



Economic Growth, Employment and Poverty Reduction in Sri Lanka

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Background and Objective

Background

- Economic Growth is necessary but not sufficient for poverty reduction
- Employment plays a vital role in linking economic growth and poverty reduction
- The countries which have attained high rates of **employment growth** alongside high rates of **economic growth** are the ones that have been successful in reducing poverty


Objective

- Examine the nexus between economic growth, employment and poverty reduction in Sri Lanka

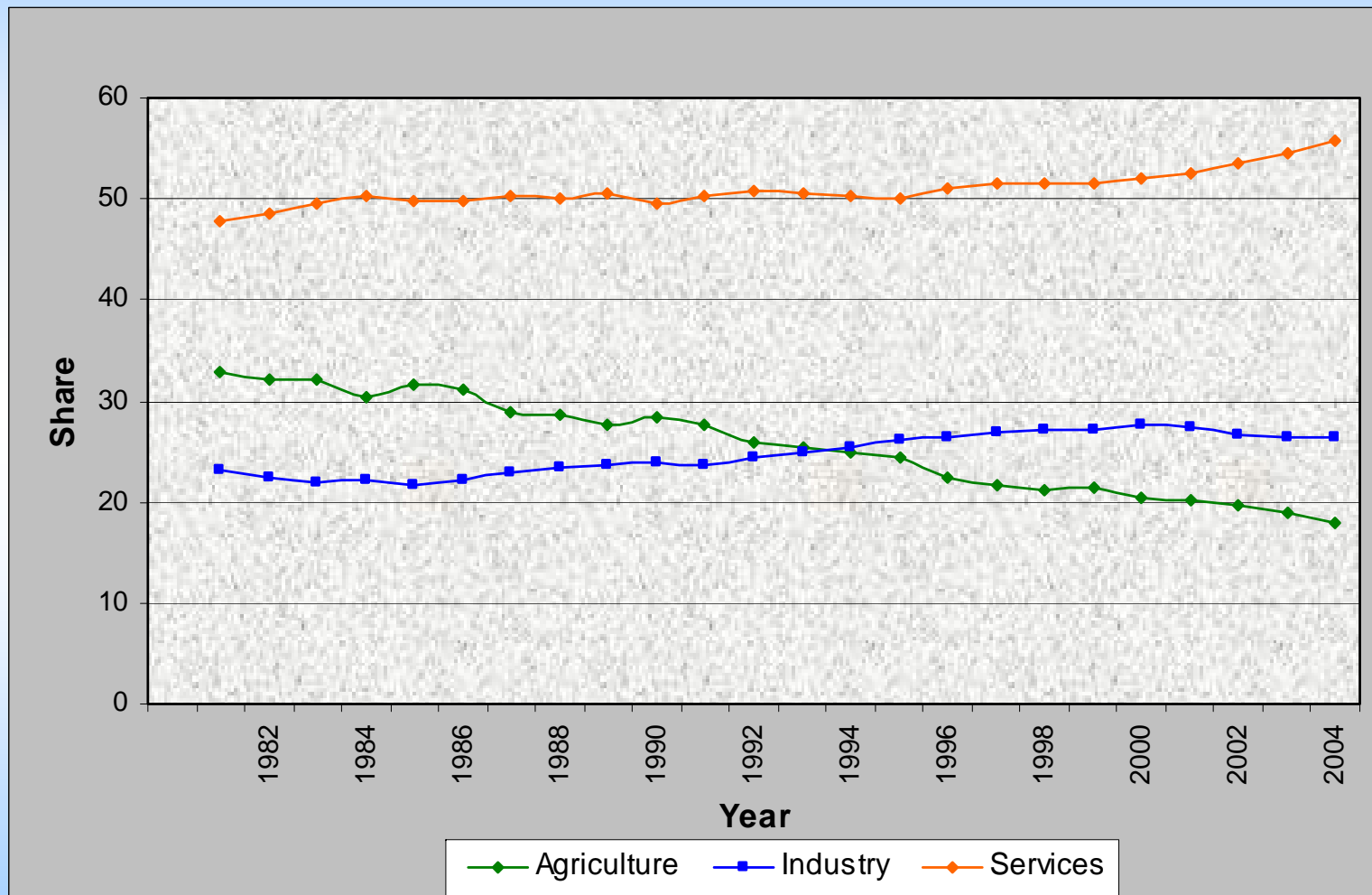
Data Sources

- Labour Force Surveys (1990-2004), DCS
- Central Bank of Sri Lanka, Annual Reports (1980-2005)
- Annual Survey of Industries (1993-2001), DCS
- Consumer Finances and Socio-economic Surveys (1981/82 and 1986/87), CBSL
- Household Income and Expenditure Surveys (1990/91, 1995/96, 2002), DCS
- Country wide Data Collection Systems Data on Informal Sector Wage Rates (1980-2004), CBSL
- Cost of Cultivation of Agricultural Crops (1980-2004), Department of Agriculture

Growth of Economy




- Sri Lankan economy has been growing at a rate of nearly 5% in the period 1980-2004
- Around 2% average annual growth rate in the agricultural sector 
- Over 5% growth in the services sector in all the sub-periods
 - High growth performance in telecommunications (approx 25%) and banking (approx 12%) sectors in the post 2000 period

Trends in Sectoral Composition of GDP



Source: Based on the calculations made using data from the Central Bank Annual Reports, various issues

