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## **MPIA Working Paper 2007-13**

### **Modelling Gender Dimensions of the Impact of Economic Reforms in Pakistan**

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**April 2007**

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## Abstract

Recently, gender-aware computable general equilibrium models (CGE) have been developed to analyse the impact of trade liberalization, with focus on a gender-disaggregated analysis of the production side of the economy. However, these studies ignore the gender-specific consumption effects due to the paucity of gender disaggregated data. We introduce intra-household allocation for the first time in a CGE-framework. The data is arranged in a gender-aware social accounting matrix, which reveals the hidden work of women (market and non-market).

This study analyses the gender dimensions of the impact of economic reforms using three types of poverty indicators – FGT, capability, and relative time poverty – calculated on the basis of the simulation results. The study mainly found out that both trade liberalization and cuts in government expenditure are pro-rich. Within poor households, both policies hurt women more than men. Despite declines in absolute poverty in both exercises, the gender composition of the poor population changes in the majority of households. In the trade liberalization exercise, poverty among women relative to men increases in poor households and decreases among the rich, leading to an overall increase in the relative poverty of women in Pakistan. However, in the fiscal adjustment exercise, the incidence of poverty remains constant. In both exercises, time poverty among women relative to men increases in rural areas and decreases in urban areas, leading to an increase in relative poverty among women in Pakistan. The poverty of capabilities among men and women increases in a similar way after trade liberalization when measured by the infant mortality rate, but it affects women more negatively when measured by the literacy rate. Cuts in government expenditure also increase capability poverty among women more than men in both regions and in Pakistan as a whole. The study concludes that prosperity (increase in income), as well as education, can help reduce the gender gap as poverty decreases in relatively rich households, whether it is measured in monetary terms, capability terms, or in terms of time-use.

**Keywords:** Pakistan, Gender, CGE, Trade Policy, Public Policy, Time Allocation, Household Production and Intra-House Allocation, Poverty and Capability Development.

**JEL:** O53, J16, C68, O24, J38, J22, D13, I32

This study was carried out with the aid of a grant awarded through the Gender Challenge Fund of the Poverty and Economic Policy (PEP) Research Network ([www.pep-net.org](http://www.pep-net.org))-a joint venture of the Gender Network (Phase III) and the PEP Network, both financed by the International Development Research Centre (IDRC). I am thankful for the comments from discussants and participants in PEP Conferences in Colombo-Sri Lanka, Dakar-Senegal and Addis Ababa-Ethiopia. Thanks are also due to Professors Bernard Decaluwé and John Cockburn from Université Laval, Canada for their comments. I would also like to acknowledge the valuable comments and suggestions by Dr. Marzia Fontana, IDS, Brighton, UK, and Dr. Howard White, Senior Evaluation Officer, World Bank, Washington, D. C., USA.

## 1. Introduction

In Pakistan, the existence of vast gender disparities in various aspects of life is reflected in the extremely low socio-economic status of women: among other things, women have low literacy rate and health status, are more malnourished, and are burdened with household work. On the other hand, men participate more in market work, are employed in domestic sectors, receive higher wages, and have better working conditions. Women are mainly responsible for household work such as cooking and cleaning, looking after children and the elderly, washing clothes, etc. They work in the market only as secondary earners and are concentrated in export-oriented industries, engaged in labour-intensive jobs, and are paid less than men<sup>1</sup>. After market work, men spend most of their time in leisure activities, while women remain engaged in household chores.

The low status of women is a matter of discrimination<sup>2</sup> and lack of bargaining power. As breadwinners, men generally receive both nutritional and educational priority (White and Masset, 2002) while women remain illiterate and malnourished. However, women's control over resources reduces their vulnerability even in the presence of discrimination as they spend more on basic needs. Yet men's control over resources worsens this situation as they spend more on luxury or personal items (Sathar and Kazi, 1997; and Siddiqui *et al*, 2006).

In this scenario, an ostensibly neutral macroeconomic policy framework is expected to reinforce biases against women. For instance, trade liberalization policies lead to the expansion of export-led industrialisation and women's employment. The rise in women's employment is not accompanied by a reduction in their unpaid household work and thus impinges women's leisure time. Similarly, if economic reforms increase the prices and/or reduce the real income, a number of undesirable effects emerge such as malnutrition among women and girls, removal of girls from schools, reduction in expenditure on women's illnesses, and increased working hours for unpaid household work.

In the absence of linkages and feedbacks between market and household economies, the analysis of gender dimensions of the impact of economic reforms cannot offer an accurate portrait (Siddiqui (2004), Fontana and Wood (2000), Fofana *et al* (2003), Kabeer (2003), World Bank (2001)). Recent studies for developing countries such as Bangladesh (Fontana and Wood, 2000; Fontana, 2001), Zambia (Fontana, 2002) Nepal

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<sup>1</sup> Women earn 35 per cent less than men. The ratio of female wage to male wage has fallen from 65.7 per cent in 1990-1 to 60.5 per cent in 1999-2000 (Siddiqui, 2004). Besides structural factors like gender segregation of job market by occupation and skills, under-representation of females in higher paying occupations and grades are a result of economy wide disparities in education and training. A 20 per cent wage differential is due to discrimination in the labour market (Siddiqui and Siddiqui, 1998).

<sup>2</sup> If resources are not distributed equitably (based on needs) between men and women, then discrimination exists.

(Fofana *et al*, 2003), South Africa (Fofana *et al*, 2005) and Pakistan (Siddiqui, 2004) have developed gender-aware CGE models that focus on gender-disaggregated analysis of the production side of the economy but ignore intra-household allocation, an essential factor in exploring the differential impacts on men and women.

In response to this need, this study extends the existing gender-aware SAM and CGE model for Pakistan (Siddiqui, 2004) by introducing more sectors, factors, and actors in the economy. The novel features of the model are: (1) It differentiates labour by gender as well as by education level; and (2) It introduces intra-household allocation using a distribution factor (estimated from household survey data) to disaggregate household consumption by gender. Three measures of poverty – monetary, capability, and time – are used to examine whether trade liberalization and fiscal adjustment affect men and women equally. Monetary poverty is measured by the FGT indices (head count ratio, poverty gap, and poverty severity). The head count ratio is further decomposed by gender to determine the change in gender composition within the poor population. Capability poverty is measured by the change in the infant mortality rate (IMR) and the literacy rate (LR). Time poverty is measured by the change in female leisure time relative to the base period and relative to male leisure time.

The study is organised into six sections. The following section begins by presenting a brief review of the literature. Section 3 discusses gender features of the Pakistan economy. Section 4 introduces features which make the model gender-aware. The results are discussed in section 5. Section 6 concludes the paper by giving some policy implications and proposing possible extensions of this work.

## **2. Review of literature**

In the literature, studies exploring gender dimensions of economic reform impacts can be grouped into three categories:

(1) Studies that explore the micro-macro linkages using household survey data. These are partial in their analysis, focusing on a subset of population and/or a subset of sectors of the economy;

(2) Economy-wide CGE models with disaggregated male and female labour as developed by Sinha and Sangita, (2003), Weerahewa (2002), and Arndt *et al* (2000), etc. These studies are partial in their analysis in the absence of linkages and feedback between the market economy and the household economy; and

(3) The most recent empirical studies which overcome these problems by integrating market and non-market activities.

