and Kiringai 2004).[13] On the whole, informal and precarious forms of employment were more prevalent during the period of intense enforcement of adjustment policies. Thus, during the ten-year period between 1986 and 1998, economic circumstances drove women into the labour market and while their labour force participation rates were comparable to men, in terms of access to jobs, in both quantity and quality, they lagged behind men.

Notes

[1] In the Kenyan context, the formal sector (referred to as the modern sector) includes the entire public sector and private sector enterprises and institutions that are formal in terms of registration, taxation and official recording (incorporated enterprises). The public sector covers all activities and establishments of the central government, its statutory corporations (wholly owned corporations or parastatals) and registered companies in which the government is a majority shareholder, and all local government authorities. Public sector activities are entirely in the modern economy. The private sector consists of companies and businesses in the modern sector in which the government does not own majority shares, the informal sector, cooperatives, non-profit organisations, private households employing domestic servants and, small-scale/subsistence farming and pastoral activities. See Republic of Kenya, (2003, 1998).

[2] The origin of these classifications comes from literature on dual labour market and labour market segmentation models. See Doeringer and Poire (1971); Lewis (1954); Ranis and Fei (1961); Ricardo (1815).

[3] The ILO first introduced the concept of 'informal sector' (now, 'informal economy') in the early 1970s when the term was used to describe specific activities taking place in urban areas of developing countries. The concern at that time was with the working poor who were not recognised, registered or protected by the working authority (ILO 1972). See also Menke (1998) for a succinct discussion of the evolution of this concept. In the Kenyan context, the informal sector (locally known as the Jua-Kali, a Kiswahili term meaning 'hot sun' to indicate that many workers operate without fixed premises) covers all small-scale activities that are normally semi-organised and unregulated and use low and simple technology. The sector largely comprises self-employed persons or employers of a few workers. It also includes unpaid family workers. Small-scale agriculture and pastoral activities are farm-related economic activities mainly located in the rural areas. Owing to their non-registration nature, they are not classified as belonging to either the modern sector or the informal sector (Republic of Kenya 2003).

[4] See also Magnac (1991) and Pradhan and Van Soest (2005).

[5] For example, unemployment in the urban areas increased from about 7 per cent in 1977 to 16 per cent in 1986 and 25 per cent in 1998. Informal sector employment to total employment has increased enormously from about 4.2 per cent in 1972 to 79.1 per cent in 2007 compared with a sharp fall in formal sector employment – from about 89.6 per cent in 1972 to 20.2 per cent in 2007.

[6] Hart (1973) first coined the term 'informal sector' in a study of economic activities in urban Ghana. Nowadays, the concept seems to have been replaced by 'informal economy', which includes all economic activities by workers and eco-

nomic units that are in law or in practice uncovered or insufficiently covered by formal arrangements, directing both enterprise and work relationships.

[7] Referring to unemployment being worsened by the fact that the rate of rural-urban migration had outnumbered the expansion of urban employment in the formal sector.

[8] While Scott's view may be true in a wider sense, it should be seen in a specific context. For instance, the ILO (1972) report raised an important policy concern about the vulnerable situation of women in the labour-force in Kenya at that time – the report stresses that these employment problems differ across groups: men and women, between school leavers, young and older persons and between people in the semi-arid regions and overpopulated districts and elsewhere. It points out that the incidence of unemployment falls more heavily on women than on men; younger members of the adult population are hardest hit; regardless of the age-group, the less educated suffer most; and 'the worst of all possible conditions from the standpoint of searching for work is to be young, uneducated and female' (ILO 1972: 59). Moreover, in the 70s in Kenya, males dominated the urban labour force almost entirely– customary, women resided in the rural areas while men migrated to the urban areas in search of better jobs in the modern economy and sent remittances back home. This situation changed with rising education levels of women and increased migration by women to the urban areas.

[9] In a MNL model, coefficients are estimated according to each outcome category. In all the models estimated here, the base category is 'unemployed'. The estimated coefficients indicate the independent log odds or chances of an independent variable being in the dependent variable category of interest, versus being in the base (or contrast) category of the dependent variable. If there is no relationship, the coefficient will be zero. Negative coefficients indicate a negative association or negative chances or odds of being in the dependent variable category of interest and positive coefficients indicate positive chances. In the case of an independent variable being an ordinal (or interval) variable (e.g. age and age-squared), the odds ratio represents the effect of a change of one value or unit in the independent variable in changing the odds of being in the dependent variable category of interest.

[10] See for example, Greene (2003: 667).

[11] Mariara (2003) finds marked differences in the process, generating the gender wage gaps in the private and public sectors of the Kenyan labour market where preferential treatment towards men is pronounced in all sectors owing to expected lower productivity of women of childbearing age.

[12] There was considerable improvement in spouse education levels (especially the secondary level) with an increase of about 14 percentage points in the proportion

of male spouses with secondary level education in 1998 (from about 43 per cent in 1986) and a decline in average male spouse real earnings (as noted).

[13] As discussed in chapter 2, although the absolute number of men and women engaged in the manufacturing sector has expanded over time, most of the growth has been the result of an influx of women workers that occurred in the 1990s mainly. Most of this female labour went into EPZ (started in Kenya in 1990). For instance, growth in casual employment was highest during the 1991-97 period (the adjustment period) and particularly high among females – during 1986-91, 1991-97 and 1997-02, casual wage employment growth within modern wage employment was 1.4 per cent, 7.0 per cent and 0.7 per cent for males. Corresponding figures for females are 9.5 per cent, 12.9 per cent and 2.2 per cent.

6 Concluding Remarks and Reflections

Similar to many developing countries, since the early 1980s, Kenya has undergone structural adjustment reforms (SAP), accompanied by changes in the configuration of employment, incomes and poverty. The reform process, together with poor growth led to a protracted decline of real earnings, which adversely affected the livelihoods of Kenyan households. In essence, poor macroeconomic performance since the implementation of SAP coupled with other external and internal shocks led to a deteriorating standard of living in the country.

Against this backdrop, this study explored three urban labour market issues. First, it provided an assessment of the various factors (human capital, individual and household characteristics) that influenced the substantial increase in women's employment rate between 1988 and 1998, a period coinciding with the structural adjustment reforms. Usual explanations for the rising incidence of women in the labour market highlight the effects of progress in female education, changes in cultural values and beliefs and expansion and diversification of occupational opportunities. The findings of this study indicate that the increase in women's LFPR in response to greater educational endowment is germane to the current case while the rest of the factors are not as relevant. The increase does not appear to be associated with better labour supply conditions or a diversification of the composition of work prospects accessible to women. Indeed, waning employment opportunities for male primary breadwinners and the accompanying income and employment insecurities within households seem to be the key factors influencing the sharp increase in the labour supply of women. This explanation received support from both the statistical analysis and the case studies reported in this study.

While women in urban Kenya have entered the labour market in large numbers and their employment and LFPR have increased over time, there are sharp differences between male and female unemployment rates. Accordingly, the second issue examined in this thesis was gender differences in access to employment. Based on labour force survey data, this study decomposed the gender unemployment gap into a proportion that may be accounted for by differences in observable characteristics between males and females, and a proportion that may be attributed to differences in the manner in which male and female characteristics are valued in the labour market. The latter is often treated as discrimination. The decomposition analysis showed that differences in observed characteristics accounted for an overwhelmingly large proportion of the gender disparity in the incidence of unemployment—84 per cent in 1986 and 81 per cent in 1998. In terms of the specific observed characteristics, about 9 to 17 per cent of the explained proportion of the gender unemployment gap may be attributed to the additional experience that men have and about 3 to 6 per cent to their higher levels of education. The most important factor in determining the gender gap appeared to be household headship, which accounted for 71 per cent of the observed employment differential in 1986 and 91 per cent in 1998. The importance of household headship may be treated as manifestation of demand and supply side effects. Individuals who are household heads may search for jobs more intensively and may have a lower reservation wage. From the demand side, household headship may serve as a signal for unobserved productivity, motivation and a greater work commitment to work. Prima facie, the analysis suggested that women are more vulnerable to unemployment than men are because of differing personal and human capital endowments, and not due to the manner in which such endowments are valued in the market. The overall analysis suggests that there is limited evidence of labour market discrimination against women at least in terms of employment outcomes.

Not only do women face lower rates of employment as compared to men, a third issue concerns the quality of their employment. The final issue explored in this study was the role played by various factors in influencing the sorting of individuals into different sectors of employment in urban Kenya.

The analysis showed that while experience and education are highly valued in the formal sector, their impact on formal labour market access

is much higher for women. The temporal patterns showed that over time the importance of education (both primary and secondary) in ensuring formal labour market access increases by about eight percentage points. However, there were sharp gender differences. For men, the importance of secondary education increases sharply (from 7 to 31 percentage points) while for women it declines (from 49 to 39 percentage points). For men, these figures reflect a greater importance of education in securing access to a formal labour market job. Concerning women, the huge increase in labour force participation of (educated) women may have worked towards reducing the importance given to education in determining entry into the formal sector. At the same time, the sharp gender difference in the role of education in determining formal labour market access suggests the presence of labour market segregation, with women restricted to certain types of jobs in the formal sector.

For both years, the analysis showed that marital status *(a proxy of domestic burdens)*, undermines women's prospects of working in the formal sector while it enhances men's employment prospects. However, there were interesting temporal differences. The negative effect of marital status on female formal sector participation declined from 24 per cent in 1986 to 10 per cent in 1998, reflecting the increasing insertion of married women in the labour market. The substantially higher informal sector participation rate of married women in 1986 supports the feminist version of the dualist view that the informal sector allows women who have a higher domestic burden to combine reproductive and productive work. In contrast, in 1998 single and married women were equally likely to be working in the informal sector, suggesting that over this time span, the informal sector was characterised as a last resort, that is, a sector offering low quality employment and heavily populated by women.