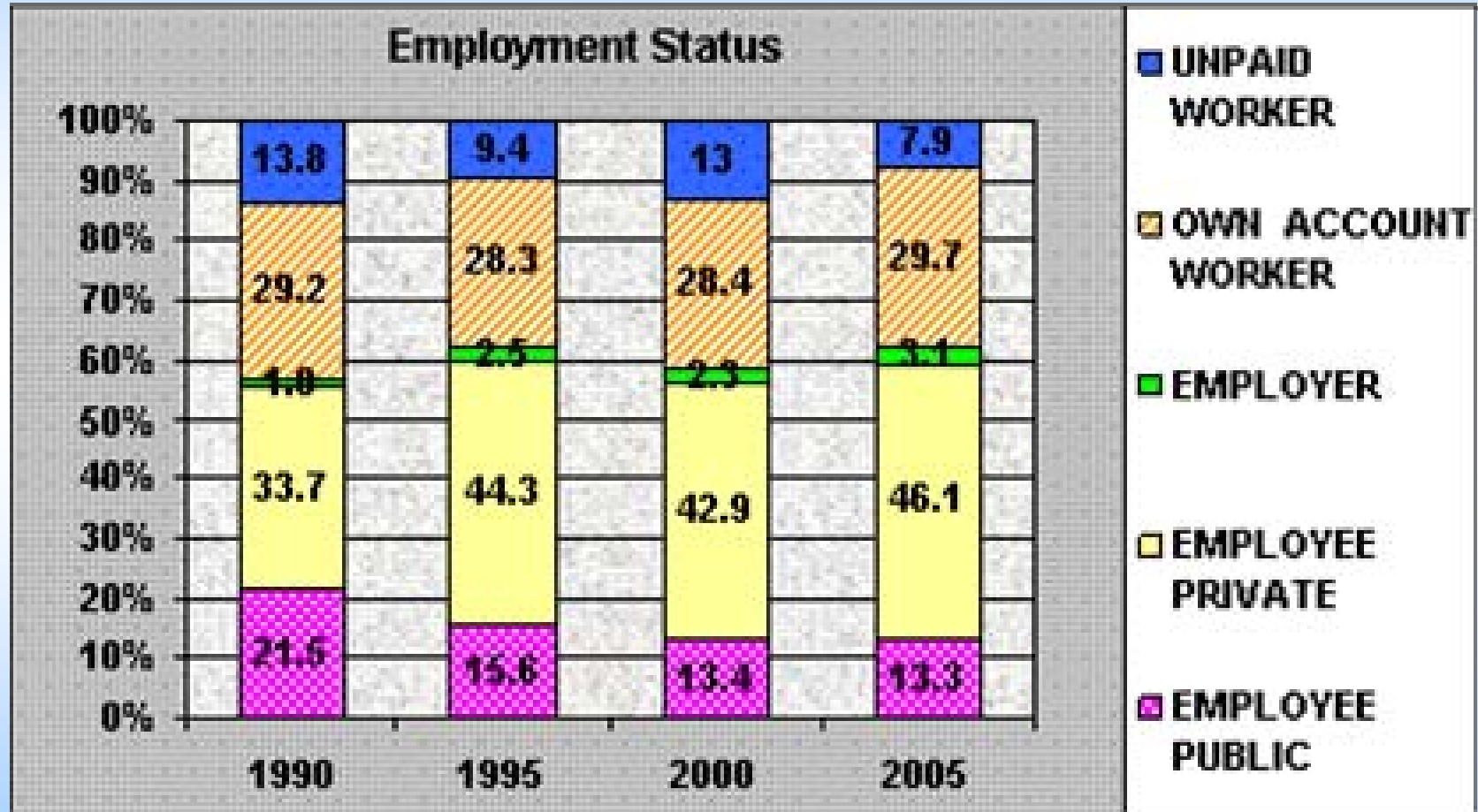
Unemployment Rate

- Unemployment rate has been declining over the years
- Female unemployment rate is almost double the male unemployment rate 
- Considerable variations in unemployment rates across provinces
 - In all provinces, female unemployment rate is much higher. 
- Youth unemployment, particularly among the more educated has been a long standing problem in Sri Lanka 

Definition of Employment

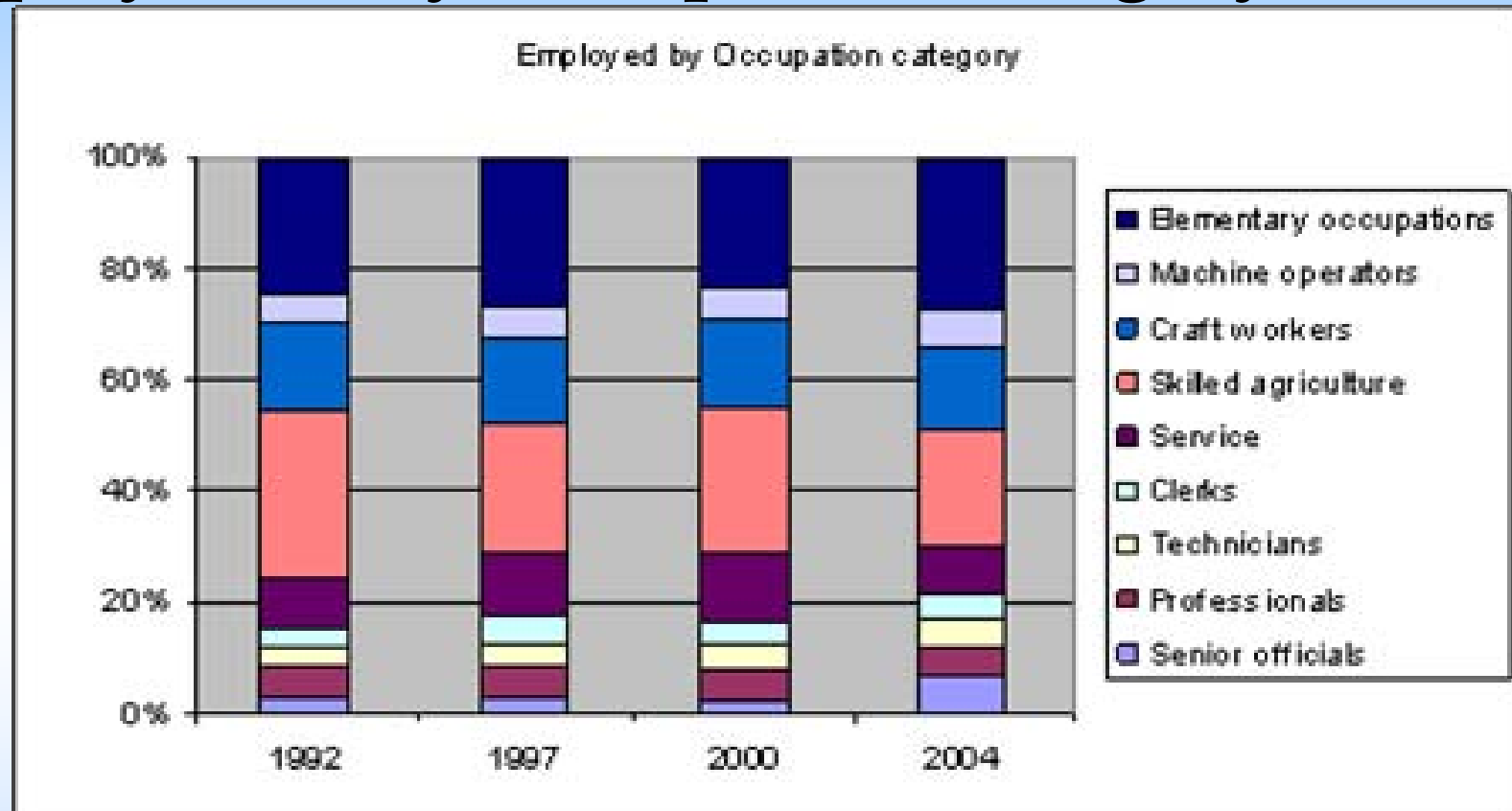
- An employed person is defined as :
 - ‘a person who worked for pay, profit or family gain (unpaid) for one hour or more during the week preceding the Labour Force Survey.’ (LFS, DCS)
 - Underemployed as well as unpaid family workers are also treated as employed.
 - Decline in unemployment rate (or increase in employment rate) may not completely reflect an increase in employment opportunities in the country

Employment by Status of Employment :1990-2005



Source: Based on data obtained from the Central Bank Annual Report, various issues

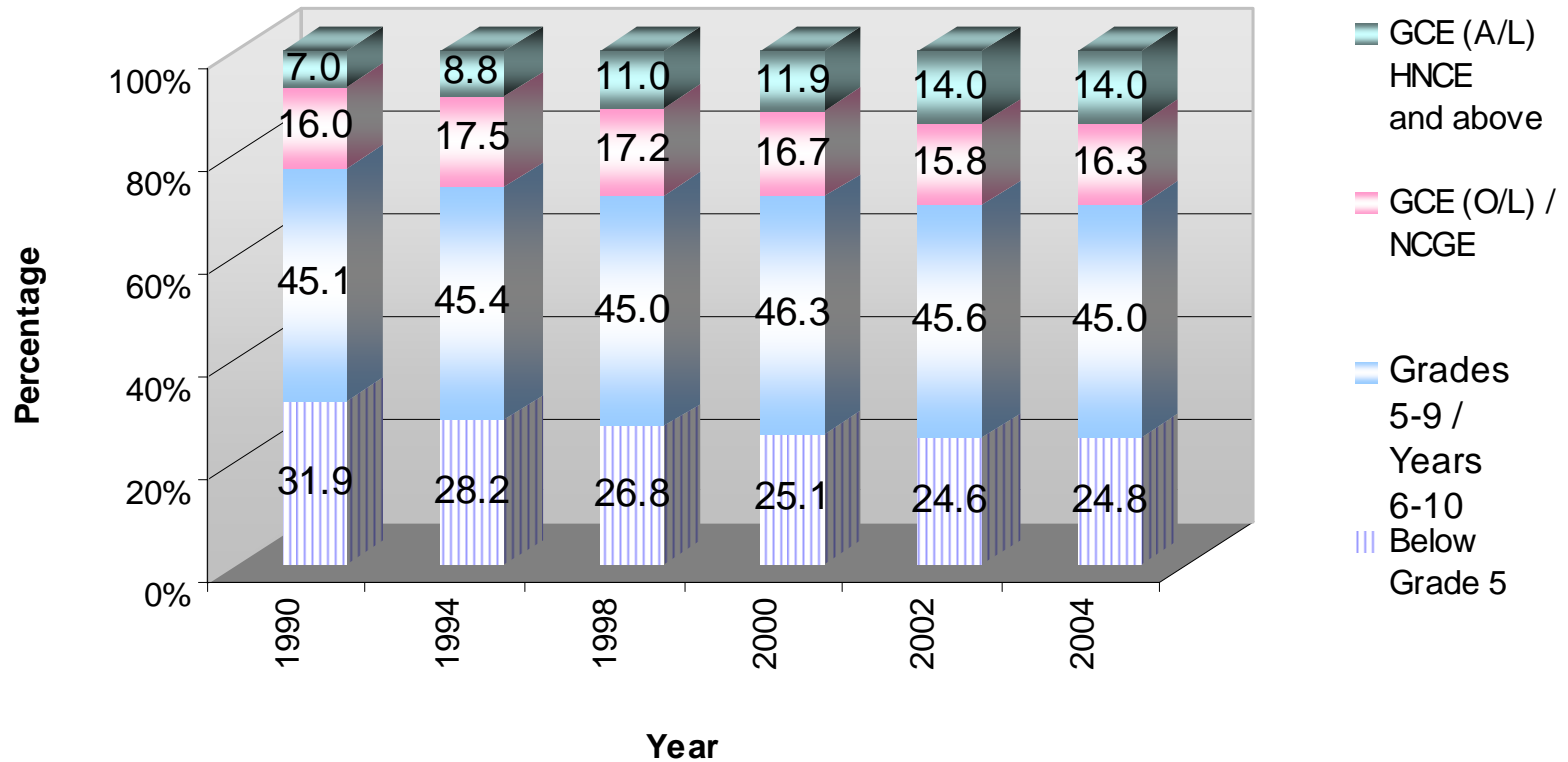
Employment by Occupation Category :1992-2004