The first study in this framework was developed by Fontana and Wood (2000) and focuses on technical issues such as how distinctions are made among households, market and leisure activities, and how rigidities in social reproduction<sup>3</sup> and market production can be introduced. Later, Fontana (2001, 2002) developed detailed gender-aware CGE models for Bangladesh and Zambia, respectively, along similar lines. Subsequently, Fofana *et al*, (2003, 2005) and Siddiqui (2004) developed gender-aware CGE models for Nepal, South Africa and Pakistan, respectively. The major difference between the Fontana and Fofana approaches is in the modelling of leisure time. Fontana and Wood (2000) formulate leisure of men and women assuming that one's leisure can be substituted for the other. This framework allows us to analyse how increased demand for one type of labour in the market affects the leisure of the other. If women are not independent in supplying their labour to the market sectors, this approach may be preferred.

Fontana (2000, 2001, and 2002) and Siddiqui (2004) calibrate the model with 14 available hours for work and leisure assuming ten hours for personal care, while Fofana *et al* (2003, and 2005) developed the model with an explicit labour supply function. They calculate maximum time available for work or leisure by using elasticities of labour supply with respect to income. The problem with this approach is that elasticities are not generally available. However, in the absence of time-use data, this approach may be preferred to overcome the problem of data paucity.

All these studies introduce gender-related rigidities by keeping low elasticities of substitution between the labour of men and women. The studies reveal that in the absence of the leisure and reproduction sectors, the impacts on women's employment and wages are not the same as those obtained when these sectors are explicitly modeled. Fontana and Wood (2000) suggest that a greater flexibility in gender roles in the non-market sphere reduces the negative impact on women. Similarly, Fofana *et al* (2003) demonstrate that an increased role for men in household production reduces the adverse impact on women. This type of counterfactual analysis is very important to build a gender-aware policy framework. The question is: What policy will force men to do more household work and how can traditions and norms be changed? The studies also indicate that it is necessary to disaggregate households and to disaggregate labour by skill category in order to reveal the variations in the impact not only by gender but also between rich and poor households, variations in income by skill level which otherwise remains hidden (Fontana, 2001, 2002 and Fofana *et al*, 2003, 2004).

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<sup>3</sup> 'Social Reproduction' is the term most commonly used to describe household activities such as cooking and cleaning, and looking after children and the elderly; these are tasks which are important but rarely recognized as a form of production and that are often performed by women. Another frequently used term is 'unpaid care work'. In this article 'household work', 'social reproduction' and 'unpaid care' are used interchangeably.

Siddiqui (2004) is the first study that developed the gender-aware CGE model for Pakistan based on the notions that production in the paid economy and the unpaid care economy are important to analyse gender dimensions of any policy change. Results support the contention that trade liberalisation in the presence of compensatory measures reduces income-based poverty, and that the gender division of labour remains unequal within a household economy after trade liberalization.

It is important to note that all these studies are limited in their analysis, focusing only on gender-disaggregated impacts on the production side of the economy and that they ignore the impacts on intra-household allocation that can result in policy failure (Haddad, 1994). If preferences of men and women differ, price changes may reallocate resources within a household (Haddad *et al*, 1994, Haddad and Kanbur, 1990, Deaton, 1997, Browning, et al., 2003, and Lise, J and S. Seitz, 2004). Deaton (1997) and White and Masset, (2002) have analysed intra-household allocation estimating Engles and Rothbarth models and demand systems using micro household survey data. Deaton (1997) estimates outlay equivalent ratios for many countries including Pakistan and do not find evidence of discrimination<sup>4</sup>. However, White and Masset (2002) have estimated a Working-Lesser equation with demographic characteristics and calculated outlay expenditure ratios<sup>5</sup>. They found a positive indication of discrimination in child rearing in rural and male-headed households.

In Pakistan however, no study has analysed the impact of economic reforms on the intra-household allocation of resources in the CGE framework. This study extends the analysis done in Siddiqui (2004) by incorporating the intra-household allocation of resources.

### **3. Gender features<sup>6</sup>**

In this study, the gender-aware social accounting matrix (SAM) for Pakistan developed by Siddiqui (2004) is extended by disaggregating sectors, factors and actors using data from various sources. The data sources include a Supply and Use Table for the year 1990 (Pakistan, 1996), salient features of an existing SAM for Pakistan (Siddiqui and Iqbal, 1999), an agriculture census (Pakistan, 1993a), a household integrated economic survey (HIES) for 1991 (Pakistan, 1993b), and a labour force survey (LFS) for 1990-1 (Pakistan, 1993c). The data on social reproduction services for women is taken from the LFS, whereas data for the participation of men in these activities is taken from the gender planning network survey (GPN-Survey), conducted by PIDE for the study by Siddiqui *et al*

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<sup>4</sup> It appears that he used unweighted household data.

<sup>5</sup> The ratio indicates the increase in total expenditure necessary to restore total expenditure on adult goods to its level prior to the addition of one more individual.

<sup>6</sup> The methodology and SAM are discussed in detail in a technical annex that is available from the author on request.

(2006), and a small rural household survey (Hafeez, 2000).

The SAM has many distinct features. (1) Labour income is adjusted for implicit own account worker remuneration including employers and the self-employed<sup>7</sup>. (2) Female participation rates are based on improved data collection techniques<sup>8</sup>. Consequently, the number of women estimated to participate in the labour force increased to 15.5 million from 3.4 million in 1990-91 (Siddiqui, 2004) and their wage share in total wage bill increased from 5 per cent to about 21 per cent. The gross domestic product increased by over 5 per cent, with the largest increase in the value added of the livestock sector and the smallest increase in the service sector<sup>9</sup>.

Using data from the LFS (Pakistan, 1993c), the GPN Survey (2006) and Hafeez (2000), a matrix of time allocation between market, social reproduction, and leisure activities for the eight labour types in each of the nine households is compiled following the standard system of national accounts (SNA). The activities, which are assumed to be separable<sup>10</sup>, are defined as productive (market), non-productive (social reproduction), and leisure<sup>11</sup>. The

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<sup>7</sup> The earlier 1990 SAM for Pakistan reports income of own account workers (self-employed and employer) as a part of operating surplus in a majority of the activities. Here, the labour share of own account workers is calculated using micro data from the HIES (Pakistan, 1993) and LFS (Pakistan, 1993). This assumes that wage rates of paid workers is also the implicit wage rate of an own account worker. By using hourly wage rates of paid workers and working hours per day of own account workers from the LFS and days worked in a month and months worked in a year from the HIES, the wage share of own account workers is calculated. This labour share is subtracted from the operating surplus and added to labour income in the SAM. Sometimes labour remuneration was so large that the returns to capital became negative. Instead of making arbitrary adjustments, the minimum wage in that sector was used to calculate the labour share in the GDP.

<sup>8</sup> In 1991, the Federal Bureau of Statistics of Pakistan revised its data collection technique. With this technique, women who reported doing nothing were probed by asking further questions about activities such as harvesting, sowing, picking cotton, drying seeds, maize and rice husking, livestock and poultry farming activities, construction work, collection of firewood and cotton sticks, fetching water, making clothes, sewing, knitting, shopping, marketing and preparing goods and material for sale, etc. If they are doing any of these activities they were included in the work force. The number of hours worked by the individuals in these activities is reported in this part of the labour force survey. Participation rates calculated on the basis of these data are called 'Improved Female Participation Rates'.

<sup>9</sup> The SAM also indicates capital goods used in household production and female labour by type of work: (1) Women working in the household economy only; and (2) Women working in both the market and household economies. However, this information is not used in the present analysis.

<sup>10</sup> Time used in one activity cannot be used in another. This assumption is not realistic in the case of Pakistan, where women are normally engaged in two or more activities at a time. For instance, cooking and cleaning at the same time as looking after children. However, this type of analysis requires a very detailed time use data set. The paucity of data restricts us to the current analysis.