Estimates showing that declines in husbands' real earnings are associated with an increase in women's participation in the informal sector further support this interpretation. Deteriorating economic circumstances of urban households appear to have driven women into the most vulnerable sector of the economy. This pattern is consistent with the feminist version of the structuralist view of the informal sector, which puts emphasis upon the vulnerable conditions of women's work. In Kenya, a majority of informal sector paid employees are casual workers. The formal sector (mostly the private sector) also employs informal labour arrangements primarily in the form of casual work—women are mainly

employed in export-oriented cut flower horticulture, textile and garment industries as casual workers. Overall, informal and precarious forms of employment increased during the period of intense implementation of the reforms. Thus, during the ten-year period between 1986 and 1998 economic circumstances drove women into the labour market and while their labour force participation rates are comparable to men, in terms of access to jobs, both quantity and quality, they lag behind men.

The analysis presented in this thesis focused mainly on the period 1986 and 1998 and while data that are more recent would have provided an updated picture of the issues discussed in this thesis, there is little evidence to suggest that the situation of women in Kenya's labour market has changed substantially in recent years (see Tables 2.7 and 2.10). Clearly, one of the first policy initiatives needed to provide an updated picture of changing labour market conditions is the regular collection and analysis of labour market data.

Beyond data initiatives, the gap in both quality and quantity of employment between men and women suggests that policymakers have to tackle the problem of less favourable terms for women in the labour market and the existing gender disparities, especially in terms of access to formal sector employment. Previous research on gender and employment outcomes in Kenya has shown that increased access to education can ensure equality of outcomes in the labour market, but only in the public sector (Atieno and Teal, 2006; Mariara 2003). Given that policy reform aims towards increasing the role of the private sector, the challenge is how to reduce gender differentials in this sector, which is largely informal. While one obvious candidate to reduce gender differences especially in terms of labour market segregation is continued investment in women's human capital, there is a limit to which such initiatives can influence the outcomes for women. Probably, a combination of the continued engagement of women, which shows their strong labour attachment, parity in terms of educational outcomes and subsequently changes in gender norms are needed for women to have equal access to formal sector opportunities.[1]

Although the thesis did not explicitly deal with it, beyond gender issues, a broader concern is the need for growth in employment. Achieving such growth remains a big challenge given the high labour force growth that outstrips employment growth and the inability of the economy so far, to generate modern wage employment. Of course employ-

ment is not necessarily a guarantee for being non-poor (the 'working poor' account for a substantial proportion of all the urban poor in Kenya; see Odhiambo and Manda 2003; Pollin et al. 2007) and the problem of poverty level-employment in Kenya is an old one (ILO 1972). It reflects in part the fact that the poor are employed in low productivity industries, including the informal sector. Any approach to mitigate urban poverty should strongly endeavour to improve worker's productivity and earnings particularly in the informal sector (where most women and the urban poor are engaged). The fundamental point is not only the need for jobs, but also the need to focus on the *quality* of employment - that is, creation of decent employment opportunities that can provide a reasonable income and not simply jobs per se.

The creation and expansion of a secure and peaceful political and social environment and economic and institutional measures that lead to the creation of a dynamic and enterprising private sector including non-agricultural household enterprises, which are an indispensable foundation of the Kenyan economy in terms of generating employment, is clearly required. The recent firm level literature on African manufacturing shows that while rates of return to investment remain high there is continued under-investment in firms, probably due to the various economic and political uncertainties faced by firms (see for instance Bigsten et al. 2006; Gunning and Mengistae 2001; Roberts and Fagernäs 2004[2]; Shiferaw 2007a, 2007b). Furthermore, in accordance with some of the measures[3] proposed by Pollin et al. (2007), any plan for expanding decent employment and reducing poverty in Kenya would have to have the non-agricultural household enterprise sector as its centre of attention to expand prospects for people working therein (mainly women), either by improving conditions within the sector itself or by creating opportunities for decent employment outside it.

Finally, it is also important to create an environment that encourages the youth to use and extend their human capital (especially regarding new-technology schemes). According to UNECA (2005), young people (ages 18–34) are most likely to become active as entrepreneurs. Leibbrandt and Mlatsheni (2004) find that one-third of successful entrepreneurs came from this age group. Encouraging self-employment and entrepreneurial skills and allowing access to assets such as education, training[4], health and finance would enable young people to take advantage of the opportunities offered by self-employment.

Notes

[1] Even in the informal sector, gender disparities in the type of work persist: most women in Kenya are engaged in a wide range of survival activities as own account or unpaid family workers – 85 per cent of female-owned businesses are in the informal sector; women constitute 48 per cent of micro, small and medium enterprises; their businesses tend to be smaller; are less likely to grow; and are less capital-intensive than those owned by males. Women are still much more likely to be engaged in invisible work (unpaid work) and thus in real life, women's employment is likely to be greater than shown by current statistics, reflecting a marginalisation of women both in terms of the jobs they perform and how their work is valued and remunerated. Additionally, women worldwide are underrepresented in high income activities and over-represented in low income activities while the gender gap in income/wages appears higher in the informal sector than in the formal sector and exists even when women are not wage workers (Chen 2001). Accordingly, Chen advocates for a need to understand why women are over-represented in the informal sector and why they are concentrated in certain segments within the informal sector. Widespread explanations to these questions are that women are less able than men are to compete in labour, capital and product markets because they have relatively low levels of education and skills, are less likely to own property or have market know-how. In addition, women's time and mobility are constrained by social and cultural norms that assign the responsibility for social reproduction to women and discourage investment in women's education and training. These shortcomings require policy address in order to improve women's work and earnings in the informal sector as well as their statistical representation and contribution in labour market statistics.

[2] Roberts and Fagernäs (2004) find that, before 1980, Kenya grew strongly, and the economy diversified. However, among the key factors behind its subsequent deterioration in the 1990s were the government's erratic, inflation-prone macroeconomic management, the overexpansion of the public sector, domestic and external indebtedness, it's uncertain conduct of structural reforms, worsening cronyism and corruption, a high-cost, non-competitive, environment for the private sector and disappointing export performance.

[3] Among the broad measures proposed include, 'raising productivity and expanding the domestic market in general, but also shaping policies so that household enterprises specifically will benefit from these overall economic gains; improving access to credit for household enterprises; reducing the overall number of people relying on informal household enterprises, so as to reduce competition among them that keeps earnings below the poverty level. To do this will also mean increasing opportunities for formal sector employment' (Pollin et al. 2007: 21). Although the measures proposed lack a gender dimension, it is important to note (ibid: 19-22) that own-account workers (people working alone for themselves)

and unpaid family members together account for more than 70 per cent of the entire employment in household enterprises-by gender, majority of these workers are women.

[4] Data used for this study reveals that most persons in the labour force have no additional training apart formal education. As noted in UNECA (2005), free education programmes are often limited to primary education and provide only basic skills while high dropout rates (among women in particular) worsen the situation further. Out-of school training would be required for young people to qualify for jobs (Leibbrandt and Mlatsheni 2004), but in most cases the resources for training and skills development are scarce. The government should promote training activities targeted towards the skills required in the labour market (Kanyenze et al. 2000).

Appendices

A.1 Descriptive Statistics Youth

Table A.1.1
Descriptive statistics: Youth in the labour-force full sample

Variable	1986		1998	
	Mean	Std. Dev.	Mean	Std. Dev.
Age	24	3.5	23.2	3.7
Age squared	587.9	162.6	553.6	171
Sex	0.6	0.49	0.4	0.49
Marital	0.48	0.5	0.51	0.5
Head	0.45	0.5	0.3	0.46
Hsize	3.98	2.87	4.23	2.47
None	0.06	0.23	0.04	0.2
Primary	0.4	0.49	0.46	0.5
Secondary+	0.54	0.5	0.49	0.5
Training	0.46	0.5	0.26	0.44
Obs	1957		1592	

Table A.1.2
Descriptive statistics: Youth in the labour-force by sex

Variable	Female 1986		Female 1998		Male 1986		Male 1998	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	23.3	3.7	22.8	3.7	24.5	3.2	23.9	3.7
Age squared	556.4	170.4	534.2	167.9	609.3	153.6	583	171.5
Marital	0.52	0.5	0.57	0.5	0.45	0.5	0.42	0.49
Head	0.24	0.43	0.13	0.33	0.59	0.49	0.55	0.5
Hsize	4.76	2.76	4.44	2.39	3.45	2.82	3.91	2.56
None	0.08	0.27	0.06	0.23	0.04	0.19	0.02	0.15
Primary	0.42	0.49	0.49	0.5	0.39	0.49	0.43	0.5
Secon-dary+	0.5	0.5	0.46	0.5	0.57	0.49	0.55	0.5
Training	0.36	0.48	0.18	0.38	0.52	0.5	0.38	0.49
Obs	791		959		1166		633	

Table A.1.3
Descriptive statistics: Youth in the labour-force by sex conditional on employment status – 1986

Variable	Females				Males			
	Employed		Unemployed		Employed		Unemployed	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	23.89	3.76	22.46	3.57	25.16	2.92	22.26	3.24
Age-squared	585.01	171.39	517.1	161.2	641.72	141.36	506.03	145.23
Marital	0.47	0.5	0.59	0.49	0.55	0.5	0.15	0.35
Head	0.34	0.47	0.1	0.3	0.72	0.45	0.16	0.37
Hsize	4.41	2.7	5.26	2.78	3.07	2.57	4.66	3.2
None	0.07	0.26	0.09	0.29	0.04	0.19	0.05	0.22
Primary	0.4	0.49	0.45	0.5	0.4	0.49	0.37	0.48
Secon-dary+	0.53	0.5	0.45	0.5	0.57	0.5	0.58	0.49
Training	0.46	0.5	0.22	0.42	0.6	0.49	0.26	0.44
Relative	0.17	0.38	0.26	0.44	0.09	0.28	0.09	0.28
Obs	458		333		887		279	