Source: Calculations made based on the Labour Force Survey data of the DCS. Note: The occupation groups are based on ISCO-88 classification.

- Elementary Occupations account for about one-fourth of the total employment while senior officials/professionals/technicians account for 10-15%

Employment by Level of Education



Source: Based on the Labour Force Survey data of the DCS


Those with Grade 9 and below account for about 70% of the total employed. The share of those with A/L and above is less than 15%

Employment Share by Sector:1990-2004

- The agricultural sector accounts for over one-third of the employment in the country
 - Employment share declined from 51.2 % in 1981 to 33.6% in 2004.
- The services sector has the highest share of employment (about 42%)
- The industrial sector shows a slight increasing trend in its employment share
 - The share of the manufacturing sector has shown a substantial increase (17.5 % in 2004)



Employment Growth

- Employment has grown at a rate of 2-3% per annum during 1980-2004
- Decline in (average) annual employment growth over the decades.

- The agricultural sector experienced marginal or negative growth rates in employment during all sub-periods
 - high fluctuations, Negative growth rates in number of years
- Both industries and services have recorded (positive) growth in employment in almost all the years.

Employment Intensity

- In analysing the linkage between economic growth, employment and poverty reduction, it is vital to look at the employment intensity of output growth
- Measured by the 'employment elasticity'
 - Percentage change in employment associated with one per cent change in output
- Indication of the employment-creating ability of growth

Employment Elasticity

- Employment elasticity for SL has been in the range of 0.4 to 0.5
 - Low level of employment creation along with a productivity improvement.
- Declining pattern in employment elasticity over the decades
- Employment elasticities vary across sectors
 - Industries and services, in general, have relatively higher employment elasticities compared to the agricultural sector.



Decomposition of Employment Growth

- To understand the forces underlying the changes in growth in employment, the employment growth can be decomposed into its *output effect* and *elasticity effect*
- Methodology was adopted from Osmani, S.R. (2006):

$$e_1 - e_2 = \eta_2 (y_2 - y_1) + y_1 (\eta_2 - \eta_1) \quad \text{-----(1)}$$

- The *output effect*: the amount by which the employment growth changes in response to changes in the rate of output growth ($y_1 - y_2$) at a given elasticity η_2
- The *elasticity effect*: the amount by which the rate of employment growth changes due to changes in the elasticity ($\eta_1 - \eta_2$) at a given rate of output growth y_1

Decomposition (cont.)

- Decomposition analysis for two time periods:
(1) between 1980s & 1990s (2) between 1990s & post 2000

Key Results

- Deceleration in employment growth during both periods
 - The elasticity effect is dominant in the first period while the output effect is dominant in the second.
- Agriculture sector: deceleration in employment growth in the first period while acceleration in the second
 - Elasticity effect dominant in both periods.
- Services sector: acceleration in employment growth in the first period while deceleration in the second
 - Elasticity effect dominant in both periods.



Labour Productivity

- The average productivity of the economy and the key sectors has increased
- The agricultural sector has the lowest productivity level, while the services sector has the highest level of productivity

Average Annual Productivity (in Rupees)

| Sector | 1980s | 1990s | 2000-04 | 1990-04 |
|--------------------|---------|---------|---------|---------|
| Overall economy | 81,790 | 120,552 | 138,748 | 126,617 |
| Agriculture Sector | 52,843 | 74,301 | 79,104 | 75,902 |
| Industries Sector | 89,596 | 147,053 | 159,218 | 151,108 |
| Services Sector | 133,327 | 156,820 | 176,832 | 163,491 |

Source: Based on LFS of DCS, CFSES (1981/82 & 1986/87) and Annual Reports of CBSL

Note: Productivity is in constant prices using 1996 as the base year

Growth in Productivity & Real Wages

- Productivity of the overall economy grew at an average annual rate of 2-3% during the 1980-2004 period
- The services sector recorded a growth in productivity accompanied by a growth in real wages

| Sector | 1990s | | 2000-04 | |
|-----------------|---------------------|------------------|---------------------|------------------|
| | Productivity growth | Real wage growth | Productivity growth | Real wage growth |
| Overall Economy | 2.8 | - | 2.1 | |
| Agriculture | 3.0 | - | 0.2 | - |
| Industry | 3.6 | 2.7 | -0.3 | -0.1 |
| Services | 2.6 | 3.0 | 3.8 | 0.4 |

Source: Calculations based on LFS of DCS, CFSES & Annual Reports of CBSL

Incidence of Poverty by Sector (head count ratio)

| Sector | Period | | |
|-----------|-------------|-------------|----------|
| | 1990-91 (%) | 1995-96 (%) | 2002 (%) |
| Sri Lanka | 26.1 | 28.8 | 22.7 |
| Urban | 16.3 | 14.0 | 7.9 |
| Rural | 29.4 | 30.9 | 24.7 |
| Estate | 20.5 | 38.4 | 30.0 |

Source: Department of Census & Statistics (DCS); estimates based on HIES 1990/91, 1995/96 and 2002.

Poverty (Head Count Ratio) by Sector of Employment (%)

| Sector | 1995/96 (%) * | 2002 (%) * |
|--|------------------|---------------|
| Agriculture | 40 | 39 |
| Agriculture | 40 | 44 |
| Forestry and logging | 33 | 38 |
| Fishing | 34 | 31 |
| Industry | 28 | 23 |
| Mining and quarrying | 46 | 40 |
| Manufacturing | 25 | 20 |
| Electricity, water & sanitation | 9 | 8 |
| Construction | 32 | 30 |
| Services sector | 16 | 18 |
| Transport storage & telecommunication | 16 | 15 |
| Banking, insurance, real estate & financial services | 3 | 6 |
| Wholesale, retail trade hotels & restaurant | 21 | 17 |
| Public administration, defence & other service | 14 | 19 |
| Total | 29 | 23 |

Authors' calculations based on regional poverty lines prepared by the DCS for 1995/96 and 2002 using HIES 1995/96 and 2002 of DCS.