<sup>11</sup> These are the activities that produce goods and services not only for sale (economic), but also those that produce goods for own consumption (non-economic). Services provided within households that are defined as non-productive include: cooking; cleaning; home, furniture and clothes repairs; care of children, the sick and the elderly; and community services. They are included in the social reproduction sector. Leisure is non-economic and non-productive, because it cannot be rendered by someone else. Examples include napping, playing games, watching movies, etc. For a detailed discussion on the topic, see Fontana and Wood (2000). Leisure is distinguished from time used for personal care, i.e. the minimum time needed for sleeping, eating and personal hygiene, which is set at 10 hours a day (Siddiqui, 2004, Fontana and Wood, 2000).

values of non-market activities (non-productive and leisure activities) are calculated assuming that the cost of production is purely labour costs. The opportunity cost of labour used in the non-market sectors of the economy is the weighted average wage that the person could earn by working in the market economy. The SAM has nine household categories with nine social reproduction sectors and nine leisure sectors. It reveals labour composition by education level used in the social reproductive activities.

The SAM has 20 market sectors with eight types of labour and sector-specific capital (Table 1). Table 2 shows that the agricultural sector is the main employer of labour, providing over a third of the employment of low-educated male workers and two-thirds of the employment for low-educated female workers. The share declines for higher educated workers, who are concentrated in the service sectors. Women with higher education levels are concentrated in the 'textile' and the 'education and health' sectors: 27 and 26.7 per cent, respectively. In the manufacturing sector, 9.5 per cent of employment of low-educated female workers is in the export-oriented textiles sector and less than one per cent is in the import-competing machinery sector. The share of female labour in the textile sector increases with the education level, but in the import competing sectors it remains negligible. The import competing sectors employ more men; 1.8 per cent of labour with no formal education, 4.3 per cent of labour with less than five years of education, 3.4 per cent of labour with between five and ten years of education, and 2 per cent with ten years or more. The service sector is the major employer of high skilled male and female labour: 75 per cent and 62 per cent of the total, respectively. In the crop sector, unskilled labour wages account for most of the total value added i.e., over 40 per cent. The services sector provides the majority of income for both labour and capital, i.e. 43 and 56 per cent after adjusting for own account worker remuneration. The trade liberalization policies could have important consequences for the returns to labour and capital as tradable sectors are relatively more capital intensive, with the exception of the social sector, which is intensive in skilled labour.

The largest share of labour income in urban households is earned by the head of the household (diagonal values in Table 3), which indicates that the earning power is an important factor in determining the status of an individual in a household. Shares of dividends, government transfers, and remittance income in total income increases with the education of the head of household. In rural areas, employee households earn about 80 per cent of their income from male and female labour. Female-headed households receive 38 per cent of their income from remittances (Table 3). This indicates that, in the absence of senior male members in the household, females become heads of household. Own account and self-employed workers, as well as employers receive, respectively, 56 per cent and 92.9



per cent of their income from capital (which includes land and livestock)<sup>12</sup>. Households distribute income between consumption and saving. The share of rural households - which represent about 70 per cent of the total population<sup>13</sup>, - in total household demand is about 52 per cent. In contrast, urban households account for 48 per cent of total household demand, for 30 per cent of the total population.

### 3.1 Intra-Household Allocation of Resources and Poverty

Household surveys collect data on consumption expenditure at the household level. Empirical studies estimate individual consumption using Engles and Rothbarth methods or demand systems analysis (Deaton, 1997, White and Masset, 2002). In using HIES data in this study, a number of hypotheses are tested to predict intra-household allocation of resources. The analysis is parametric and begins with the specification of a standard model linking expenditure to income or total consumption and demographic characteristics of individuals in the following way:

$$W_i = \beta_o + \beta_1 M + \beta_2 F + \beta_3 \ln(Y_{pc}) + \sum_k \beta_{4k} \Psi_k$$

where  $W$  = Household consumption share of  $i^{\text{th}}$  good in total expenditure,  $Y_{pc}$  = Household income per capita,  $M$  = Number of adult equivalent males,  $F$  = Number of adult equivalent females,  $k$  = Other socioeconomic characteristics,  $i$  = Commodities consumed (see Table 1).

The coefficients of  $M$  and  $F$ , respectively  $\beta_1$  and  $\beta_2$ , represent the percentage change in the share of household consumption of good  $i$  with an increase in one adult man and one adult woman, respectively. We estimate this equation for each type of household separately. It is assumed that all households in a group behave homogeneously and we drop the last term in the actual estimation. We test the hypothesis that  $\beta_1$  is statistically different from  $\beta_2$ . We then calculate outlay equivalent ratios. Other things remaining equal, we have a coefficient ratio of  $\beta_1/\beta_2$ . Normalising the coefficients by one of the coefficients ' $\beta_1$ ' gives the following ratios:  $\beta_1/\beta_1 = 1$  and  $\beta_2/\beta_1 = X$ .

The shares of consumption of good  $i$  of a man relative to a woman is given by  $(1/X)$ . In a household with one adult man and one adult woman, the following two ratios

$\frac{1}{1+X}$  and  $\frac{X}{1+X}$  determine the shares of consumption of the man and the woman, respectively, in total household consumption of good  $i$ . Household resources are divided

<sup>12</sup> Self-employment income in operating surplus may still be overestimated as surveys report this income as part of capital income. We adjusted for labour share with minimum wages.

<sup>13</sup> Even after taking into account home consumption of own production in rural areas, this bias remains important.

between men and women using these ratios, taking into account the number of adult equivalent males and adult equivalent females in each household.

Distribution of resources by gender also depends on bargaining power and discrimination. If a woman has control over resources she spends more on basic needs items such as food, clothing, education, and health. In contrast, men spend more on items other than basic needs, such as cigarettes, drinks, transportation, and other luxury items. In the literature, the mother's education or share of female unearned income is related to female bargaining power, as it is embodied in the exogenously determined distribution factor. This depicts the level of discrimination and bargaining power, which depends on female human capital and unearned income (such as dowry).

Regression results for food items, clothing, education and health show that there is a difference in consumption between women and men. Other commodities such as housing, sanitation facilities, and utilities like water, electricity and gas are categorised as public goods, which are consumed by men and women equally. The expenditure on these goods is independent of gender composition.

Table 4 reports consumption patterns of the households by gender. It reveals that household resources are prioritized for men and boys in most cases. In urban areas, women consume more from crop production (vegetables) than do men, while in rural areas, except for female-headed households, men consume more crop sector goods than women. The consumption of goods from the livestock sector is higher for men than women, except in the richest families (high-education and employers in urban and rural areas, respectively). In the case of fish, no explicit pattern is found, but it has a very small share in household expenditure. Manufactured food items are largely consumed by men rather than women in urban areas, while in rural areas the opposite is true, except for other (miscellaneous group of household). Poor families spend more on clothing for men while rich families spend more on clothing for women. In rural female-headed households, men and women have equal share in household expenditures, whereas the rich (employer) households spend more on women's clothing. In urban and rural areas, poor families (no education, or illiterate)<sup>14</sup> and low education households (employees and self-employed) spend more on education for girls than for boys. The reason may be that in poor families boys are sent to the labour market to earn money. Rich families in the urban and rural areas spend equally for the education of boys and girls, if not more for boys. When rich families spend less on female education, this is an indication of discrimination and not a problem of scarcity of resources.