Table A.1.4
Descriptive statistics: Youth in the labour-force by sex conditional on employment status – 1998

Variable	Females				Males			
	Employed		Unemployed		Employed		Unemployed	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	23.19	3.97	22.42	3.39	24.55	3.53	21.63	3.37
Age-squared	553.59	179.22	514.29	153.2	615.01	165.02	479.15	150.11
Marital	0.46	0.5	0.68	0.47	0.5	0.5	0.13	0.34
Head	0.22	0.42	0.03	0.17	0.68	0.47	0.15	0.36
Hsize	4.32	2.2	4.55	2.58	3.59	2.46	4.94	2.59
None	0.05	0.21	0.07	0.25	0.02	0.14	0.03	0.18
Primary	0.48	0.5	0.5	0.5	0.43	0.49	0.44	0.5
Secon-dary+	0.48	0.5	0.44	0.5	0.56	0.5	0.52	0.5
Training	0.26	0.44	0.09	0.29	0.48	0.5	0.13	0.33
Relative	0.29	0.45	0.25	0.43	0.14	0.35	0.18	0.39
Obs	485		474		484		149	

Table A.1.5
Distribution by sex: Youth and adults in the working-age population

	1998					
	Females (%)			Males (%)		
	Adult	Youth	Total	Adult	Youth	Total
Formal	29.3	13.9	20.1	59.7	28.9	46.6
Informal	35.2	20.5	26.4	31	24.2	28.1
Unemployed	32.6	44.1	39.4	9.1	18.2	13
Inactive	2.9	21.6	14.1	0.2	28.8	12.3
Total	100	100	100	100	100	100
Number	724	1,076	1,800	1,109	820	1,929
	1986					
	Females (%)			Males (%)		
	Adult	Youth	Total	Adult	Youth	Total
Formal	31.7	23.1	26.3	73.4	47.5	60.1
Informal	20.7	8.3	12.9	19.3	7.6	13.4
Unemployed	13	22.8	19.2	4	17.3	10.8
Inactive	34.6	45.8	41.6	3.3	27.5	15.7
Total	100	100	100	100	100	100
Number	859	1,458	2,317	1,536	1,609	3,145

A.2 Determinants of Youth Unemployment

Table A.1.6
Estimates: Determinants of youth unemployment full sample

Variable	1986				1998			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.291*	0.114	0.094	0.037	0.543***	0.118	0.201	0.044
Age Squared	-0.008**	0.003	-0.003	0.001	-0.013***	0.003	-0.005	0.001
Sex	-0.193**	0.071	-0.063	0.023	-0.178*	0.084	-0.065	0.031
Marital	-0.113	0.074	-0.037	0.024	0.297***	0.084	0.109	0.031
Head	-1.124***	0.086	-0.34	0.023	-1.306***	0.114	-0.403	0.026
Hsize	0.002	0.012	0	0.004	-0.014	0.016	-0.005	0.006
Primary	-0.385**	0.14	-0.121	0.043	-0.348*	0.17	-0.127	0.061
Secondary+	-0.367**	0.139	-0.12	0.045	-0.327*	0.171	-0.12	0.062
Constant	-2.042	1.292			-5.137***	1.326		
Number of obs	1957				1592			

Table A.1.7
Estimates: Determinants of unemployment by sex 1986

Variable	Females				Males			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.454**	0.152	0.176	0.059	-0.235	0.189	-0.059	0.048
Age Squared	-0.011***	0.003	-0.004	0.001	0.003	0.004	0.001	0.001
Marital	0.294**	0.109	0.113	0.042	-0.457***	0.12	-0.112	0.028
Head	-0.661***	0.147	-0.238	0.047	-1.202***	0.118	-0.325	0.032
Hsize	0.034*	0.019	0.013	0.007	-0.013	0.017	-0.003	0.004
Primary	-0.318*	0.183	-0.122	0.069	-0.388*	0.229	-0.093	0.052
Secondary+	-0.444*	0.181	-0.171	0.069	-0.246	0.226	-0.062	0.058
Constant	-4.319*	1.7			3.978	2.176		
Number of obs	791				1166			

Table A.1.8
Estimates: Determinants of unemployment by sex 1998

Variable	Females				Males			
	Coef.	Std. Err.	ME	Std. Err.	Coef.	Std. Err.	ME	Std. Err.
Age	0.556***	0.144	0.222	0.057	0.296	0.214	0.077	0.056
Age Squared	-0.013***	0.003	-0.005	0.001	-0.008	0.005	-0.002	0.001
Marital	0.521***	0.11	0.205	0.042	-0.206	0.176	-0.053	0.044
Head	-1.015***	0.184	-0.357	0.05	-1.145***	0.19	-0.311	0.051
Hsize	0.006	0.02	0.002	0.008	-0.023	0.027	-0.006	0.007
Primary	-0.31	0.193	-0.123	0.076	-0.313	0.371	-0.08	0.093
Secondary+	-0.324*	0.195	-0.128	0.077	-0.18	0.372	-0.047	0.098
Constant	-5.463***	1.606			-2.543	2.434		
Number of obs	959				633			

A.3 Decomposition Analysis: Gender Gap in Youth Unemployment

Table A.1.9
Decomposition analysis: Gender gap in the incidence of youth unemployment

	1986		1998	
Total Differential	**18.2**	**100**	**25.9**	**100**
Component due to Characteristics' Effect (CHE)	14.5	75.8	22.1	85.3
Component due to Coefficients' Effect(COE)	3.7	24.2	3.8	14.7
Variable	**Contribution to CHE**	**% Share**	**Contribution to CHE**	**% Share**
Age	-0.085	-61.6	-0.171	-77.5
Age Squared	0.105	75.9	0.191	86.5
Marital	-0.001	-0.8	0.017	7.5
Head	0.113	82.4	0.183	83.1
Hsize	0.001	1	-0.003	-1.1
Primary	-0.004	-2.7	-0.006	-2.9
Secondary+	0.008	5.7	0.01	4.4
Constant				
Total	0.138	100	0.221	100

Bibliography

Adamchik, V.A. and A. Bedi (2003) 'Gender Pay Differentials During the Transition in Poland', *Economics of Transition* 11(4): 697-726.

Agarwal, B. (1997) 'Bargaining and Gender Relations: Within and Beyond the Household', *Feminist Economics* 3(1): 1-51.

Agesa, J. and R.U. Agesa (1999) 'Gender Differences in the Incidence of Rural to Urban Migration: Evidence from Kenya', *Journal of Development Studies* 35(6): 36-58.

Aldeman, H., P.A. Chiapori, L. Haddad, J. Hoddinot and R. Kanbur (1995) 'Unitary Versus Collective Models: Is it Time to Shift the Burden of Proof?', *The World Bank Research Observer* 10(1): 1-19.

Almquist, E.M. (1987) 'Labour Market Gender Inequality in Minority Groups', *Gender and Society* 1(4): 400-414.

Amanda, E., J. Cutura, N. Dione, G. Ikiara, C. Manuel and J. Thongori (2007) *Gender and Economic Growth in Kenya: Unleashing the Power of Women*. Washington DC: The World Bank.

Amemiya, T. (1985) *Advanced Econometrics*. Oxford: Basil Blackwell.

Anker, R. (1998) *Gender and Jobs: Sex Segregation of Occupations in the World*. Geneva: International Labour Office.

Anker, R. (1997) 'Theories of Occupational Segregation by Sex: An Overview', *International Labour Review* 136(3): 315-39.

Anker, R. and C. Hein (eds) (1986) *Sexual Inequalities in Urban Employment in the Third World*. London: The Macmillan Press Ltd.

Appleton, S. (2002) 'Education, Incomes and Poverty in Uganda in the 1990s', Credit Research paper No. 01/22. University of Nottingham: Centre for Research in Economic Development and International Trade Nottingham.

Appleton, S., Bigsten, A. and D.K. Manda (1999) 'Educational Expansion and Economic Decline: Returns to Education in Kenya, 1978-1995', Working Paper WPS/99-6. Oxford University: Centre for the Study of African Economies.

Arulampalam, W. and M.B Stewart (1995) 'The Determinants of Individual Unemployment Durations in an Era of High Unemployment: Are the Influences different?', *Economic Journal* 105(429): 321-332.

Ashenfelter, O. and J. Ham (1979) 'Education, Unemployment, and Earnings', *Journal of Political Economy* 87(5): S99-S116.

Assaad, R., F. El-Hamidi and A.U. Ahm (2000) 'The Determinants of Employment Status in Egypt', FCND Discussion Paper No. 88. Washington, DC: International Food Policy Research Institute.

Atieno, R. and F. Teal (2006) 'Gender, Education and Occupational Outcomes: Kenya's Informal Sector in 1990s', Working Paper No. 050. Oxford University: Centre for the Study of African Economies, Global Poverty Research Group.

Azmat, G., M. Güell and A. Manning (2006) 'Gender Gaps in Unemployment Rates in OECD Countries', *Journal of Labour Economics* 24: 1–37.

Bateman, M. (2003) 'New Wave Micro-finance Institutions in South-East Europe: Towards a More Realistic Assessment of Impact', *Small Enterprise Development* 16(3): 176-91.

Bay, E.G. (ed.) (1982) *Women and Work in Africa.* USA: Westview Press Inc.

Becker, G.S. (1965) 'A Theory of the Allocation of Time', *Economic Journal* 75: 299.

Bedi, A., P.K. Kimalu, D.K. Manda and N. Nafula (2004) 'The Decline in Primary School Enrolment in Kenya', *Journal of African Economies* 13(1): 1-43.

Behrman, J. and N. Birdsall (1983) 'The Quality of Schooling: Quantity Alone is Misleading', *American Economic Review* 73: 928-46.

Bellemare, D. and L. Poulin-Simon (1994) *What is the Real Cost of Unemployment in Canada?*. Ottawa: Canadian Centre for Policy Alternatives.