Agricultural Sector

- Importance of the agricultural sector has declined in terms of output and employment

Composition of Output and Employment

| Sector | Output | Employment |
|---------------------------|--------------|--------------|
| | 2004 | 2001 |
| Agriculture | 77.2 | 98.0 |
| Tea | 7.0 | 25.9 |
| Rubber | 1.9 | 3.8 |
| Coconut | 6.8 | 2.2 |
| Paddy | 14.4 | 38.0 |
| Other products | 47.1 | 28.0 |
| Forestry and logging | 9.8 | 0.3 |
| Fishing | 13.0 | 1.7 |
| Agriculture Sector | 100.0 | 100.0 |

Agriculture Sector :Growth Rates & Employment Intensity

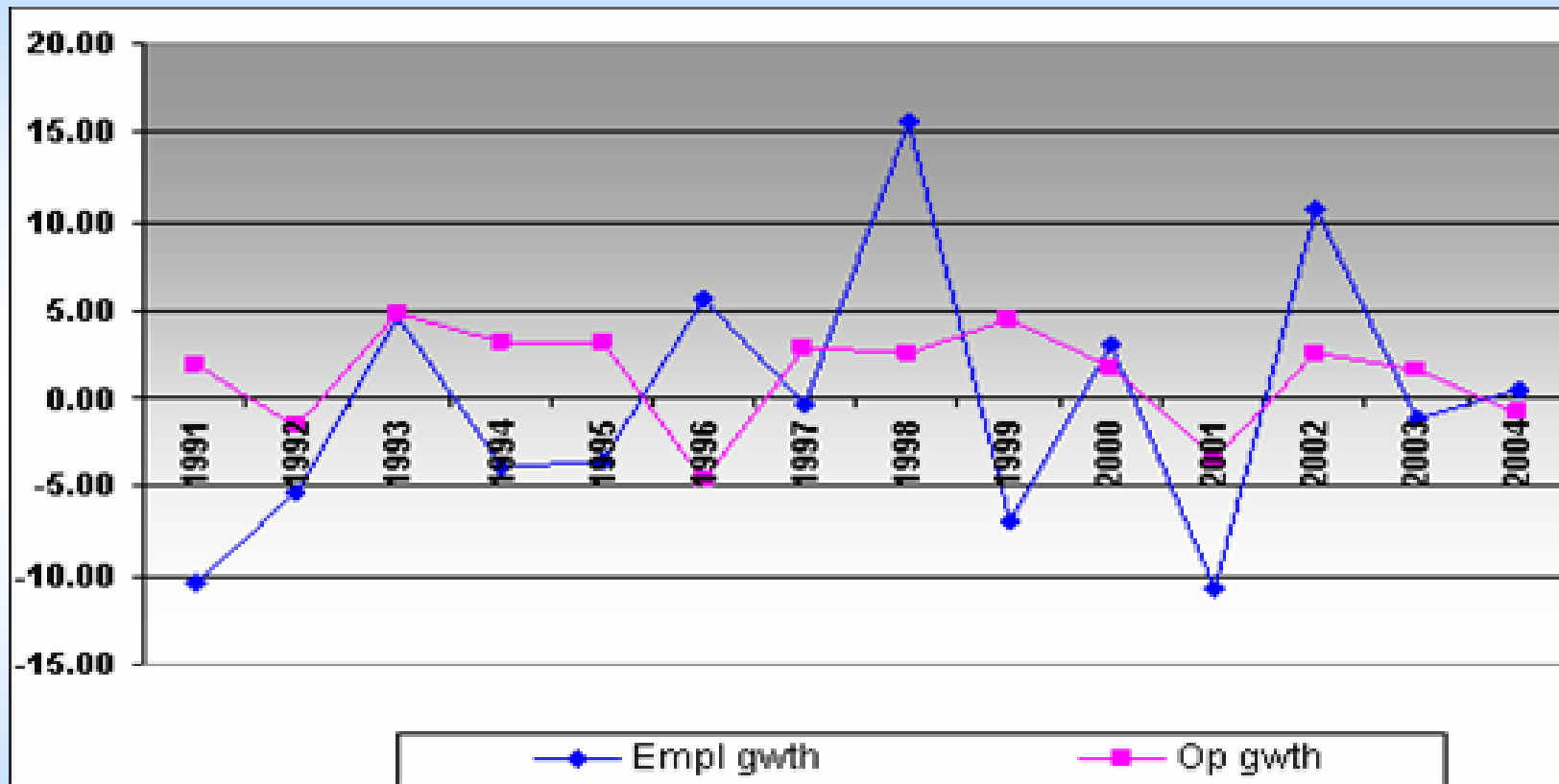
| Sector | 1990-2004 | | |
|---------------------------|-----------------------|-----------------------------|-------------------------|
| | Growth Rate of output | Growth Rate of employment # | Employment Elasticity # |
| Agriculture Sector | 1.8 | -0.1 | 0.26 |
| Agriculture | 1.7 | 0.4 | 0.55 |
| Tea | 3.3 | 3.8 | 0.26 |
| Rubber | -0.6 | 1.5 | 0.92 |
| Coconut | 0.1 | 22.4 | 3.53* |
| Paddy | 2.2 | 0.03 | 0.65 |
| Forestry | 1.7 | 4.1 | -4.12 |
| Fishing | 2.7 | 3.3 | 1.48*** |

Source: Author's calculations made using data from Labour Force survey data of DCS and various CBSL data sources

Notes: * denotes 99% significant and *** denotes 90% significance

Except for the main agricultural sector, for all the sub-sectors, data available only from 1992-2001

Growth of Agriculture Output and Employment : 1990-2004



- Considerable fluctuations in growth rates.
- Employment growth has been divergent from output growth in number of years

Industrial Sector: Growth & Elasticity

1990-2004

| Sector | Output Growth | Employ. growth | Employ. elasticity |
|-----------------------|---------------|----------------|--------------------|
| Industry Sector | 5.0 | 3.4 | 0.70 |
| Mining & Quarrying | 4.3 | 5.1 | 0.42 |
| Manufacturing | 6.0 | 3.8 | 0.67 |
| Electricity and Water | 6.7 | -5.6 | -0.91 |
| Construction | 3.3 | 4.8 | 0.90 |

Source: Author's calculations based on the Labour Force Survey data 1990-2004 of DCS and, Consumer Finances and Socio Economic Survey Reports, 1981/82 and 1986/87, Central Bank of Sri Lanka.

- Almost all the sub-sectors have moderate output growth rates and employment growth rates
- The industrial sector as a whole and the sub-sectors of manufacturing and construction show high levels of employment creation along with an increase in productivity

Productivity and Real Wage Growth in Industrial Sector

| | Productivity Growth | | | Real Wage Growth | | |
|--------------------|---------------------|---------|-----------|------------------|---------|-----------|
| | 1990s | 2000-04 | 1990-2004 | 1990s | 2000-04 | 1990-2004 |
| Industry Sector | 3.6 | -0.3 | 2.2 | 2.7 | -0.1 | 1.5 |
| Mining & Quarrying | 10.8 | 6.6 | 9.3 | 7.3 | -1.4 | 3.7 |
| Manufacturing | 4.9 | -1.9 | 2.5 | 2.1 | -0.2 | 1.1 |
| Electricity, Water | 15.5 | 47.4 | 26.9 | 1.3 | 5.6 | 3.1 |
| Construction | 0.3 | 2.1 | 0.9 | 3.3 | 0.8 | 2.3 |

Source: Calculations made using data from LFS 1990-2004 and CBSL

Growth in productivity has been followed by growth in real wages in all the sub-sectors during 1990-2004

However, real wage growth has been much slower except in the construction sector.