Table 4 also reveals that more resources are allocated to basic needs items in

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<sup>14</sup> 'Illiterate' and 'no education' are used interchangeably in the paper.

relatively poor households – illiterate, employee, self-employed, and other – and that distribution between women and men is more unequal in poorer households. The results show that in illiterate households 53 per cent of men and 47 per cent of women consume 34 per cent and 25 per cent (respectively) out of 59 per cent expenditure on basic needs (Table 4). This unequal distribution is clearer from a per capita expenditure perspective. In urban areas, women's per capita expenditure on basic needs is 84 per cent of men's per capita expenditure in illiterate households. This ratio increases in rich (high-educated) households to 0.93. The same pattern is found in rural areas. In rural areas, women's per capita expenditures on basic needs as a percentage of men's are 0.89, 0.76, and 0.81 among the relatively poorer households ('employee', 'self-employed' and 'other'). In the employer group of households, the ratio increases to 0.92 and exceeds one in female-headed households, which may indicate that empowerment of women helps to improve their condition. The capability indicators - such as the literacy rate, life expectancy and the infant mortality rate - are strongly associated with intra-household allocation of resources. These indicators reflect differences in child rearing. The female literacy rate is 40 per cent compared to the male literacy rate of 65 per cent in 2004-5 (Pakistan, 2004-05). The female child mortality rate was also higher than the male child mortality rate, 24.3 (per 1000 live births) compared to 15.1, respectively, in the 1990s (CRPRID, 2002). Life expectancy for men and women has increased from 54 to 64 years and from 53 to 63.8 years, respectively, during 1981-90 (CRPRID, 2002), but is still slightly lower for women than men; in more advanced economies it tends to be higher. All these indicators show that the gender gap is still prevalent in the economy.

During the last two decades, about one-third of the population has been living without enough resources to fulfil their basic needs, and more than half of them are women. The head count ratio has increased from 28.6 per cent in 1986-87 to 32.6 per cent in 1998-99<sup>15</sup>. The poverty gap, which represents roughly 21 per cent of the poverty line in 1986-87, increased marginally to 21.5 per cent in 1999. The severity index has increased substantially from 1.8 per cent in 1986-87 to 4.1 per cent in 1993-94 (Siddiqui and Kemal, 2002) but declined to 2.1 per cent in 1999. However, the most recent estimates reveal a substantial decline in poverty measured by the head count ratio (23.9), poverty gap (19.9) and severity index (1.5)<sup>16</sup>.

### **3.2 Time Use in Work-Leisure Activities**

In this study, labour use is measured in hours, assuming economically active

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<sup>15</sup> The poverty line is calculated on the basis of basic needs. It is Rs 202.1 and Rs 383.8 per capita per month at current prices for the years 1986-7 and 1993-4, respectively (MCHD, 1999).

<sup>16</sup> Poverty is calculated on the basis of a poverty line of Rs 878.6 per adult equivalent per month. These figures are taken from the Economic Survey (Pakistan, 2006).

individuals are involved in all activities: market, household and leisure. Table 5 shows that women spend about 80 per cent of their available time in household and market work, while men spend only about 60 per cent of their time in these activities. Women spend about 35 to 40 per cent of their time on market work - roughly the same percentage on household social reproductive services - and 20 per cent on leisure. In contrast, men allocate more than 50 per cent of available hours to market work and only about 10 per cent to household work, which leaves them 40 per cent of their time for leisure activities<sup>17</sup>. A comparison of time use by men and women reveals that irrespective of the type of household and skill level, all women have more working hours than men<sup>18</sup>. The results confirm the findings of Fafchamps and Quisumbing (1999) that human capital partly determines time allocation by gender. Time used in market activities declines as the education of men increases within households except for employees and self-employed households, whose labour time in market activities is higher for labour with high education compared to illiterate (no education) labour. Time spent in leisure activities by men shows an increasing trend according to the education level in each household. This gendered SAM serves as an input into the construction of a gendered CGE model for Pakistan.

#### **4. Gender features of the computable general equilibrium model for Pakistan**

The CGE model for Pakistan developed in Siddiqui and Iqbal (2001), and extended in Siddiqui and Kemal (2002) and Siddiqui *et al* (2006) with various levels of disaggregation, has been further extended to incorporate the necessary characteristics for gender impact analysis. The model has six blocks of equations: income and saving, production, demand, prices, trade, and equilibrium.

The model has nine types of households and each household has two non-market production sectors: social reproduction and leisure. Therefore, the model has 20 market sectors and 18 non-market sectors with eight types of labour identified by gender and education level. The model assumes that men and women labour are imperfect substitutes in the production process. Gender rigidities are introduced by keeping low elasticities of substitution between the labour of men and women. Intra-household allocation of resources by gender is introduced in the model using distribution factors. It is assumed that non-market sectors (social reproduction and leisure) behave like productive sectors<sup>19</sup> and that they

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<sup>17</sup> Some people argue that male leisure time may be overestimated as this is forced leisure due to under-employment. But this is not a male-specific bias as female leisure time may be even more overestimated as under-employment is more frequent among women than men in the market economy.

<sup>18</sup> Detailed results are available on request from the author.

<sup>19</sup> Empirical work on time allocation traces its roots to Becker, who first formulated a utility-maximizing model of Z goods that were produced by both time and market goods inputs. Later, Gronau (1977) and others extended the model by including home production and leisure.

produce goods that are consumed by the households themselves. Both social reproduction services and leisure are joint products of all types of labour of both women and men<sup>20</sup>. A total available time of 14 hours a day for an individual is allocated to market, household, and leisure activities, assuming these activities are separable. In the production process, the labour of men and women for each education level is first combined with the CES technology. Household goods are produced by the four types of composite labour according to the CES technology. It is assumed that male and female labour can be substituted in household production and that male and female leisure can also be substituted. Demand for labour in these sectors is derived as in the market sector. The price of these goods ( $P_h$ ) is the weighted average of wages of the labour used in the production of household goods. Thus total income of a household ( $Y_T$ ) is defined as the sum of receipts from the market economy and the non-market economy. Households consume household and market goods, where it is assumed that the household good is an imperfect substitute for market goods. By maximizing a Stone-Geary utility function of market goods ( $C_i$ ), home produced goods ( $C_H$ ), and leisure ( $C_L$ ) subject to total income and time constraints, we derive household demand for goods produced in the market and non-market sectors. Total labour used in market or non-market activities is fixed and can move between the market and household economies. The wage rates of men and women are determined by the supply and demand for their labour.

Previous studies document differences in the preferences of men and women but, due to lack of gender disaggregated data for consumption, these preferences have never been integrated into a CGE framework. We assume that all women in a given household have the same preferences and that all men in the household also have the same preferences. Given this assumption, total resources consumed by men and women are defined using distribution factors. The utility function defined by gender is maximised subject to resources men and women receive from total household resources, which is determined by distribution factors and total available time.

The nominal exchange rate acts as the numeraire and the real exchange rate varies in order to keep the current account balance (CAB) fixed. Increases in imports lead to a depreciation of the real exchange rate, which stimulates exports. This closure eliminates the possibility that external resources would finance domestic policies. Price-taking behaviour for exports and imports is assumed<sup>21</sup>. In the simulation of trade liberalization, tax rates adjust to eliminate the impact of a reduction in tariff rates on government revenue. The household

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<sup>20</sup> In a country like Pakistan, where gender rigidities are relatively intense, women's leisure is considered a luxury item and men's leisure as a basic need. Women supply their labour at the cost of their leisure and men supply their labour by reducing household work.

<sup>21</sup> Small open economy assumption.

savings rate varies in order to equilibrate the investment-saving condition. To allow welfare and poverty analysis, government consumption and investment are fixed in real terms. The outcomes are conditioned by the initial socioeconomic structure of the country. In the second simulation, the fiscal deficit is reduced by reducing government expenditures. National savings finance the fiscal deficit and domestic investment. Here, the assumption of fixed real investment is relaxed. Reduction in government consumption reduces the fiscal deficit and releases resources for investment or consumption purposes.