Beneria, L. (1995) 'Towards a Greater Integration of Gender Economics', *World Development* 23(11): 1839-1995.

Beneria, L. and M. Rodan (1987) *The Crossroads of Class and Gender: Industrial Home Work, Subcontracting and Household Dynamics in Mexico City.* Chicago: University of Chicago Press.

Beneria, L. and C.R. Stimpson (eds) (1987) *Women, Households and the Economy.* Newbrunswick and London: Rutgers University Press.

Berger, M. (1995) 'Key Issues in Women's Access to and Use of Credit in the Micro and Small-scale Sector', in L. Dignard and J. Havet (eds), *Women in Micro- and Small-scale Enterprise Development.* Boulder CO: Westview Press.

Berger, M. and M. Buvinic (1995) *Women's Ventures: Assistance to the Informal Sector in Latin America.* Hartford: Kumarian Press Inc.

Bertola, G., F.D. Blau and L.M. Kahn (2007) 'Labour Market Institutions and Demographic Employment Patterns', *Journal of Population Economics* 20(4): 833-867.

Besley, T., R. Burgess, and B. Esteve-Volart (2004) *Operationalizing Pro-Poor Growth: India Case Study*. Mimeographed, London: DFID.

Bigsten, A. and M. Söderbom (2006) 'What have We Learned from a Decade of Manufacturing Enterprise Surveys in Africa?', *World Bank Research Observer* 21(2): 241-65.

Bigsten, A. and D. Durevall (2004) 'Trade Reform and Wage Inequality in Kenya, 1964-2000'. Working Papers in Economics 148. Göteborg University: Department of Economics.

Bigsten, A. (1984) *Education and Income Determination in Kenya*. England: Gower.

Blackaby, D.H., D.G. Leslie, P.D. Murphy and N.C. O'Leary (1998a) 'The Ethnic Wage Gap and Employment in the 1990s: Evidence for Britain', *Economics Letters* (58): 97–103.

Blackaby, D.H., D.G. Leslie, P.D. Murphy and N.C. O'Leary (1998b) 'Unemployment among Britain's Ethnic Minorities', *Manchester School* 67(1): 1-20.

Blackaby, D.H., K. Clark, D.G. Leslie and P.D. Murphy (1994) 'Black–White Male Earnings and Employment Prospects in the 1970s and 1980s: Evidence for Britain', *Economics Letters* 46: 273–279.

Blanchflower, D. and R.B. Freeman (2000) 'Youth Employment and Joblessness in Advanced Countries'. *National Bureau of Economic Research (NBER) Comparative Labour Markets Series*. Chicago: University of Chicago Press.

Blau, F.D and A. Khan (2007) 'Changes in the Labor Supply Behavior of Married Women: 1980–2000' *Journal of Labor Economics* 25: 393-438.

Blau, F.D and A. Khan (2006) 'Changes in the Labor Supply Behavior of Married Women: 1980-2000', IZA, Discussion Paper No. 2180. Bonn: Institute for the Study of Labour (IZA).

Blau F. D. and L.M. Khan (1997) 'Swimming Upstream: Trends in the Gender Wage Differential in the 1980s', *Journal of Labour Economics* 15(1): 1-42.

Blau, F.D and M.A. Ferber (1992) *The Economics of Women, Men, and Work*. Beijing: Englewood Cliffs Prentice-Hall.

Blinder, A.S. (1973) 'Wage Discrimination: Reduced Form and Structural Estimates', *Journal of Human Resources* 8(4): 436-455.

Blumberg, R.L. (1984) 'A General Theory of Gender Stratification', *Sociological Theory* (2) 23-101.

Blundell, R. and C. Meghir (1987) 'Bivariate Alternatives to the Tobit Model', *Journal of Applied Econometrics* 34: 179-200.

Blundell, R., J. Ham and C. Meghir (1987) 'Unemployment and Female Labour Supply', *Economic Journal* 97(388a):44-64.

Brenner, H.M. (1979) 'Influence of the Social Environment on Psychology: The Historical Perspective', in J.E. Barrett (ed.), *Stress and Mental Disorder*. New York: Raven University Press.

Brownbridge, M., C. Harvey and A.F. Gockel (1998) *Banking in Africa: the Impact of Financial Sector Reform since Independence*. London: James Currey Publishers.

Cagatay, N. and S. Ozler (1995) 'Feminization of the Labour-force: The Effects of Long-term Development and Structural Adjustment', *World Development* 23(11): 1883-1894.

Çağatay, N., and G. Berik (1991) 'Transition to Export-led Growth in Turkey: Is There a Feminization of Employment?', *Capital and Class* 43:153-177.

Cain, G. 1966. *Married Women in the Labour-force: An Economic Analysis*. Chicago, IL: The University of Chicago.

Caplow, T., H.M. Bahr, B.A. Chadwick and J. Modell (1994) *Recent Social Trends in the United States, 1960-1990*. Canada: McGill-Queen University Press.

Card, D.; A. Krueger (1995) *Myth and Measurement: The New Economics of the Minimum Wage*. Princeton, NJ: Princeton University Press.

Central Bureau of Statistics (2003) *Geographic Dimensions of Well-being in Kenya*. Nairobi: The Regal Press Kenya Ltd.

Cerruti, M. (2000) 'Economic Reform, Structural Adjustment and Female Labour Force Participation in Buenos Aires, Argentina', *World Development* 28(5): 879-891.

Chafetz, J.S. (1984) *Sex and Advantage: A Comparative, Macro-Structural Theory of Sex Stratification*. Towota, NJ: Rowman and Allanheld.

Chant, S. (1994) 'Women, Work and Household Survival Strategies in Mexico, 1982-1992: Past Trends, Current Tendencies and Future Research', *Bulletin of Latin America Research* 13(2): 203-33.

Chen, M.S. (2001) 'Women and Informality: A Global Picture, the Global Movement', *SAIS Review* 21(1): 71-82.

Chiswick, B. (1988) 'Labour Supply and Investment in Child Quality: A Study of Jewish and Non-Jewish Women', *Contemporary Jewry* 9(2): 35-61.

Chune, N.C. (2003) *Highlights of Current Labour Market Conditions in Kenya*. Nairobi: COTU.

Clark, K. and S. Drinkwater (2006) 'Dynamics and Diversity: Ethnic Employment Differences in England and Wales, 1991-2001', Discussion Paper No. 12. UK: University of Surrey.

Clarke, S. (2002) 'Sources of Subsistence and the Survival Strategies of Urban Russian Households', in A. Rainnie, A. Smith and A. Swain (eds), *Work, Employment and Transition: Restructuring Livelihoods in Post-communism*. London: Routledge.

Collier, P. and D. Lal (1996) *Labour and Poverty in Kenya: 1900-1980*. Oxford: Clarendon Press.

Costa, D.L. (2000) 'From Mill Town to Board Room: The Rise of Women's Paid Labour', *Journal of Economic Perspectives* 14(4): 101-122.

Cramer, J.S. and G. Ridder (1991) 'Pooling States in the Multinomial Logit Model', *Journal of Econometrics* 47(2-3): 267-272.

DeBoer, L. and M.C. Seeborg (1989) 'The Unemployment Rates of Men and Women: A Transition Probability Analysis', *Industrial and Labour Relations Review* 42(3): 404-414.

Demery, L. and C. Grootaert (1993) 'Priority Analysis', in L. Demery, M. Ferroni, C. Grootaert and J. Wong-Valle (eds), *Understanding the Social Effects of Policy Reform*. Washington DC: The World Bank.

Dignard, L. and J. Havet (eds) (1995) *Women in Micro- and Small-scale Enterprise Development*. Boulder, CO: Westview Press.

Dolan, C. and K. Sutherland (2002) 'Gender and Employment in the Kenya Horticulture Value Chain', Discussion Paper No. 8. Norwich: School of Development Studies and Overseas Development, University of East Anglia.

Dollar, D., and R. Gatti (1999). 'Gender Inequality, Income and Growth: Are Good Times Good for Women?', Gender and Development Working Paper 1. Washington DC: The World Bank.

Doeringer, P. and M. Poire (1971) *International Labour Market and Man Power Analysis*. Lexington: Health Lexington Books.

Echebiri, P.N. (2005) 'Characteristics and Determinants of Urban Youth Unemployment in Umuahia, Nigeria: Implications for Rural Development and Alternative Labour Market Variables'. (available at: http://www.isser.org/53b%20Echebiri.pdf).

England, P., C. Garcia-Beaulieu and M. Ross (2004) 'Women's Employment among Blacks, Whites, and three Groups of Latinas: Do more Privileged Women have Higher Employment', *Gender and Society* 18(4): 494-509.

Esteve-Volart, B. (2000) 'Sex Discrimination and Growth', Working Paper WP/00/84, African Department. Washington DC: International Monetary Fund.

Esteve-Volart, B. (2004) 'Gender Discrimination and Growth: Theory and Evidence from India', Discussion Paper, STICERD (Suntory and Toyota International Centre for Economics and Related Disciplines). London: London School of Economics (available at: http://sticerd.lse.ac.uk/dps/de/dedps42.pdf).

Evans, M.D.R. and J. Kelley (2004) 'Trends in Women's Labour Force Participation in Australia: 1984-2002', Working Paper No. 23/04. The University of Melbourne: Melbourne Institute of Applied Economic and Social Research.

Even, W.E. (1987) 'Career Interruptions Following Childbirth', *Journal of Labour Economics* 5(2): 255.

Even, W.E. and D.A. Macpherson (1990) 'Plant Size and the Decline of Unionism', *Economics Letters* 32(4): 393-398.

Even, W.E. and D.A. Macpherson (1993) 'The Decline of Private-Sector Unionism and the Gender Wage Gap', *Journal of Human Resources* 28(2): 279-296.