Composition of Manufacturing Sector

| Type of Industry | Output | | | Employment | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1993 | 1997 | 2001 | 1993 | 1997 | 2001 |
| Food, beverage & tobacco | 37.3 | 39.3 | 36.9 | 20.4 | 19.2 | 21.6 |
| Food | 14.6 | 17.5 | 14.3 | 12.9 | 13.2 | 15.6 |
| Beverage | 12.9 | 8.9 | 7.3 | 1.1 | 1.1 | 0.7 |
| Tobacco | 9.7 | 12.9 | 15.4 | 6.4 | 4.9 | 5.3 |
| Textiles, Apparel, & Leather | 31.3 | 26.8 | 33.1 | 52.2 | 48.4 | 48.5 |
| Textiles | 8.9 | 8.5 | 15.3 | 13.5 | 14.4 | 17.4 |
| Apparel | 20.4 | 15.5 | 15.3 | 36.5 | 31.3 | 28.3 |
| Leather & footwear | 2.0 | 2.7 | 2.5 | 2.2 | 2.7 | 2.8 |
| Wood products | 1.5 | 1.0 | 0.7 | 2.7 | 3.5 | 2.6 |
| Paper & paper products | 2.7 | 2.9 | 1.9 | 2.7 | 3.6 | 3.3 |
| Chemicals, Petroleum, Rubber & Plastic | 14.0 | 15.1 | 15.6 | 8.8 | 9.7 | 9.2 |
| Non - metallic mineral products | 4.6 | 5.0 | 4.5 | 5.7 | 6.1 | 6.4 |
| Metal products | 6.4 | 7.0 | 5.7 | 5.2 | 6.0 | 5.7 |
| Other | 2.1 | 2.8 | 1.5 | 2.3 | 3.6 | 2.6 |
| Total Manufacturing | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Calculation made using data from Annual Survey of Industries of, DCS 1993-2001

Growth and Elasticity of Manufacturing Sub- Sector:1993-2001

| Type of Industry | O/P growth | EmPLY. growth | Elasticities | Product growth | Real wage growth |
|---|-------------|---------------|----------------|----------------|------------------|
| Food, beverage & tobacco | 2.1 | -0.4 | 0.16 | 2.9 | 0.8 |
| Food | 2.9 | 1.4 | 0.22 | 1.5 | 2.9 |
| Beverage | -4.8 | -5.5 | 1.07* | 1.9 | -3.9 |
| Tobacco | 8.0 | -1.4 | -0.35 | 15.8 | -3.5 |
| Textiles, Apparel & Leather | 3.2 | -2.0 | 0.01 | 5.1 | -0.7 |
| Textiles | 9.8 | 2.3 | 0.18 | 7.5 | 2.5 |
| Apparel | -0.3 | -4.0 | 0.89*** | 3.2 | -2.1 |
| Leather & footwear | 5.9 | 1.9 | 0.18 | 4.7 | 3.4 |
| Wood products | -6.1 | -1.1 | 0.08 | -3.6 | -3.0 |
| Paper & paper products | -0.1 | 1.7 | 0.37*** | -2.6 | 3.6 |
| Chemicals, Petroleum, Rubber & Plastic | 4.1 | -0.7 | 0.21 | 4.9 | 3.1 |
| Non - metallic mineral products | 1.8 | 0.1 | -0.11 | 1.9 | 0.8 |
| Metal products | 4.3 | 0.2 | 0.28** | 2.9 | 2.0 |

Source: Calculation made using data from Annual Survey of Industries of, DCS 1993-2001

* 99% significant, **95% significant, ***90% significant

Composition of Services Sector in 2004

- Services sector has become the dominant sector of the economy – both in terms of the share of output and employment.

| Sub-sectors | Output | Employment |
|---------------------------------|--------------|--------------|
| Transport & Communication | 25.9 | 15.1 |
| Transport & Port | 16.2 | 12.9 |
| Telecommunication | 9.7 | 2.2 |
| Banking Insurance & Real Estate | 16.8 | 6.4 |
| Wholesale and Retail Trade | 38.8 | 29.9 |
| Public Administration & Defence | 7.9 | 17.0 |
| Hotels and Restaurants | 1.3 | 3.6 |
| Other services | 6.4 | 28.0 |
| Ownership of Dwellings | 2.9 | - |
| Total Services Sector | 100.0 | 100.0 |

Source: Calculations made using data from LFS 1990-2004 and CBSL sources.

Services: Growth & Elasticity

| Sectors and Sub Sectors | Output Growth | | | Employment Growth | | | Employment Elasticities | | |
|---------------------------------|---------------|--------|-----------|-------------------|--------|-----------|-------------------------|-----------|-----------|
| | 1980's | 1990's | 2000-2004 | 1980's | 1990's | 2000-2004 | 1990's | 2000-2004 | 1990-2004 |
| Services Sector | 5.1 | 5.4 | 5.6 | 3.7 | 5.9 | 1.9 | 0.73*** | 0.09 | 0.62*** |
| Transport & Communication | 4.7 | 6.3 | 8.7 | 5.5 | 6.8 | 7.7 | 0.76*** | 0.61 | 0.69*** |
| Banking Insurance & Real Estate | 9.4 | 7.9 | 8.5 | 4.1 | 6.1 | 13.0 | 0.45** | 1.01** | 0.80*** |
| Wholesale and Retail Trade | 4.6 | 5.2 | 4.1 | - | 3.4 | 5.2 | 0.62** | 0.80 | 0.94*** |
| Public Admin & Defence | 10.2 | 3.4 | 1.6 | - | 4.3 | 5.0 | 0.66* | 5.49 | 1.09*** |
| Hotels and Restaurants | 2.2 | 5.7 | 5.3 | - | 11.0 | 4.5 | - | 0.18 | - |
| Other services | | | 4.8 | - | 5.7 | -4.6 | - | -0.99* | - |

*: Significant at 99 % level, **: Significant at 95 % level, ***: Significant at 90 % level

Wholesale & retail, transport and communication and banking & insurance sub-sectors have high growth rates and high employment intensity.

Productivity and Real Wage Growth

| Sector | Productivity Growth | | Real Wage Growth | |
|---------------------------------|---------------------|------------|------------------|------------|
| | 1990s | 2000-04 | 1992-1999 | 2000-2004 |
| Services Sector | 2.6 | 3.8 | 3.0 | 0.4 |
| Transport & port | 4.8 | -0.2 | 3.1 | -1.6 |
| Telecommunications | | 29.5 | 2.4 | 6.1 |
| Banking | 9.9 | 7.9 | 3.6 | -2.1 |
| Insurance, Real Estate | | -6.4 | 3.1 | -1.7 |
| Wholesale & retail trade | 1.7 | -0.6 | 2.4 | 0.7 |
| Public administration & Defence | 1.4 | -1.3 | 3.0 | 1.3 |
| Hotels and Restaurants | | 2.9 | 3.8 | 1.7 |
| Other services | | 10.5 | 3.2 | -0.3 |

Source: Calculations made using data from Labour Force Survey 1990-2004 of DCS, Consumer Finance and Socio Economic Survey Reports, 1981/82 and 1986/87 of CBSL and Annual Reports of the CBSL.

Conclusions and Policy Implications

- Despite a moderate economic growth, employment growth has been relatively low and declining over the decades
- Employment intensity has been falling from its already low levels → a possible state of 'jobless growth'!
- Output growth has not resulted in a significant poverty reduction due to low and falling employment intensity, low growth rates in real wages, etc.
- In order to make growth more pro-poor, need to improve the employment content of growth:
 - shift emphasis to sectors with high employment intensity
 - encourage less labour displacing technology
 - encouraging employment-friendly value addition to primary products and SMEs

Conclusions (contd.)

- The sectors with potential for creating productive employment : industries and services
- Within the industries sector, the manufacturing sub-sector and apparel in particular show greater promise
- The construction sub-sector is an important sector where employment opportunities for more unskilled labour can be created
- In the services sector, sub-sectors such as wholesale and retail, have high employment intensity

Conclusions (contd.)