## 4.2 Poverty Analysis

This study uses capability indicators, FGT indices, and relative time poverty to measure gender-specific impacts of policy shocks on various dimensions of poverty. The infant mortality rate (IMR) and literacy rate (LR) are the most appropriate capability indicators for a gender impact analysis<sup>22</sup>. IMR is used to measure the satisfaction of four out of six basic needs: nutrition intake, health services, shelter with safe drinking water, and sanitation facilities (Siddiqui, 2006)<sup>23</sup>. The literacy rate measures the basic need for education, which also enhances capabilities and choices. In the model, IMR and LR are defined as a function of income and public provision of social services<sup>24</sup> using elasticities from Siddiqui (2006)<sup>25</sup>,

$$IMR = IMR_{\min} + \frac{(IMR_{base} - IMR_{\min})}{1 + A * CH_{PC}^{\beta-h} * CG_{HEPC}^{\gamma-h}}$$

$$LR = LR_{\max} - \frac{(LR_{\max} - LR_{base})}{1 + A * CH_{PC}^{\beta-e} * CG_{HEPC}^{\gamma-e}}$$

where IMR = infant mortality rate, CH<sub>pc</sub> = per capita household consumption, CG<sub>HEPC</sub> = per capita government expenditure on education and health, LR = literacy rate, LR<sub>max</sub>=maximum literacy rate a country can achieve (i.e., 100 per cent). The parameters  $\beta_{hand}$  and  $\gamma_h$  are the elasticities of IMR with respect to household consumption and public consumption expenditure, respectively. The parameters  $\beta_e$  and  $\gamma_e$  are the elasticities of LR with respect to household consumption and public consumption expenditure on education and health, respectively. IMR<sub>min</sub> is the minimum value for the infant mortality rate that the country has ever achieved (5 per 1000 live births<sup>26</sup>).

<sup>22</sup> They measure composite effects of input and output indicators (Kabeer, 2003).

<sup>23</sup> Infants are more sensitive to water-borne diseases. The two basic needs not covered are clothing and education.

<sup>24</sup> Siddiqui (2006) discusses the role of household's income and public provision of social services in capability development.

<sup>25</sup> These relationships are estimated using cross district data for Pakistan (see Siddiqui, 2006).

<sup>26</sup> Japan achieved Infant Mortality Rate of 5 deaths per 1000 live births in 1990 (World Bank, 2005).

The minimum and base year values for IMR and LR for each household group is projected on the basis of per capita household income using IMR and LR estimates from Siddiqui (2006). In this static exercise, the population of each household is fixed. Given household consumption and government expenditure elasticities, the change in per capita public expenditure on the social sector (education and health) and household consumption per capita determine the level of IMR and LR in the post-shock period. Given the logistic relationships between dependent and independent variables, the gap between desired and actual levels of indicators decreases with the increase in inputs. As the rightmost term approaches zero, the country tends to achieve targeted  $IMR_{min}$  and  $LR_{max}$  values.

Using a basic needs poverty line, FGT indices<sup>27</sup> are calculated (Foster *et al*, 1984). With a change in prices and given the quantity of basic needs, the monetary value of the poverty line is determined before and after the shock (for details see Decaluwé *et al*, 1999, Siddiqui and Kemal, 2002)<sup>28</sup>. Changes in prices shift the poverty line and the change in household income shifts the distribution function of income. The vector of simulated income is obtained by multiplying the base year income vector (taken from HIES-90-91) by the change in income of the group of households after the policy shock. Using the vector of simulated incomes and the changed poverty line, FGT indices are estimated using the DAD program (Duclos *et al*, 2001).

Time poverty is measured in relative terms. By taking the base year leisure time? as a threshold level, the change in leisure time of women or men relative to the base period measures time poverty. Similarly, the change in leisure time of women relative to men measures the time poverty of women relative to men.

### 4.3 Calibration

The model is calibrated to the data of Pakistan's economy for the year 1989-90. Tariff rates, tax rates, and savings rates are calculated from the base year data. The shift and the share parameters in the demand and supply equations are also calibrated from base year data. For the consumption function, household specific income elasticities for each commodity are estimated using micro data from the Household Integrated Economic Survey (Pakistan, 1993). For the intra-household allocation of resources, income elasticities are borrowed from the unitary household demand function. However, they are kept higher for

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<sup>27</sup>  $P\alpha = 1/n \sum (Z-Y)/Z^\alpha$

where n is the total number of households, Z is the basic needs poverty line based on a basket of commodities required to satisfy basic needs, y is household income,  $\alpha=0$  is the head count ratio,  $\alpha=1$  is the poverty gap, and  $\alpha=2$  is severity of poverty. Prices are endogenously determined in the model.

<sup>28</sup> However, the poverty analysis approach differs from Decaluwé *et al* (1999) as it uses the actual distribution of micro data from the HIES instead of assuming a beta-distribution (Siddiqui and Kemal, 2002).

females than for males by 2 percentage points as feminist economists emphasize that, in the presence of discrimination, female consumption is more vulnerable to changes in income and prices than male consumption. Elasticities for the production function are taken from Siddiqui *et al* (2006). Elasticities that were not available from empirical studies are arbitrarily set. The GAMS software package is used to solve and simulate the model.

## **5. Simulation results**

The impacts of two policy shocks, tariff reductions, and retrenchment in government expenditures are discussed in this section. Simulations are conducted under two assumptions, that: (i) consumption is invariant to the distribution of income; and (ii) consumption varies by gender. The main purpose of the simulation exercises is to bring out the gender-differentiated impact of economic reforms.

### **5.1. Trade Liberalization**

#### **5.1.1. Simulation 1 - Tariff Reduction on Imports and Sales Tax Adjustment**

In this revenue-neutral exercise, tariff cuts on all imports are accompanied by the introduction of a general sales tax (GST) on both imports and domestic production<sup>29</sup>. The magnitude of the imposed shocks is approximated on the basis of historical evidence. The impact propagates through changes in relative prices that ultimately affect labour demand in export-oriented and import-competing sectors in opposite directions. In Pakistan, industry was highly protected with a 25.7 per cent tariff on imports, while agriculture was mildly protected with an average tariff rate of 6.9 per cent. The service sector was not protected at all.

The reduction in tariffs leads to declines in import prices and an increased demand for imports as consumers switch demand to cheap imported goods. As a result, the inflow of imports increases in the majority of the agricultural and industrial sectors (Table 6). Given a high penetration ratio and a larger decline in the price of machinery, the consumption of machinery increases by 1.2 per cent. The excess demand of machinery in the country is covered by a 3.5 per cent increase in imports as domestic production declines. A depreciation of the real exchange rate boosts exports. With a high export intensity ratio of 42 per cent and elasticity of transformation slightly greater than one, textile exports increase by 4.6 per cent. Output increases in the textile sector more than domestic sales, since part of output is directed to the foreign market, i.e. the 'export push effect' of trade liberalisation (Cockburn *et al* (2005)). A decline in prices of goods does not always lead to a rise in their demand, as consumers switch demand towards relatively cheaper goods. Therefore, consumption of goods from the crop sector declines by 0.2 per cent as consumers switch to

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<sup>29</sup> The tax rate has been standardised at 15 per cent. On a few products it is as high as 20 per cent (Siddiqui, 2004). But a large number of commodities and services are still exempted, thus reducing average tax on imports to 5.6 per cent and on domestic production to 5 per cent.



relatively cheaper non-agriculture goods. Production and imports decline in this sector by 0.2 and 0.4 per cent, respectively.