Fairlie, R.W. (2003) 'An Extension of the Blinder-Oaxaca Decomposition Technique to Logit and Probit Models', Working Paper No. 873. New Haven, CT: Yale University: Economic Growth Center.

Folbre, N. (1988) "The Black Four of Hearts: Towards a New Paradigm of Household Economics", in B. Dwyer and J. Bruce (eds), *Home Divided.* Stanford, CA: Stanford University Press.

Forbes, K. (2000) 'A Reassessment of the Relationship between Inequality and Growth', *American Economic Review* 90 (4: 869–87).

Fox, L. and M.S. Gaal (2008) *Working Out of Poverty: Job Creation and the Quality of Growth in Africa.* Washington DC: The World Bank.

Gang, I.N., K. Sen and M. Yun (2006) 'Poverty in Rural India: Ethnicity and Caste', Rutgers University, Department of Economics, Working Paper No. 200634. New Brunswick, NJ: Rutgers University.

Gilbert, N. (ed.) (2006) *Gender and Social Security Reform. What's Fair for Women?*. New Brunswick, NJ: Transactions Publishers.

Glick, P. and D. Sahn (1997) 'Gender and Education Impact on Employment and Earnings from Conakry, Guinea', *Economic Development and Cultural Change* 45: 793-824.

Golden, L. and M.D. Figart (2002) *Working Time: International Trends Theory and Policy Perspectives*. USA: Routledge.

Goldin, C. (1983) 'The Changing Role of Women: A Quantitative Approach', *Journal of Interdisciplinary History* 13(4): 707-733.

Gomulka, J. and N. Stern (1990) 'The Employment of Married Women in the United Kingdom 1970-83', *Economica* New Series 57(226): 171-199.

Gong, X. and A. Van Soest (2000) 'Family Structure and Female labour Supply in Mexico', IZA, Discussion Paper No. 214. Bonn: Institute for the Study of Labour (IZA).

Gonzalez de la Rocha, M. (1994) *The Resources of Poverty: Women and Survival in a Mexican City*. Oxford: Blackwell.

Gonzalez de la Rocha, M. (1988) 'Economic Crisis, Domestic Reorganization and Women's Work in Guadalajara, Mexico', *Bulletin of Latin American Research* 7(2): 207-223.

Government of Kenya (2003) *Economic Recovery Strategy for Wealth and employment Creation 2003-2007*. Nairobi: Government Printer.

Gray, M., L. Qu, F. Renda and D. de Vaus (2003) 'Changes in the Labourforce Status of Lone and Couple Australian Mothers, 1983-2002', Research Paper No. 33. Melbourne: Australian Institute of Family Studies.

Gray, M., L. Qu, D. de Vaus and C. Millward (2002) 'Determinants of Australians Mothers' Employment: An analysis of Lone and Couple Mothers', Research Paper No. 26. Melbourne: Australian Institute of Family Studies.

Greene, W. (2000) *Econometric Analysis,* 4th edition. New Jersey: Prentice Hall.

Gronau, R. (1977) 'Leisure, Home Production and Work: The Theory of the Allocation of Time Revisited', *Journal of Political Economy* 85(6): 1099-1123.

Gronau, R. (1986) 'Home Production: A Survey', in O. Ashenfelter and R. Layard (eds), *Handbook of Labour Economics* 1: 273-304. New York: Elsevier Science Publishers.

Gunning, J.W. and T. Mengistae (2001) 'Determinants of African Manufacturing Investment: the Microeconomic Evidence', *Journal of African Economies* 10: 48-80

Gutierrez- Domenech, M. and B. Bell (2004) 'Female Labour Force Participation in the United Kingdom: Evolving Characteristics or Changing Behavior', Working Paper No. 221. UK: Bank of England.

Haddad, L., J. Hoddinott and H. Alderman (1997) *Intrahousehold Resource Allocation in Developing Countries: Models, Methods, and Policy*. Baltimore, MD: John Hopkins University Press.

Haddad, L. and J. Hoddinott (1995) 'Does Female Income Share influence Household Expenditures: Evidence from Cote d'Ivore', *Oxford Bulletin of Economics and Statistics* 57(1):77-96.

Ham, J. C., J. Svejnar and K. Terrell (1999) 'Women's Unemployment During Transition', *Economics of Transition* 7: 47-78.

Hart, R.A., E.R. Wright, D. Bell and N.F. Bell (1997) 'Multiple Job Holding as a Hedge against Unemployment', Centre for Economic Policy Research, Discussion Paper No. 1626. London.

Hart, K. (1973) 'Informal Income Opportunities and Urban Employment in Ghana', *Journal of Modern Studies* 11: 61-89.

Hazlewood, A., J. Armitage, J. Knight and R. Sabot (1989) *Education Work, and Pay in East Africa.* Oxford: Clarendon Press.

Heckman, J. (1979) 'Sample Selection Bias as a Specification Error', *Econometrica* 47(1): 153-162.

Heckman, J. (1976) 'The Common Structure of Statistical Models of Truncation, Sample Selection and Limited Dependent Variables and a Sample Estimation for such Models', *Annals of Economic and Social Measurement* 5(4).

Hill, M.A. (1989) 'Female Labour supply in Japan: Implications of the Informal Sector for the Labour-force Participation and Hours of Work', *Journal of Human Resources* 24(1): 143-161.

Hill, M.A. (1983) 'Female Labour-force Participation in Developing and Developed Countries: Consideration of the Informal Sector', *Review of Economics and Statistics* 65: 459-468.

Hoffman, S.D. (2009) 'The Changing Impact of Marriage and Children on Women's Labour Force Participation', *Monthly Labor Review* 132(2), February.

Horton, S., R. Kanbur and D. Mazumdar (eds) (1994) *Labour Market in the Era of Structural Adjustment,* Vol. 1 and 2. Washington DC: The World Bank.

House, W.J. (1984) 'Nairobi's Informal Sector: Dynamic Entrepreneurs or Surplus Labor?', *Economic Development and Cultural Change* 32(2): 277-302.

Howe, W.J. (1990) 'Labour Market Dynamics and Trends in Male Female Unemployment', *Monthly Labour Review* 113(11): November.

Humphrey, J. (1996) 'Responses to Recession and Restructuring: Employment Trends in the Sao Paulo Metropolitan Region 1979-87', *Journal of Development Studies* 33(1): 40-62.

Hunter, B.H. and M.C. Gray (1999) 'Further Investigations into Indigenous Labour supply: What Discourages Discouraged Workers?', Working Paper No. 2/1999. Australia: Centre for Aboriginal Economic Policy Research (CAEPR).

Hussmanns, Ralf. (2004) 'Measuring the Informal Economy: From Employment in the Informal Sector to Informal Employment', Working Paper No. 53. Geneva: Policy Integration Department, Bureau of Statistics, ILO.

Hussmanns, R., F. Mehran and V. Verma (1990) *Surveys of Economically Active Population, Employment, Unemployment, and Underemployment.* Geneva: ILO.

Ikiara, G.K. and S.N. Ndung'u (1999) 'Employment and Labour Markets During Adjustment –Kenya', in R. Van der Hoeven and W. Van der Geest (eds), *Adjustment Employment and Missing Institutions in Africa: The Experience in Eastern and Southern Africa*. Geneva: ILO.

Ikiara, G.K. and S.N. Ndung'u (1997) *The Labour Market during Adjustment: The Case of Kenya*. Geneva: ILO.

ILO (2009) *Global Employment Trends for Women*. Geneva: ILO.

ILO (2007) *Global Employment Trends for Women*. Geneva: ILO.

ILO (2004) *Global Employment Trends for Women*. Geneva: ILO.

ILO (2003) *Key Indicators of the Labour Market 2002–2003*. Geneva: ILO.

ILO (1999a) 'Employment Creation in Eastern and Southern African Sub-regions', East and Southern Africa Sub-regional Follow-up Conference to the World Social Summit, Nairobi, Kenya (15-17 March).

ILO (1999b) 'Employing Youth: Promoting Employment-Intensive Growth.' Report for the Interregional Symposium on Strategies to Combat Youth Unemployment and Marginalization, ILO, Geneva (13-14 December).

ILO (1996) *World Employment 1996/97*. Geneva: ILO.

ILO (1972) *Employment, Incomes and Equality: A Strategy for Increasing Productive Employment in Kenya*. Geneva: ILO.

Institute of Economic Affairs (2008a) *Profile of Women's Socio-Economic Status in Kenya*. Nairobi: Institute of Economic Affairs.

Institute of Economic Affairs (2008b) *Promoting Competitiveness and Efficiency in Kenya: The Role of Competition Policy and Law*. Nairobi: Institute of Economic Affairs.

Johnson, L.J. (1983) 'Sex Differentials in Unemployment Rates: A Case for No Concern', *The Journal of Political Economy* 91(2): 293-303.

Joshi, H. and H. Davies (1992) 'Day Care in Europe and Mothers' Forgone Earnings', *International Labour Review* 132: 561-579.

Jovanovic, B. (1979) 'Job Matching and the Theory of Turn-over', *Journal of Political Economy* 87(5): 972-990.

Kabbani, N. and E. Kothari (2005) 'Youth Employment in the MENA Region: A Situational Assessment', Discussion Paper No. 0534. Washington DC: The World Bank.

Kabeer, N. (1995) 'Necessary, Sufficient or Irrelevant? Women, Wages and Intra-household Power Relations in Urban Bangladesh', IDS Working Paper No. 25. Brighton: Institute of Development Studies (IDS).

Kanyenze, G., G. Mhone and T. Sparreboom (2000) 'Strategies to Combat Youth Unemployment and Marginalisation in Anglophone Africa', Discussion Paper 14. Harare: International Labour Office, Southern Africa Multidisciplinary Advisory Team.

Kaufman, B. E. (1994) *The Economics of Labour Markets*. USA: Dryden Press.