- To facilitate the transfer of labour between sectors necessary training/skill development should be provided
- Ensuring real wages commensurate with productivity is important.
- Despite the lower employment intensity, agricultural sector cannot be ignored

Two broad policy measures:

- 1) to improve productivity (e.g. R&D, extension, irrigation)
- 2) to create non-agricultural (off-farm) employment in rural areas (e.g. agro-based industries)

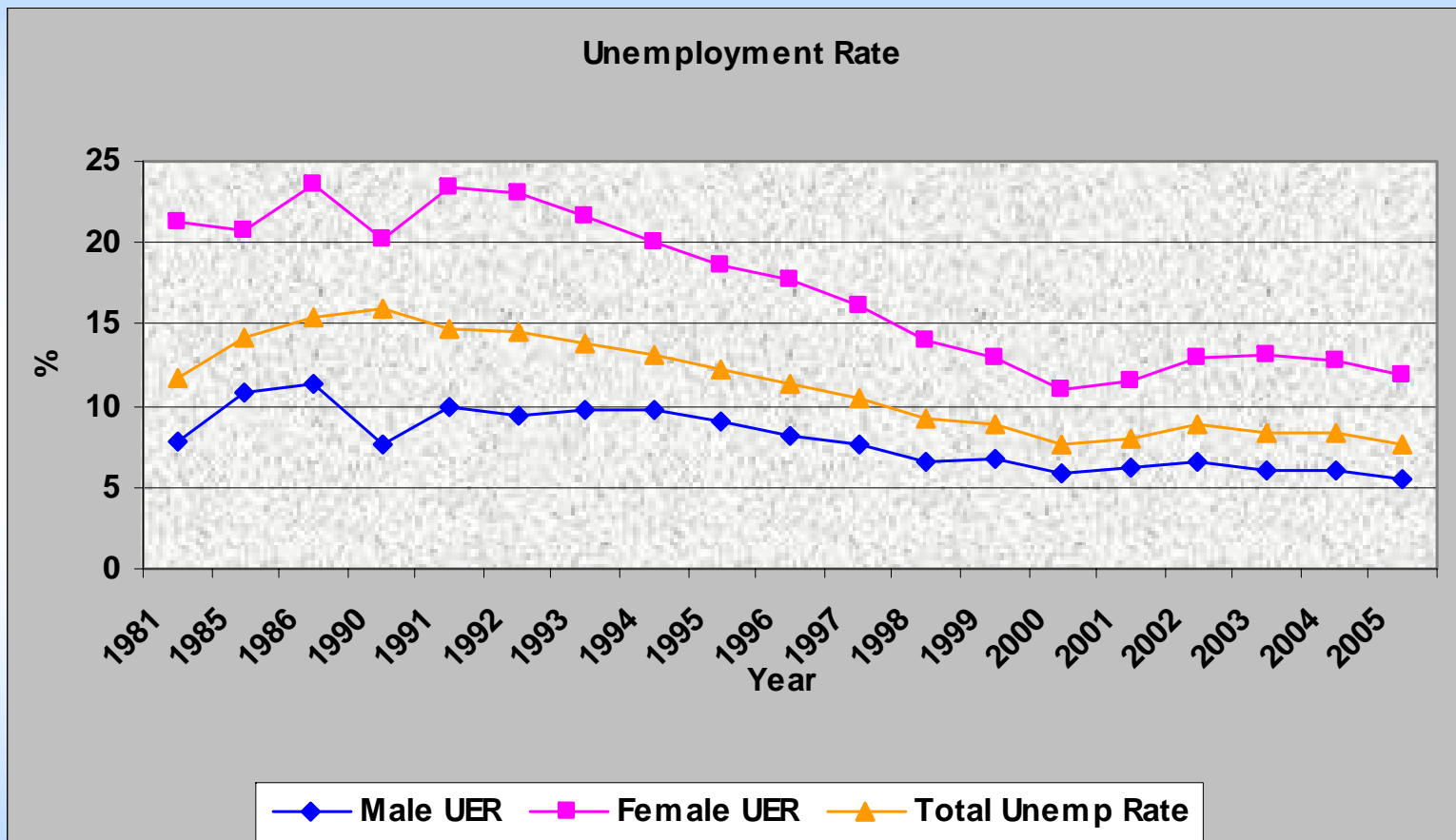
Average Annual Growth Rates of Output

| Sector | 1980s | 1990s | 2000-04 | 1980-2004 |
|--------------------------------------|------------|------------|------------|------------|
| GDP | 4.2 | 5.2 | 4.0 | 4.6 |
| Agriculture Sector | 2.4 | 2.6 | 0.4 | 2.0 |
| Agriculture | 2.4 | 2.5 | 0.2 | 2.0 |
| Forestry and logging | 3.3 | 1.4 | 2.2 | 2.4 |
| Fishing | 2.7 | 4.2 | -0.1 | 2.7 |
| Industry Sector | 4.0 | 6.8 | 3.4 | 5.0 |
| Mining and quarrying | 6.3 | 2.6 | 3.6 | 4.3 |
| Manufacturing | 5.3 | 8.0 | 3.3 | 6.0 |
| Electricity and water | 6.6 | 8.0 | 4.0 | 6.7 |
| Construction | 1.3 | 5.2 | 3.7 | 3.3 |
| Services Sector | 5.1 | 5.4 | 5.6 | 5.3 |
| Transport, storage & communication | 4.7 | 6.3 | 8.7 | 6.2 |
| Banking insurance and real estate | 9.4 | 7.9 | 8.5 | 8.6 |
| Wholesale and retail trade | 4.6 | 5.2 | 4.1 | 4.7 |
| Public administration and defence | 10.2 | 3.4 | 1.6 | 5.8 |
| Hotels, restaurants & other services | 2.2 | 5.7 | 4.7 | 4.1 |
| Ownership of dwellings | 2.9 | 1.3 | 1.4 | 1.9 |

Source: Calculations made using data from the Central Bank Annual Reports, various issues.



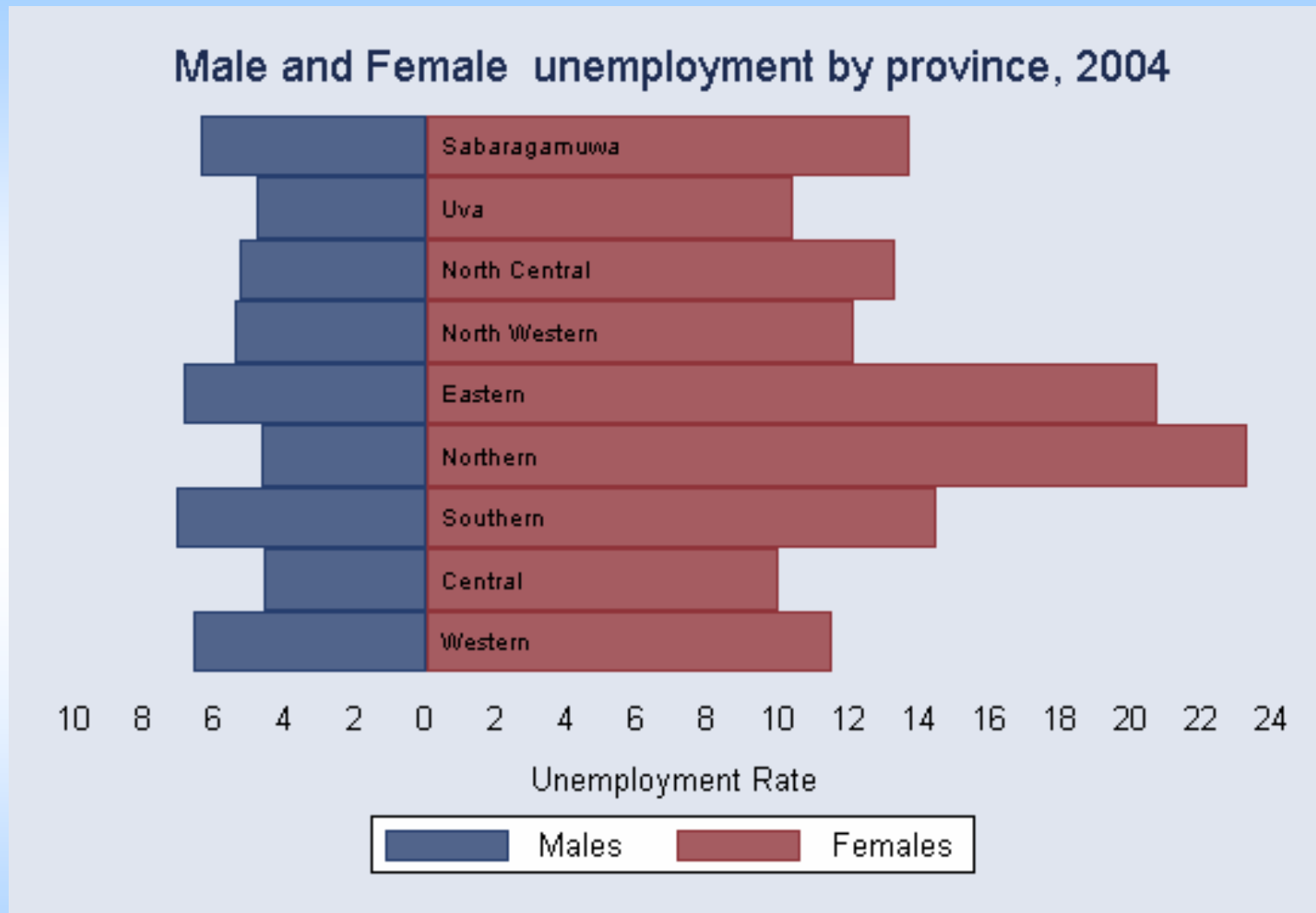
Unemployment Rates by Gender



Source: Central Bank Annual Reports, various issues, Labour Force Survey Quarterly And Annual Reports 2004 of the DCS



Unemployment Rates by Province



Source: Labour Force Survey 2004 of the DCS.