The service sector has no tariffs on its imports. A uniform rise in the tax rate on all goods increases the domestic import price in this sector and thus imports decline (Table 6). Exports from the service sector are very small except in wholesale and retail trade, but the real depreciation of the exchange rate still channels more output to the export market from the service sector as well. On the other hand, despite a high export intensity of 9.1 per cent of 'wholesale and retail trade', this sector does not expand as consumers switch to cheaper industrial and agricultural goods (Table 6).

With endogenous labour supply, men and women respond to changes in market prices and output by moving their supply of labour between the non-market and market sectors. Overall results show that the aggregate employment changes in a similar fashion as output. Aggregate labour demand in the textile sector increases by 5.3 per cent (Table 7) resulting in an increase in female labour time in this sector by 4.3 per cent. However, the amount of increase in female labour demand declines with the skill level, (7, 4.7, 4.2 and 1.8 per cent, respectively, for illiterate, low-skill, medium-skill, and high-skill levels). The increase in female employment in the textile sector is larger than its decline in all other industrial sectors. Consequently, female employment rises by 2.2 per cent in the industry as a whole. The increase in market participation is larger for unskilled female workers (6.2 per cent), as unskilled labour is more intensively used in textiles. However, employment of unskilled female labour in agriculture increases marginally by 0.2 per cent, as this sector has a very low export intensity of 0.7 per cent. Aggregate female employment declines in agriculture and service sectors by 1.1 and 2.7 per cent (Table 7), respectively, as the negative impacts on female employment dominate the positive impacts. Aggregate demand for illiterate female workers increases by 0.8 per cent, but it declines for all other skill levels. Consequently, market participation of women declines and labour moves toward the unpaid economy.

Trade liberalisation mostly affects the import competing sectors negatively; these include the non-metallic, metallic, and machinery sectors. In these sectors, demand for both male and female labour decline. The decline is highest for high-skilled labour, which is more intensively used in the import-competing sectors. Aggregate demand for skilled male labour time declines by 6.2 per cent. It can be observed from table 7 that the decline in employment in the contracting sectors overwhelms the increase in employment in expanding sectors. Therefore, aggregate employment decreases by 0.47 per cent and labour moves from market to non-market sectors of the economy. The results suggest that the impact of trade liberalization on time allocation between market and non-market activities varies not only by

gender and skill level but also between rich and poor households.

The impact also depends on the price of home-produced goods, which vary with the composition of labour used in household production. The change in wage rates determines changes in price of home-produced goods, as well as the opportunity cost of social reproduction and leisure. From the results it may be concluded that the opportunity cost of labour rises for relative poor households, which reduces demand for home goods<sup>30</sup>. The poorest urban households (no education) and all rural households, with the exception of female-headed households, increase their total supply of labour in the market sectors by reducing non-market work and leisure (Table 8). On the other hand, skilled labour owned by relatively rich households face a decline in demand for their labour in the market sectors and move towards non-market activities (Table 8). The results reveal that, irrespective of type of household, female leisure evolves less favourably – declines more or increases less – than male leisure.

The results indicate that employment increases (declines) when the wage rate declines (increases). The reason for the negatively-sloped supply curve lies in the trade-off between labour and leisure. An increase in wages has both a substitution and income effect. When the wage rate increases, leisure becomes relatively more expensive, causing workers to substitute away from leisure and to work more. However, when wages increase, income increases and, assuming leisure is a normal good, causes workers to demand more of it. As a result, workers work less. If the income effect dominates the substitution effect, we get a backward bending labour supply curve<sup>31</sup>, i.e. workers decide to spend a portion of their higher wage buying more leisure time and working less. In this situation, utility gained from an extra hour of leisure is greater than the utility gained from the income earned<sup>32</sup>.

The real wage rates increases for all types of labour except unskilled female labour, as well as unskilled and medium-skilled male labour (Table 7). Consequently, the average wage rate prevailing in the economy rises by 0.7 per cent. In the majority of cases, the wage rate for women increases more or declines less than it does for men. As a result, the gender wage gap falls. With changes in the wage rate, the wage income of illiterate male workers

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<sup>30</sup> However this needs to be explored further.

<sup>31</sup> A worker's optimal level of work varies as the wage rate varies, i.e. the budget constraint rotates due to a change in wages. The supply of labour first increases with the wage rate and then decreases as wages increase further, i.e. backward-bending at high wages.

<sup>32</sup> Worker optimization for the labour-leisure choices can also be explained through indifference curves between leisure and all other goods given the workers' budget constraint. The budget constraint rotates inward or outward at the goods axis with a decrease or increase in wage rate, respectively being fixed at maximum 24 hours a day leisure time. The substitution effect and the income effect influence workers' decisions between consumption and leisure. When the wage rate increases, the income effect makes workers feel wealthier and makes them demand more of both leisure and consumption and vice versa. Although it is true at low wage levels, as wage increases the income effect comes to dominate the substitution effect and wage workers increase demand for leisure.

decreases, whereas it increases across all other skill categories. The largest increase is in the income of highly-educated workers (Table 9). Results indicate that trade liberalisation favours women in the market economy who belong to non-poor households in both urban and rural areas.

The changes in factor prices affect household incomes according to their factor endowments. In urban households, the income disparity between rich and poor increases after trade liberalization. Poor households are hit most and the rich least, as real income falls by 1.8 percent for the poor households (illiterate) and by 0.23 percent for the rich households (high education). This is due to the fact that rich households earn a larger share of their income from skilled labour, whereas poor households depend proportionately more on unskilled labour income. In rural areas, income decreases for all households except female headed households. Whereas all other rural households earn a larger share of their income from labour and capital, female-headed households receive 37 per cent of their income from remittances, the value of which increases in domestic currency terms with devaluation. Therefore, non-factor income is also important in determining the income of households. This suggests that trade liberalization is pro-rich in urban areas, but it is not as clear for rural households as income of both the employee (poor) and the employer (rich) groups decline.

The effect on female incomes varies by skill level. Women with no skills experience a decline in real wage rates, whereas highly-skilled female workers obtain a wage rate increase (Table 7). These changes in wage income across skills results in changes in the share of female wage income in household income relative to male wage income (Table 8). Hence women are better off in terms of earned income, which is expected to improve their bargaining power.

Variation in welfare and poverty depend on changes in both income and consumer prices. Changes in the consumer price index shift the poverty line and differ according to consumption patterns. Rural households consume more agricultural goods, whereas urban households consume relatively more services. Industrial goods are consumed equally by urban and rural households. As agricultural prices decline more than service prices, the CPI declines more for rural households than urban households (Table 9). Among urban households, the CPI declines more in poor than rich households, as these households consume more agricultural goods. However, the difference is very small (0.02 percentage points). In rural households, the CPI declines by 1.7 per cent for all households except for the 'other' group of households, where it declines slightly more. Table 9 shows that poor households (urban-illiterate and rural-employee, self-employed and "other") reduce expenditure on basic needs goods, whereas all other households increase expenditure on them (Table 9).

The poverty consequences are mixed for rich and poor households. Monetary poverty declines by all indicators in all urban households except illiterate, where the percentage of households below the poverty line increases by 3.7 per cent (Table 10). In rural areas, poverty increases by all measures in all households except in female-headed and employer households. In aggregate urban poverty decreases and rural poverty increases by all measures. For Pakistan as a whole, poverty measured by the head count ratio declines, but the other two measures show an increase in poverty.