Khan, A. (2004) 'Why Are Married Women Working More? Some Macroeconomic Explanations', *Business Review* Q4: 16-25 (available at: www.PhiladelphiaFed.org).

Killingsworth, M. (1983) *Labour Supply*. Cambridge University Press.

Killingsworth, M. and J. Heckman (1986) 'Female Labour Supply: A Survey', in O. Ashenfelter and R. Layard (eds), *Handbook of Labour Economics*. New York: Elsevier Science Publishers.

Kimenyi, S.M., J.M. Mbaku and N. Mwaniki (2003) *Restarting and Sustaining Economic Growth and Development in Africa: The Case of Kenya*. UK: Ashgate Publishing. Ltd.

King, K. (1996) 'Micro Enterprise: Macroeconomic Environment: Revisiting Kenya's Informal (Jua Kali) Sector against the Background of the Formal Globalising Economy', *International Journal of Educational Development* 16(4): 417-426.

Kingdom, G. and J. Knight (2000) 'Are Searching and Non-searching Unemployment Distinct States when Unemployment is High? The Case of South Africa', Centre for the Study of African Economies, WPS/2000-2. Oxford: University of Oxford.

Klasen, S. (1999) 'Does Gender Inequality Reduce Growth and Development? Evidence from Cross-Country Regressions', Gender and Development Working Paper 7. Washington DC: The World Bank (available at: INTGENDER/Resources/wp7.pdf).

Klasen, S. (2002) 'Low Schooling for Girls, Slower Growth for All? Cross-Country Evidence on the Effect of Gender Inequality in Education on Economic Development', *World Bank Economic Review* 16 (3): 345–73.

Klasen, S., and F. Lamanna (2003) 'The Impact of Gender Inequality in Education and Employment on Economic Growth in the Middle East and North Africa', Background paper. Washington DC: The World Bank (available at: http://www.iai.wiwi.uni-goettingen.de/klasen/klasenlamanna.pdf).

Klasen, S., and C.Wink (2002) 'A Turning Point in Gender Bias in Mortality? An Update on the Number of Missing Women, '*Population and Development Review* 28 (2): 285–312.

Knowles, S., P. K. Lorgelly and P. D. Owen (2002) 'Are Educational Gender Gaps a Brake on Economic Development? Some Cross-Country Empirical Evidence', *Oxford Economics Papers* 54 (1: 118–49).

Kolev, A. (1998) 'Labour Supply in the Informal Economy in Russia during Transition', Discussion Paper No. 2024. London: Centre for Economic Policy Research.

Lachaud, J. P. (1994) *The Labour Market in Africa.* Geneva: ILO.

Laier, J. K. (1997) 'Women's Work and the Household in Latin America: A Discussion of the Literature', Centre for Development Research, WP No. 97.5. Copenhagen.

Lanot, G. and C. Muller (1997) 'Dualistic Sector Choice and Female Labour Supply: Evidence from Formal and Informal Sectors in Cameroon', Centre for the Study of African Economies, Working Paper Series/97-9. London; Oxford: University of Oxford.

Lauerová, J. S. and K. Terrell (2002) 'Explaining Gender Differences in Unemployment with Micro Data on Flows in Post-Communist Economies', IZA, Discussion Paper No. 600. Bonn: Institute for the Study of Labour (IZA).

Leibbrandt, M. and C. Mlatsheni (2004) 'Youth in Sub-Saharan Labour Markets'. Chapter presented at African Development and Poverty Reduction: The Macro-Micro Linkage Forum, Somerset West, South Africa (13-15 October).

Lewis, W.A. (1954) *Economic Development with Unlimited Supplies of Labour.* Manchester: Manchester School of Economics and Studies.

Linden, E. (1996) 'The Exploding Cities of the Developing World', *Foreign Affairs* 75(1): 52-65.

Lingle, C.R. and E.B. Jones (1978) 'Women's Increasing Unemployment: A Cross-Sectional Analysis', *The American Economic Review* 68(2): 84-89.

Lugalla, J.L.P. (1997) 'Development, Change and Poverty in the Informal Sector During the Era of Structural Adjustments in Tanzania', *Canadian Journal of African Studies* 31(3): 424-451

Magnac, T, (1991) 'Segmented or Competitive Labour Markets', *Econometrica* 59.

Makonnen, N. (1993) *Labour Supply and the Distribution of the Economic Well-being: A Case Study of Lesotho.* Sweden: University of Gothenburg.

Manda, D.K, G. Mwabu and M.S. Kimenyi (2006) 'Human Capital Externality and Returns to Education in Kenya', *Eastern Economic Journal* 32: 493-514.

Manda, D.K. and K. Sen (2004) 'The Labour Market Effects of Globalization in Kenya', *Journal of International Development* 16: 29-43.

Manda, D.K., G. Mwabu and M.S Kimenyi (2002) 'Human Capital Externalities and Returns to Education in Kenya', KIPPRA, Discussion Chapter No. 13. Nairobi: Kenya Institute of Public Policy Research and Analysis (KIPPRA).

Manda, D.K (1997) *Labour Supply, Returns to Education, and the Effect of Firm Size on Wages: The Case of Kenya.* Sweden: University of Gothenburg.

Manser, M. and M. Brown (1980) 'Marriage and Household Decision Making: A Bargaining Analysis', *International Economic Review* 22(2): 333-349.

Mariara, J.K. (2003) 'Wage Determination and Gender Wage Gap in Kenya: Any Evidence of Gender Discrimination?', Research Paper 132. Nairobi: African Economic Research Consortium (AERC).

Mazumdar, D. (1975) 'The Theory of Urban Underemployment in Less Developed Countries', World Bank Staff Working Paper, No. 198. Washington DC: The World Bank.

Mazumdar, D. (1989) 'Microeconomic Issues of Labour Markets in Developing Countries: Analysis and Policy Implications', EDI Seminar Paper. Washington DC: Economic Development Institute (EDI) of the World Bank.

McElroy, M.B. and M.J. Horney (1981) 'Nash Bargaining Household Decisions: Towards a Generalization of the Theory of Demand', *International Economic Review* 22: 333-350.

McLennan, W. (1998) *Australian Social Trends*. Australian Bureau of Statistics, ISSN: 1321-1781, Australia, Canberra (available at: http://www.ausstats.abs.gov.au/ausstats).

Menke, J. (1998) *Restructuring, Urban Employment and Poverty: The Case of Suriname*. Pamaribo: SWI Press.

Milne, W.J. and M. Neitzer (1994) 'Kenya', in S. Horton., R. Kanbur and D. Mazumdar (eds), *Labour Market in the Era of Structural Adjustment* Vol. 2. Washington DC: The World Bank.

Milne, W.J., G.M. Barber and G. Ongile (1990) 'Determinants of Urban Labour Force Participation in Kenya', *Eastern Africa Economic Review* 6(2): 83-93.

Mincer, J. and S. Polachek (1974) 'Family Investments in Human Capital: Earnings of Women', *Journal of Political Economy* 82(2): S76-S108.

Mincer, J. (1962) *Labour-force Participation of Married Women: A Study of Labour Supply: Aspects of Labour Economics*. Princeton, New Jersey: Princeton University Press.

Mlatsheni, C and S. Rospabe (2002) 'Why is Youth Unemployment so High and Unequally Spread in South Africa?', Working Paper 02/65. South Africa: Development Policy Research Unit, University of Cape Town.

Moser, C.O.N. (1998) 'Asset Vulnerability Framework: Reassessing Urban Poverty Reduction Strategies', *World Development* 26(1): 1-19.

Moser, C.O.N. (1995) 'Confronting Crisis: A Comparative Study of Household Responses to Poverty and Vulnerability in Four Urban Communities', ESD Studies and Monographs Series No. 8. Washington DC: The World Bank.

Moser, C.O.N. (1992) 'Adjustment from Below: Low Income Women, Time and Triple Role in Guayaquil, Ecuador', in H. Afshar and C. Dennis (eds), *Women and Adjustment Policies in the Third World*. London: Macmillan.

Moser, C.O.N. (1984) 'The Informal Sector Revisited: Viability and Vulnerability in Urban Development', *Regional. Development Dialogue* 5: 135-178.

Moser, C.O.N. (1978) 'Informal Sector or Petty Commodity Production Dualism or Dependence in Urban Development', *World Development* 6(9-10): 1041-1064.

Moser, C.O.N. (1977) 'The Dual Economy and Marginality Debate and the Contribution of Micro Analysis: Market Sellers in Bogotá', *Development and Change* 8(4): 465-489.

Mroz, T.A. (1987) 'The Sensitivity of an Empirical Model of Married Women's Hours of Work to Economic and Statistical Assumptions', *Econometrica* 55(4): 765-799.

Mumford, K.A. Parera-Nicolau (2001) 'The Labor Force Participation of Married Mothers in Spain and Britain', Department of Economics, Discussion Papers No. 10. United Kingdom: University of York (available at: http://ideas.repec.org/p/yor/yorken/01-10.html).

Mwabu, G., M. Oiro and D.K. Manda (2004) 'Poverty and Employment in Kenya', KIPPRA, Discussion Paper No. 33. Nairobi: Kenya Institute of Public Policy Research and Analysis (KIPPRA).

Mwabu, G., S.M. Kimenyi, P. Kimalu, N. Nafula and D.K. Manda (2002) 'Predicting Household Poverty: A Methodological Note with a Kenyan Example', KIPPRA, Discussion Paper No. 12. Nairobi: Kenya Institute of Public Policy Research and Analysis (KIPPRA).

Mwabu, G., S.M. Kimenyi and D.K. Manda (2000) 'A Review of Poverty and Anti-poverty Initiatives in Kenya', KIPPRA, Working Paper No. 3. Kenya Institute of Public Policy Research and Analysis (KIPPRA).

Mwega, F.M. (2003) 'Financial Sector Reforms in Eastern and Southern Africa', in T. Mkandawire and C.C. Solud (eds), *African Voices on Structural Adjustment a Companion to Our Continent, Our Future*. Trenton NJ: Africa World Press.