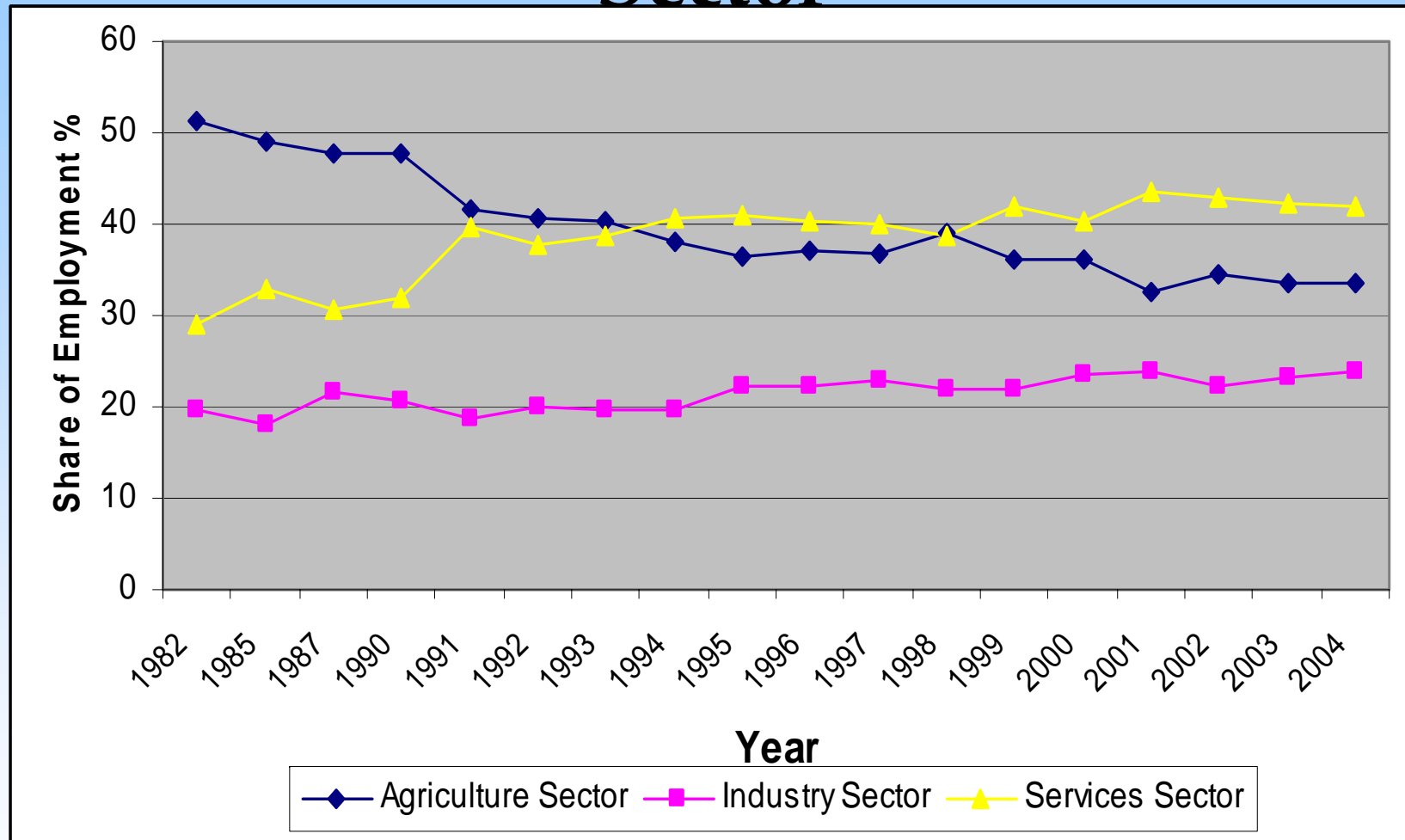
Unemployment Rate by Level of Education and Age Group

| | 1992 | 1994 | 1996 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|------------------------------|-------------|-------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|
| By Level of Education | | | | | | | | | | | |
| No Schooling | 3 | 2.6 | 2.8 | 1.0 | 0.4 | } 1.0 | 1.3 | 1.8 | 1.7 | 2.0 | 1.8 |
| Grade 0-4 / Year 1-5 | 4.7 | 5 | 3.4 | 2.4 | 1.9 | | | | | | |
| Grade 5-9 / Year 6-10 | 15.9 | 13 | 12.2 | 9.0 | 8.2 | 7.5 | 7.1 | 7.9 | 7.4 | 6.9 | 6.3 |
| CE(O/L) | 22.2 | 19.6 | 16.4 | 13.7 | 13.6 | 11.3 | 11.8 | 13.3 | 13.0 | 12.3 | 11.5 |
| GCE(A/L) & above | 22.4 | 23.7 | 19.0 | 17.5 | 17.9 | 14.9 | 15.3 | 16.8 | 16.5 | 16.8 | 13.8 |
| By Age Group | | | | | | | | | | | |
| 15 - 19 Years | 37.6 | 40.7 | 36.5 | 27.3 | 28.4 | 23.4 | 29.8 | 30.1 | 30.3 | 28.3 | 30.8 |
| 20 - 29 Years | 27.5 | 24.5 | 22.0 | 19.3 | 18.9 | 17.4 | 18.4 | 20.1 | 19.4 | 19.2 | 17.2 |
| 30 - 39 Years | 7.8 | 7.6 | 6.0 | 4.9 | 4.4 | 3.6 | 3.4 | 4.0 | 3.9 | 4.0 | 3.8 |
| 40 - 49 Years | 3.5 | 2.5 | 1.9 | 2.0 | 1.6 | } 1.1 | 0.9 | 1.6 | 1.1 | 1.3 | 1.2 |
| 50 Years and above | 1.4 | 1.2 | 0.5 | 0.7 | 1.0 | | | | | | |
| ALL | 14.6 | 13.1 | 11.3 | 9.2 | 8.9 | 7.6 | 7.9 | 8.8 | 8.4 | 8.3 | 7.7 |

Source: Central Bank Annual Reports, various issues



Trends in Employment Share by Sector



Source: Based on the estimations made by using LFS (1990-2004) of DCS, CFSES 1981/82 and 1986/87 of CBSL and Labour Force & Socio Economic Survey Report 1985/1986 of CBSL



Average Annual Growth Rates of Employment by Sector (%)

| Sector | 1980s | 1990s | 2000-04 | 1990-2004 |
|---|------------|-------------|------------|-------------|
| Total Economy | 2.6 | 2.4 | 1.8 | 2.2 |
| Agriculture Sector | 1.0 | -0.5 | 0.5 | -0.1 |
| Industry Sector | 4.8 | 3.2 | 3.8 | 3.4 |
| Mining and quarrying | 5.4 | 8.5 | -0.9 | 5.1 |
| Manufacturing | 4.3 | 2.9 | 5.4 | 3.8 |
| Electricity, water, sanitation | 23.7 | 2.5 | -20.1 | -5.6 |
| Construction | 4.9 | 6.1 | 2.5 | 4.8 |
| Services Sector | 3.7 | 5.9 | 1.9 | 4.4 |
| Transport, & Communication | 5.5 | 6.8 | 7.7 | 7.1 |
| Banking Insurance & Real Estate | 4.1 | 6.1 | 13.0 | 8.6 |
| Wholesale,,retail & Hotel & Restaurant. | 5.2 | 6.8 | 5.1 | 6.2 |
| Public Admin, Defence and Other | 1.9 | 5.5 | -0.2 | 2.8 |



Source: Calculation made using LFS 1990-2005 of DCS, Consumer Finances and Socio Economic Survey Reports, 1981/82 and 1986/87, Central Bank of Sri Lanka.