Table 10 also reveals a change in the gender composition within poor populations after trade liberalization. Women's share in the poor population increases in poor urban households (no or low education) regardless of whether absolute poverty declines or rises. This share declines or remains the same in relatively richer households (medium or high education). In rural areas, women's share in the poor population increases in the self-employed and "other" group of households. In female-headed households this share declines, while it remains constant at the base level in the employee and the employer group of households. Overall results show that the share of women in the total poor increases by 0.03 percentage points, with an increase among the urban poor and a decline among the rural poor. It may be concluded from these results that poverty increases among women relative to men, even though it declines in absolute terms (Table 10).

Our capability indicators of poverty – IMR and LR – show an improvement among rich households and a deterioration among poor households in both urban and rural areas (Table 10). Per capita household expenditure, as well as government expenditure on education and health, affects capability indicators. Therefore, government provision of social services can play an important role in capability development of the poor, or to offset the potential adverse impact of trade liberalization. In aggregate, IMR decreases in urban areas, but deteriorates in rural areas, while the literacy rate deteriorates in both (Table 10). The negative impact dominates in both indicators for Pakistan as a whole.

Results reveal that leisure time for men evolves more favourably – declines less or increases more – than leisure time for women in all urban and rural households except among the high educated urban group, where the pattern is reversed. In urban areas, time poverty decreases among men and women relative to the base period, but it decreases less among women than men as leisure increases by 1.74 and 1.87 per cent, respectively (Table 10). In rural areas, time poverty increases for men and women, but it increases more among women: 1.68 per cent compared to 1.49 per cent for men. The positive impact on women in urban areas is not enough to counter the negative impact in rural areas, hence time poverty among women relative to the base period as well as relative to men increases in Pakistan. All indicators of poverty suggest that trade liberalisation was pro-rich during the nineties. It is

also found that education can be the most appropriate tool to counter poverty's negative impact on the poor.

### **5.1.2. Trade Liberalisation and Intra-Household Allocation of Resources**

This exercise captures the difference in impacts on the consumption of women and men due to trade liberalization when bargaining power is kept constant. The results reveal that the effects of changes in prices and income on consumption of men and women depend on the base year values of consumption of men and women, as well as price and income elasticities. In this exercise, effects on output, employment, wage income, and time allocation are the same as in previous exercises. Therefore, we focus on the variation in household demand for goods and services by gender and the consequences on their capability development.

Table 6 shows that among basic needs commodities, consumer prices decline in the range of 0.8 to 2.2 per cent. The results show that the direction of change in consumption for men and women remains the same as the change in aggregate household consumption, but the quantitative impact differs by gender. Among poor households, declines in income outweigh the impact of reduced prices such that tariff reduction generates negative impacts on the demand for basic needs goods – crops, livestock, fish, food, textiles, education, and health (Table 9) – which leaves them worse off. The strength of the response depends on the capacity of consumers to substitute (the price elasticity of these goods along with change in price and income), the initial share of individual's consumption of  $i^{\text{th}}$  good in the total budget, and the composition of household demand. The results show that the negative effect on the consumption of women is larger if women's share in total consumption of a good is larger than men's or vice versa. For this reason, in urban areas, women's demand for crops, fish, and social services declines by 1.65, 1.42, and 2.87 per cent, respectively. The negative impact on men's consumption of these goods decreases by 0.2, 0.1 and 0.16 percentage points, respectively. In rural areas, trade liberalization also affected relatively poor groups of households such as employees, self-employed, and others. The results show that if the female share is larger than the male share in the base year, their consumption is more strongly affected by the policy shock. However, this pattern is not found in relatively rich households (Table 11).

All households show an increase in the demand for all basic needs items except for illiterate households in urban areas and employer and female-headed households in rural areas. An interesting result is that in the richest group of households in urban areas ("high-educated") and rural areas ("employer"), women further increase demand for basic needs if their consumption is less than the consumption of men in the base year. For instance, expenditure on girl's education was less than the expenditure on boy's education in the base

year, but it increases more than the increase in expenditure on boys' education in high education households: 5.36 and 4.86 per cent, respectively (Table 11). This confirms that prosperity reduces the gender gap in capability development.

The change in consumption has important implications for the capability indicators of poverty: IMR and LR. We can observe from table 12 that the infant mortality and literacy rates deteriorate for both boys and girls in poor households, for the illiterate in urban areas and employees, and for the self-employed and others in rural areas. The effect on IMR is the same for male and female children in these households. However, the change in literacy rate varies by gender. It declines more for girls than for boys. These results can also be confirmed from the demand side as girls' demand for social services declines more than boys' (Table 11). In all other households, both IMR and LR show improvements for both boys and girls, as increased household income overcomes the negative impact of reductions in public expenditure in social services. Indicators show more improvement for women than for men. In these exercises, the elasticities are the same and thus the impact depends principally on the base year values, the change in income, and public provision of social services. A breakdown of capability indicators by gender reveals once more that the impact of policy shocks (negative or positive) is largely absorbed by females (Table 12). In illiterate households, the literacy rate declines by 0.92 per cent for females compared to 0.6 per cent for males. In low, medium and high education households, the literacy rate improves more for females than males (Table 12). The same pattern is found in rural areas (Table 15). In Pakistan as a whole, the negative effect dominates and all indicators for men and women deteriorate.

## **5.2 Fiscal Adjustment**

### **5.2.1. Simulation II: Cuts in Government Expenditure**

Cuts in government expenditure were the principal means that Pakistan used to achieve its targeted value for the fiscal deficit of 4 per cent of GDP during 1990. This deficit had been fluctuating between 6 and 7 per cent of GDP since 1985. A closer look at the government budget reveals that Pakistan adopted various policies to reduce the fiscal deficit such as a ban on new jobs and golden handshakes to reduce expenditures on the wage bill, austerity measures, and the reduction in development expenditure mostly in the social sectors of health and education.

In this experiment, the chosen policy variable is government final consumption expenditure, which is decreased by 8 per cent to bring the fiscal deficit down to 4 per cent of GDP<sup>33</sup> from 5.4 per cent in the base year. The first impact of the reduction in government

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<sup>33</sup> Recently, the fiscal deficit dropped below 3 per cent of GDP.

expenditure is that the fiscal deficit decreases and releases resources. With a fixed current account balance, resources flow towards investment or, with endogenous savings rates, they may flow back to households to finance its consumption to offset a price hike effect. Demand for goods for investment purposes falls significantly. Reduction in total government expenditure reduces expenditure in the three government sectors – ‘education and health’, ‘public administration’ and ‘other government sectors’ – by 7.3, 8.4 and 8.2 per cent, respectively (Table 6). This exerts inflationary pressure, as the GDP deflator rises by 0.5 per cent.

The main consequence of expenditure-decreasing policies during the adjustment period was a sharp increase in unemployment, which translates as a movement of labour from the market economy to the household economy after the policy shock. The results of this exercise also show that employment significantly decreases in the service sector. The change in prices benefits workers engaged in agriculture and industry. However, the tradable sector could not generate enough jobs and labour moves towards the household sector. Total employment in market sectors decreases by 1.6 per cent. It has more of a negative impact on female than male workers, as market employment decreases by 1.8 per cent for women and by 1.6 per cent for men (Table 13).

Skilled labour of both men and women are most affected across all skill levels, as their market employment decreases by 5 and 5.2 per cent, respectively. This is because public sectors are major employers of skilled labour, with 42 and 64 per cent of female and male workers, respectively, employed in the public sector (Table 2). Output expands in agriculture, which is a major employer of labour. However, the rise in production is very small. Real wage rates rise for women across all skill levels except for illiterate labour. For men, real wage rates rise for low and high skilled workers, but decline for those with no skills and medium skills. The average wage rate prevailing in the economy increases by 0.8 per cent.