Myatt, A. and D. Murrell (1990) 'The Female/Male Unemployment Rate Differential', *The Canadian Journal of Economics* 23(2): 312-322.

Myint, H. (1985) 'Organizational Dualism and Economic Development', *Asian Development Review* 3(1): 24-42.

Ndulu, B.J., S.A. O'Connell, J.P. Azam, R.H. Bates, A.K. Fosu, J.W. Gunning and D. Ninjinkeu (2007) *The Political Economy of Economic Growth in Africa, 1960-2000*. United Kingdom: Cambridge University Press.

Neuman, S. and S. Grossbard-Shechtman (1998) 'The Extra Burden of Moslem Wives: Clues from Israeli Women's Labour Supply', CPER, Discussion Paper, No. 180. London: Centre for Economic Policy Research (CPER).

Newman, J.L. and P.J. Gertler (1994) 'Family Productivity, Labour Supply and Welfare in a Low Income Country', *Journal of Human Resources* 29: 989-1026.

Newmark, D. (1988) 'Employers Discriminatory Behavior and the Estimation of the Wage Discrimination', *Journal of Human Resources* 23: 279-95.

Nielsen, H.S. (1998) 'Discrimination and Detailed Decomposition in a Logit Model', *Economics Letters* 61: 115-120.

Nielsen, H.S. and P. Jensen (1997) 'Child Labour or School Attendance? Evidence from Zambia', *Journal of Population Economics* 10: 407-24.

Niemi, B. (1974) 'The Female-Male Differential in Unemployment Rates', *Industrial and Labour Relations Review* 27: 331-50.

Nwanganga, S. (1980) 'Women in the Urban Labour Markets of Africa: The Case of Tanzania', Staff Working Paper Series, No. 380. Washington DC: The World Bank.

Oaxaca, R.L. and M.R. Ransom (1999) 'Identification in Detailed Wage Decompositions', *Review of Economics and Statistics* 81(1): 154-157.

Oaxaca, R.L. and M.R. Ransom (1998) 'Calculation of Approximate Variances for Wage Decomposition Differentials', *Journal of Economic and Social Measurement* 24(1): 55-61.

Oaxaca, R. (1973) 'Male-Female Earnings Differential in Urban Labour Markets', *International Economic Review* 14: 693-709.

Odada, J.E.O. and A.B. Ayako (1989) *The Impact of Structural Adjustment Policies on the Well-Being of the Vulnerable Groups in Kenya.* Nairobi: UNICEF.

Odhiambo, W. and D.K. Manda (2003) 'Urban Poverty and Labour Force Participation in Kenya', paper presented at the World Bank Urban Research Symposium, The World Bank, Washington DC (15-17 December).

Ogbu, O. and G.K. Ikiara (1995) 'The Crisis of Urbanization in Sub-Saharan Africa', *Courier* 149 (Jan-Feb): 52-59.

O'Higgins, N. (2001) *Youth Unemployment and Employment Policy, a Global Perspective*. Geneva: ILO.

O'Higgins, N. (1997) 'The Challenge of Youth Unemployment', Employment and Training Papers. No. 7. Geneva: ILO.

Oppenheimer, V.K. (1976) *The Female Labour Force in the US: Demographic and Economic Factors Governing its Growth and Changing Composition.* Westport, CT: Greenwood Press.

Orchardson-Mazrui, E. (2006) 'The Impact of Cultural Perspectives on Gender Issues', in C. Creighton, F. Yieke and E. Smith (eds), *Gender Inequalities in Kenya*. Paris: UNESCO.

Peterson, J. and M. Lewis (1999) *The Elgar Companion to Feminist Economics.* Gloucester: Edward Elgar Publishing.

Phillips, A. (2004), 'Defending Equality of Outcome', *Journal of Political Philosophy* 12(1):1-19.

Pollachek, S.W. (1995) 'Earnings Over the Lifecycle: What Do Human Capital Models Explain?', *Scottish Journal of Political Economy* 42(3): 267-89.

Pollin, R., M. Githinji and J. Heintz (2007) *An Employment Targeted Economic Program for Kenya.* USA: Political Economy Research Institute, Amherst.

Pradhan, M. and A. Van Soest (1995) 'Formal and Informal Sector Employment in Urban Areas of Bolivia', *Labour Economics* 2: 275-297.

Pritchett, L. 2001. 'Where has all the Education Gone?', *World Bank Economic Review* 15(3): 367-391.

Psacharopoulous, G., S. Morley, A. Fiszbein, H. Lee, B. Wood (2007) 'Poverty and Income Distribution in Latin America: The Story of the 1980s', World Bank Technical Paper No. 351. Washington DC: The World Bank.

Psacharopoulos G. and Z. Tzannatos (eds) (1992) *Women's Employment and Pay in Latin America; Overview and Methodology.* Washington DC: The World Bank.

Psacharopoulos, G. and Z. Tzannatos (1991) 'Female Labour-force Participation and Education', in G. Psacharopoulos (ed.), *Essays on Poverty, Equity and Growth* Oxford: Pergamon Press for the World Bank.

Rakodi, C. and T. Lloyd-Jones (eds) (2002) *Urban Livelihoods: A People Centred Approach to Reducing Poverty*. London: Earthscan Publications Ltd.

Rakodi, C. (1999) 'A Capital Assets Framework for Analyzing Household Livelihood Strategies: Implications for Policy', *Development Policy Review* 17(3): 315-342.

Ranis, G. (1988) 'Analytics of Development: Dualism', in H. Chenery and T.N. Srinivasan (eds), *Handbook of Development Economics* Chapter 4. New York: Elsevier Science Publishers.

Ranis, G. and J. Fei. (1961) 'A Theory of Economic Development', *American Economic Review* 56.

Reich, M., G. Gordon and R. Edwards (1980) 'A Theory of Labour Market Segmentation', in A. Amsden (ed.), *The Economics of Women and Work,* pp. 232-241. New York: St. Martin's Press.

Rempel, H. (1981) 'The Labour Market', in T. Killick (ed.), *Papers on Kenyan Economy Performance, Problems and Policies*. Nairobi: Heinemann.

Rempel, H. and W.J. House (1978) *The Kenya Employment Problem: An Analysis of the Modern Sector Labour Market.* UK: Oxford University Press.

Republic of Kenya (2006) *Kenya National Youth Policy*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (2003) *Report of 1998/99 Labour Force Survey*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (1977) *Labour-Force Survey Report*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (1986a) *Labour-Force Survey Report*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (1986b) *Sessional Paper No. 1 of 1986 on Economic Management for Renewed Growth*. Nairobi: Government Printer.

Republic of Kenya (1985) *Sessional Paper No. 2 of 1985 on Unemployment*. Nairobi: Government Printer.

Republic of Kenya (1999a) *Analytical Report on Education,* Vol. 3. Nairobi: Central Bureau of Statistics.

Republic of Kenya (1999b) *Census Report*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (1989a) *Census Report*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (1989b) *Development Plan, 1989-93*. Nairobi: Government Printer.

Republic of Kenya (1979) *Census Report*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (1969) *Census Report*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (1965) *Sessional Paper No. 10 African Socialism and Planning*. Nairobi: Government Printer.

Republic of Kenya *(Various Issues) DHS Report*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (*Various Issues*) *Economic Survey*. Nairobi: Central Bureau of Statistics.

Republic of Kenya (*Various Issues) Statistical Abstract*. Nairobi: Central Bureau of Statistics.

Ricardo, D. (1815) *Works and Correspondence of David Ricardo*. 1-4, Cambridge University Press, Cambridge.

Rives, J.M. and M. Yousefi (1997) *Economic Dimensions of Gender Inequality: A Global Perspective*. USA: Praeger Publishers.

Roberts, J. and S. Fagernäs (2004) 'Why is Bangladesh Outperforming Kenya: A Comparative Study of Growth and its Causes Since the 1960', ESAU Working Paper 5. United Kingdom: Economics and Statistical Analysis Unit (ESAU), Overseas Development Institute (ODI) (available at: www.odi.org.uk/spiru/publications/working_papers/Esau_5_Bangladesh_kenya.pdf).

Rodgers, Y. (1999) 'Protecting Women and Promoting Equality in the Labour Market: Theory and Evidence', Policy Research Report on Gender and Development, Working Paper Series, No. 6. Washington DC: The World Bank.

Sabot, R. (1977) *Economic Development and Urban Migration: A Study of Tanzania*. Oxford: Clarendon Press.

Schoumaker, B.C. and B.D. Beauchemin (2002) 'Les migrations a Ouagadougou: Tendances Récentes (1990–2000)', Ouaga Focus 30. Ouagadougou: Unite d'enseignement et de Recherche en Démographie,

Schultz, T.P. (2003) 'Evidence of Returns to Schooling in Africa from Household Surveys: Monitoring and Restructuring the Market for Education', Working Paper No. 875. New Haven, CT: Economic Growth Center, Yale University.

Schultz, T.P. (2002) 'Why Governments Should Invest More to Educate Girls', *World Development* 30(2): 207-225.

Scott. A.M. (1995) 'Informal Sector or Female Sector? Gender Bias in Urban Labour Market Models', in D. Elson (ed.), *Male Bias in the Development Process*. Manchester: Manchester University Press.

Sen, A. (1990) 'Gender and Cooperative Conflicts', in I. Tinker (ed.), *Persistent Inequalities*. UK: Oxford University Press.

Sethuraman, S.V. (1997) *Urban Employment and the Informal Sector: A Critical Assessment of the Current Strategies*. Geneva: ILO.

Shiferaw, A. (2007a) 'Firm Heterogeneity and Market Selection in Sub-Saharan Africa: Does It Spur Industrial Progress?', *Economic Development and Cultural Change* 55(2): 393-423.