Employment Elasticity of Output

| Sector | 1980s | 1990s | 2000- 04 | 1990-2004 |
|---------------|-------|---------|----------|-----------|
| Total Economy | 0.51 | 0.46*** | 0.42** | 0.52*** |
| Agriculture | 0.28 | 0.03 | 2.56** | 0.26 |
| Industries | 1.14 | 0.60*** | 0.71*** | 0.70*** |
| Services | 0.61 | 0.73*** | -0.09 | 0.62** |

Source: Authors calculations based on the LFS of DCS and , CFSES (1981/82 and 1986/87) and Annual Reports of the CBSL

Notes: * * denotes 99% significance , ** 95% significance and *** 90% significance

Elasticity figures were estimated using the econometric method for the periods since 1990s and Symmetric Mid-point Arc Elasticity for 1980s.



Decomposition of Employment Growth : 1980s-1990s and 1990s-post 2000

| Sector | 1980s-1990s | | | 1990s -2000-04 | | |
|--------------------|-------------------|---------------|-------------------|-------------------|---------------|-------------------|
| | Employment growth | Output effect | Elasticity effect | Employment growth | Output effect | Elasticity effect |
| Total | -0.20 | 66 | -166 | -0.53 | -69 | -31 |
| Agriculture Sector | -1.51 | -5 | -95 | 0.99 | -660 | 760 |
| Industry Sector | -1.67 | 2510 | -2610 | 0.67 | -146 | 46 |
| Services Sector | 2.16 | -78 | 178 | -3.97 | 0 | -100 |

Note: The decomposition analysis is based on the econometric elasticities and average annual growth rates of output and employment for 1990s and 2000-04 period, while for 1980s, Symmetric Mid-point Arc Elasticity between 1981/82 and 1986/87 was used.



Annual Average Productivity (in Rupees)

Detailed



| Sector | 1980s | 1990s | 2000-04 | 1990-04 |
|--------------------|---------|---------|---------|---------|
| Overall economy | 81,790 | 120,552 | 138,748 | 126,617 |
| Agriculture Sector | 52,843 | 74,301 | 79,104 | 75,902 |
| Industry Sector | 89,596 | 147,053 | 159,218 | 151,108 |
| Services Sector | 133,327 | 156,820 | 176,832 | 163,491 |

Source: Estimated by using the LFS of DCS, CFSES (1981/82 & 1986/87) and Annual Reports of CBSL.

Note: Productivity is in constant prices using 1996 as the base year.



Annual Average Productivity (in Rs) Detailed

| Sector | 1980s | 1990s | 2000-04 | 1990-04 |
|-----------------------------------|----------------|----------------|----------------|----------------|
| Overall economy | 81,790 | 120,552 | 138,748 | 126,617 |
| Agriculture Sector | 52,843 | 74,301 | 79,104 | 75,902 |
| Agriculture # | - | 61,594 | 63,588 | 61,993 |
| Tea # | - | 20,120 | 24,303 | 20,957 |
| Rubber# | - | 40,985 | 37,189 | 40,226 |
| Coconut # | - | 377,265 | 323,888 | 366,590 |
| Paddy # | - | 29,938 | 30,744 | 30,099 |
| Forestry & logging # | - | 1,062,321 | 2,048,990 | 1,259,655 |
| Fishing # | - | 487,671 | 549,506 | 500,038 |
| Industry Sector | 89,596 | 147,053 | 159,218 | 151,108 |
| Mining & Quarrying | 84,267 | 180,340 | 209,207 | 189,962 |
| Manufacturing | 72,815 | 129,676 | 137,414 | 132,256 |
| Electricity, Water, Sanitation | 205,282 | 300,656 | 1,055,389 | 552,234 |
| Construction | 122,812 | 177,333 | 190,602 | 181,756 |
| Services Sector | 133,327 | 156,820 | 176,832 | 163,491 |
| Transport & communication | 196,138 | 279,648 | 332,035 | 297,110 |
| Transport & port | - | - | 266,186 | - |
| Telecommunications | - | - | 1,008,503 | - |
| Banking, insurance & real estate | 255,946 | 483,893 | 487,000 | 484,929 |
| Wholesale retail trade | 102,887 | 257,134 | 248,541 | - |
| Public Administration and Defence | - | 100,388 | 94,731 | 253,829 |
| Hotels and Restaurants | -- | - | 55,048 | - |
| Other services | - | - | 36,182 | - |



Source: Estimated by using the Labour Force Survey Data of DCS, Annual Reports of CBSL and the Consumer Finances and Socio Economic Survey Reports, 1981/82 and 1986/87 of CBSL.

Average Annual Growth Rates of Productivity and Real Wages

Detailed



| Sector | 1990s | | 2000-04 | |
|-----------------|---------------------|------------------|---------------------|------------------|
| | Productivity growth | Real wage growth | Productivity growth | Real wage growth |
| Overall Economy | 2.8 | - | 2.1 | |
| Agriculture | 3.0 | - | 0.2 | - |
| Industry | 3.6 | 2.7 | -0.3 | -0.1 |
| Services | 2.6 | 3.0 | 3.8 | 0.4 |

Source: Calculations based on LFS of DCS, CFSES (1981/82 & 1986/87) and Annual Reports of CBSL



Average Annual Growth Rates of Productivity and Real Wages



| Sector | 1980s | 1990s | | 2000-04 | |
|---------------------------------|---------------------|---------------------|------------------|---------------------|------------------|
| | Productivity Growth | Productivity growth | Real wage growth | Productivity growth | Real wage growth |
| Overall Economy | 2.5 | 2.8 | - | 2.1 | |
| Agriculture Sector | 2.8 | 3.0 | - | 0.2 | - |
| Agriculture* | - | 1.3 | - | 2.3 | - |
| Forestry* | - | 6.8 | - | 61.7 | - |
| Fishing* | - | 0.8 | - | 24.4 | - |
| Industry Sector | -0.5 | 3.6 | 2.7 | -0.3 | -0.1 |
| Mining & Quarrying | -0.8 | 10.8 | 7.3 | 6.6 | -1.4 |
| Manufacturing | 2.3 | 4.9 | 2.1 | -1.9 | -0.2 |
| Electricity, Gas & Water | -7.0 | 15.5 | 1.3 | 47.4 | 5.6 |
| Construction | -3.8 | 0.3 | 3.3 | 2.1 | 0.8 |
| Services Sector | 2.3 | 2.6 | 3.0 | 3.8 | 0.4 |
| Transport & Communication | 0.9 | 4.8 | | 3.8 | |
| Transport & Port Services | - | - | 3.1 | -0.2 | -1.6 |
| Telecommunications | - | - | 2.4 | 29.5 | 6.1 |
| Banking Insurance & Real Estate | 5.9 | 9.9 | - | -2.9 | - |
| Banking | - | - | 3.6 | 7.9 | -2.1 |
| Insurance, Real Estate | - | - | 3.1 | -6.4 | -1.7 |
| Wholesale and Retail Trade | 2.5 | 1.7 | 2.4 | -0.6 | 0.7 |
| Public Admin and Defence | - | 1.4 | 3.0 | -1.3 | 1.3 |
| Hotels and Restaurants | - | - | 3.8 | 2.9 | 1.7 |
| Other services | - | - | 3.2 | 10.5 | -0.3 |