Shifrew, A. (2007b) *Industrial Competiveness and Firm Dynamics in Sub-Saharan Africa, A Firm Level Analysis with a Focus on Ethiopian Manufacturing*. Maastricht: Shaker Publishing.

Smith, K. (2008) 'Working Hard for the Money. Trends in Women's Employment: 1970 to 2007', Reports on Rural America, Vol. (5). Durham: The Carsey Institute, University of New Hampshire (available at: http://www.carseyinstitute.unh.edu/publications/Report-Smith-WorkingHard.pdf).

Smith, S.P. (1976) 'The Changing Composition of the Labour Force', *FRBNY Quarterly Review/Winter* 24.

Sommers, M. (2003) *Urbanization, War and Africa's Youth at Risk: Towards Understanding and Addressing Future Challenges*. Washington, DC: United States Agency for International Development.

Standing, G. (1989) 'Global Feminization through Flexible Labour', *World Development* 17(7): 1077-1095.

Standing, G. (1982) *Labour Force Participation and Development*. Geneva: ILO.

Standing, G. (1976) 'Women's Education and Female Participation in Labour Force', *International Labour Review* 114 (Nov.-Dec.): 281-297.

Stigler, G. (1962) 'Information in the Labour Markets', *Journal of Political Economy* 70(5): 94-105.

Stitcher, S. (1990) 'Women Employment and the Family: Current Debates', in S. Stitcher and J.L. Parpart (eds), *Women, Employment and the Family in International Division of Labour*. London: Macmillan Press Ltd.

Tansel, A. (1996) 'Self-employment, Wage Employment and Returns to Education for Urban Men and Women in Turkey', in T. Bulutay (ed.), *Education and Labour Market in Turkey*. Turkey, Ankara: State Institute of Statistics and Publication.

Tansel, A. (1994) 'Wage Employment, Earnings and Returns to Schooling for Men and Women in Turkey', *Economics of Education Review* 13(4): 305-320.

Teinda, M. and J. Glass (1985) 'Household Structure and Labour-force Participation of Black, Hispanic, and White Mothers', *Demography* 22(3): 381-394.

Temesgen T. and A.G. Zeufack (2002) *Gender Pay Inequality in African Manufacturing: Evidence from Linked Employer-employee Establishment-level Data*. Washington, DC: The World Bank Development Research Group.

Tiefenthaler, J. (1994) 'A Multi-sector Model of Female Labour Free Participation: Empirical Evidence from Cebu Island, Philippines', *Economic Development and Cultural Change* 42(4): 719-742.

Tinker, I. (1990) *Persistent Inequalities*. Great Britain: Oxford University Press.

Todaro, M. (1971) 'Income Expectation, Rural-Urban Migration and Employment', *International Labour Review* 104(5): 387-413

Toye, J. (1995) *Structural Adjustment and Employment Policy*. Geneva: ILO.

UN (2003) *World Youth Report 2003: The Global Situation of Young People. Department of Economic and Social Affairs*. New York: UN.

UN (2005) *Millennium Development Goal Indicators Database*. New York: Department of Economic and Social Affairs, Statistics Division, UN.

UNAIDS (United Nations Programme on HIV/AIDS). 2004. *Report of the Global AIDS Epidemic*. Geneva: UN.

UNDP (United Nations Development Programme). (2004) *Human Development Report 2004: Cultural Liberty in Today's Diverse World*. New York.

UNDP (United Nations Development Programme) (1995) *Human Development Report*. Oxford: Oxford University Press.

UNECA (United Nations Economic Commission for Africa) (2005) *Economic Report on Africa 2005: Transforming Africa's Economies*. Addis Ababa.

Van den Brink, H.M. (1994) *Female Labour Supply Child Care and Marital Conflict*. Amsterdam: Amsterdam University Press.

Van der Hoeven, R. (2000) 'Poverty and Structural Adjustment: Some Remarks on Tradeoffs between Equity and Growth', Employment Paper 2000/4. Geneva: ILO.

Van der Hoeven, R. and W. Van der Geest (eds) (1999) *Adjustment Employment and Missing Institutions in Africa: The Experience in Eastern and Southern Africa*. Geneva: ILO.

Vera, A.A. and A. Bedi (2003) 'Gender Pay Differentials during the Transition in Poland', *The Economics of Transition* 11(4): 697-726.

Wanjala, B.M. and E. Were (2009) 'Gender Disparities and Economic Growth in Kenya: A Social Accounting Matrix Approach', *Feminist Economics* 15 (3):227-251.

Wambugu, A., B. Munga and E. Onsomu (2009) *Unemployment in Kenya: The Situational Analysis*. Nairobi: Kenya Institute of Public Policy Research and Analysis (KIPPRA)

Wambugu, A. (2003) *Essays on Earnings and Human Capital in Kenya*. Sweden: University of Gothenburg.

Wamuthenya, R.W (*forthcoming*). *Determinants of Employment in the Public, Private and Informal Sectors of the Urban Areas of Kenya*. Nairobi: African Economic Research Consortium (AERC).

Weichselbaumer D. and R. Winter-Ebmer (2005) 'A Meta-analysis of the International Gender Wage Gap', *Journal of Economic Surveys* 19(3): 479-511.

Weil, G. (1992) 'Caught in the Crisis: Women in the Economies of Sub-Saharan Africa', in H. Kahne and J.Z. Giele (eds) *Women's Work and Women's Lives: The Continuing Struggle Worldwide*. Oxford: Westview Press.

Wen-Hao, C.M. Corak (2005) 'Child Poverty and Changes in Child Poverty in Rich Countries Since 1990', IZA, Discussion Paper No. 1574. Bonn: Institute for the Study of Labour (IZA).

Were, M. (2007) 'Employment Outcomes and Earnings during Trade Liberalisation in Kenya: The Case of Manufacturing Sector in Kenya', Phd dissertation. University of Dar es Salaam.

Were, M., R. Ngugi and P. Makau (2006) 'Understanding Reforms in Kenya', in J. Mensah (ed.), *Understanding Reforms in Africa, a Tale of Seven Nations*. New York: Palgrave Macmillan.

Were, M. and J. Kiringai (2004). *Gender Mainstreaming in Macroeconomic Policies and Poverty Reduction Strategy in Kenya*. Nairobi: African Women's Development and Communication Network.

Wong, R. and R.E. Levine (1992) 'The Effect of Household Structure on Women's Economic Activity and Fertility: Evidence from Recent Mothers in Urban Mexico', *Economic Development and Cultural Change* 41(1): 89-102.

Wood, A. (1991) 'North-South Trade and Female Labour in Manufacturing: An Asymmetry', *Journal of Development Studies* 27(2): 168-189.

World Bank (1997) *Global Economic Perspectives and the Developing Countries.* Washington DC: The World Bank.

World Bank (1996) *Social Dimensions of Adjustment, World Bank Experience 1980-93.* Washington DC: The World Bank.

World Bank (1995a) *World Development Report.* Washington DC: The World Bank.

World Bank (1995b) *Development in Practice: Priorities and Strategies for Education.* Washington DC: The World Bank.

World Bank (2004) *MENA Development Report: Gender and Development in the Middle East and North Africa (MENA).* Washington DC: The World Bank.

Wuyts, M.E. (2001) 'Informal Economy, Wage Goods and Accumulation under Structural Adjustment: Theoretical Reflections Based on the Tanzanian Experience', *Cambridge Journal of Economics* 25(3): 417-438.

Yamarik, S. and S. Ghosh (2003) *Is female education productive? A reassessment.* Mimeographed, Medford, MA: Tufts University

Yun, M.S. (2004) 'Decomposition Differences in the First Moment', *Economics Letters* 82(2): 275-280.

Zabel, E.J. (1997) 'The Relationship between Hours of Work and Labour-force Participation in Four Models of Labour Supply Behaviour', *Journal of Labour Economics* 4(3): 223-244.

Zepeda, E. (2007) 'Addressing the Employment-Poverty Nexus in Kenya: Comparing Cash-Transfer and Job-Creation Programmes', International Policy Centre for Inclusive Growth in its series Working Papers No. 40. Brazil: UNDP - International Poverty Centre.

Wambui R. Wamuthenya

For the last couple of years, Wambui has been working on her doctorate research. She has her MA and BA degrees in Economics, both from the University of Nairobi. Prior to enrolling for her doctorate studies in May 2002, she held a Research Officer's post at the International Development Research Centre (IDRC). Before joining IDRC, she worked for M.A. Consulting Group (in Kenya) as a Research Associate. She also worked as a private consultant (1999 to 2002) in a wide range of economic issues, data collection and analysis. As part of this, Wambui was engaged in short research assignments with the Institute of Policy Analysis and Research (IPAR) and the Kenya Institute of Public Policy Research and Analysis (KIPPRA). Wambui has also worked as resource person (conducting training assignments) with Tigerhead Computer Systems (in Kenya) and Information Professionals of Africa (in Kenya), both information technology (IT) training and consultancy firms.

Wambui has received research grant awards from African Economic Research Consortium (AERC) and Ryoichi Sasakawa Young Leaders Fellowship Fund (SYLFF) to work on research projects related to the labour market (AERC) and environmental education issues (SYLFF). She is a member of the International Association for Feminist Economists (IAFFE) (since 2005) and in 2009, she presented a paper on gender and labour market issues at IAFFE's yearly conference.

Contacts: Rue Crocq 94, Woluwe St Lambert, 1200, Brussels, Belgium
Tel +32-(0) 27369238, Cell +32-(0) 484438708.
Email: wambuirose@yahoo.co.uk; wambui.wamuthenya@gmail.be

The above candidate was admitted to the doctorate programme in the Institute of Social Studies (now the International Institute of Social Studies of Erasmus University Rotterdam) in The Hague in May 2002 on the basis of:

MA Economics, University of Nairobi, 1998

This thesis has not been submitted to any university for a degree or any other award.