The change in structure of production and employment in the market sector leads to a reallocation of time from market activities towards non-market activities. Labour composition by skill and by gender in each household group determines the ultimate impact. Urban illiterate households, as well as rural employees, self-employed and "other" households, experience a reduction in labour use in social reproduction and leisure. Indeed, they reduce demand for household goods as their price increases with the increase in wage rates. All other households show a rise in labour use in social reproduction and leisure activities (Table 14). A comparison of the change in time use by men and women in non-market activities reveals that demand for women’s time increases less compared to men in the majority of households. However, in absolute terms it remains higher for women.

Table 9 demonstrates that the real income of all households declines. This impact mostly affects more the relatively poorer groups of households in the urban and rural households, and illiterate households and employees, where income declines by 0.9 and 1.4 per cent, respectively. The results show that consumption of basic needs goods declines among the urban poor (illiterate) and the rural poor (employee, self-employed, and other households). However, consumer prices increase more for the poor than for the rich in urban areas, whereas they increase the most for rich households (employer) in rural areas (Table 9). The increase in CPI leads to an increase in the cost of living and shifts the value of the poverty line. The changes in the poverty line and income determine the change in the incidence of poverty among households.

Poverty, measured by FGT indices, increases among illiterate, employee, and other households and declines or remains constant among all others (Table 10). In aggregate, the positive impact of poverty dominates and poverty decreases in the rural and urban areas by all measures except for the severity of poverty, which increases in rural areas. Therefore, cuts in government expenditure are only harmful for the urban poor households (illiterate). Poverty decreases by all measures throughout Pakistan as a whole. This unexpected finding of poverty reduction despite declines in real income and a rise in CPI can be explained by the closure rule adopted in the model. The reduction in the fiscal deficit (public dissaving) leads to a reduction in household savings, which underlies the increased household expenditure. Thus the price hike effect is neutralised by reduced savings. Demand for goods for investment purposes falls significantly.

Table 10 indicates that the gender composition of poor households changes in relatively rich households and remains the same in poor households in urban areas. In the rural households, 'other' is the only household group that shows an increase in the share of women among the total poor. Overall results show that the share of women in total poor remains constant in the rural and urban areas and in Pakistan as a whole. However, this result may change with a change of the closure.

A reduction in government expenditure on social sectors dominates the increased consumption effect of households and leads to a deterioration of capability indicators – IMR and LR – in all households. However, table 10 reveals that the poor households are hit the most; the IMR (LR) rate increases (declines) by 0.47 (4.4) per cent among illiterate households, while in rural areas the greatest impact is recorded for employees: IMR increases by 0.5 per cent and LR declines by 9.3 per cent. Overall results show that capability indicators deteriorate more in rural areas than in urban areas. In Pakistan, both indicators show deterioration as well.



The results confirm that education can be the most appropriate tool to improve the condition of women as they remain time poor relative to men in illiterate, low and medium education households, but not highly-skilled women. In rural areas, time poverty increases among women relative to men in all households, where tradition and norms are difficult to change. The table indicates that cuts in government expenditure reduce time poverty more in urban areas and increase time poverty more in rural areas compared to the previous exercise of trade liberalization. However, contrary to previous exercises, relative time poverty decreases for both men and women (Table 10). On the other hand, an increase in leisure time over a threshold level may indicate forced leisure, indicating a potential link with unemployment instead of time poverty.

### **5.2.2. Cuts in Government Expenditure and Intra-Household Allocation of Resources**

The results suggest that the impact is not gender neutral even in rich households, where demand for goods increases (Table 11). The direction of change in consumption of men and women is similar to the change in the aggregate household consumption, but the magnitude differs by gender. Table 6 shows that among basic needs commodities, consumer price changes in the range of 1.2 per cent for fish and -0.78 per cent for the social sector (where government reduces expenditures) hit the poor hardest. A decline in their real income further accentuates the negative impact of increased consumer prices (Table 9). Consequently, women and men reduce demand for basic needs including social services, which face a 0.8 per cent reduction in consumer prices in poor households (illiterate, employee, self-employed and others). In all other households, both women and men increase demand for basic needs items despite a decline in income and increased prices, as savings fall significantly (around 17 per cent for the relatively rich households). This outcome is largely driven by this closure.

Results show that this policy shock affects female consumption more negatively if their share in total consumption of a good is larger, except in social services, which shows the reverse pattern. However, this pattern is not found in relatively rich households. In urban high-educated households, men's demand for food items, crops, and livestock goods increases more relative to women, while women's demand increases for all other basic needs items irrespective of the base year share. This indicates that prosperity helps to reduce the gender gap. The reverse pattern is found in the employer group of households, which is the richest group in rural areas. In this group, women increase their demand for crops and livestock, whereas men increase their demand relatively more for food manufactures, textiles, and social services. Fish and social services are two exceptions. Fish has a very small share in total expenditure, while the price of social services declines instead of increasing.

We can observe from table 12 that the effect on IMR and LR also varies by gender and by type of household. The results reveal that this policy shock has a more adverse impact on women than on men in all households. The impact of the decline in income dominates that of the decline in the price of social services. Thus the literacy rate also declines for both men and women in both regions and all capability indicators for men and women deteriorate. A comparison of the results with those of trade liberalisation indicates that this policy has a more adverse impact. The reason is that government expenditure on the social sector declined by 8 per cent, which is crucial for capability development.

### **5.3. Simulation III - Bargaining Power**

In this exercise, we assume that female bargaining power improves given that the share of women's wage income in total household income increases by 1.9 per cent relative to an increase in men's wage share of 0.5 per cent. The bargaining over household resources results in an increase in the allocation of resources to women by 0.01 percentage point. We feed this impact exogenously into the trade liberalisation simulation through the distribution factor. The outcome of this exercise is compared with results of trade liberalization with no change in bargaining power (simulation 5.1.2).

With the change in the distribution factor, women's share in total household resources increases and men's share declines, which affects men's and women's consumption and capability indicators in the opposite direction. The comparison reveals that the female IMR and LR improve with the increase in the bargaining power of women, but deteriorate more (or improve less) for men. Overall results show that an improvement in bargaining power results in gains for Pakistan as a whole in terms of female capability development, but a loss for males, compared to the results of earlier exercises. However, this needs to be explored in further research with endogenously defined bargaining power in the model.

## **6. Concluding Remarks and Some Policy Implications**

This is the first study in a CGE framework to incorporate intra-household allocation of resources based on the view that both the production and the consumption sides are important for gender impact analysis. The study reveals hidden market and non-market work of women. As a result, female participation and their wages increase to 50 per cent and 21 per cent of the total wage bill, respectively. The GDP increases by 5 per cent. The work-leisure matrix reveals that the division of labour is biased against women. Women spend over 80 per cent of their time at work compared to men who spend only 60 per cent of their time. The results also reveal that household resources are prioritized for men and boys in poor households. Among rich households (high-education and employer), women's

consumption is larger or equal to men's. From these results, it may be concluded that the scarcity of household resources forces households to allocate more resources towards the primary income earner. Thus the reduction in poverty can reduce bias against women to some extent. However, expenditure on female education does not show this pattern, as education may be a matter of traditions or norms in Pakistan.

The simulation results support the argument that trade liberalization reduces the gender wage gap. The results also show that migration can help reduce poverty as female-headed household income increases significantly due to their high reliance on remittances. Despite reallocation of time after trade liberalization, gender division of labour remains unequal. Time poverty relative to the base period increases among women compared to men except in high-educated urban and employer rural households. Income poverty mostly affects poorer groups of households in both urban and rural areas. Absolute poverty decreases in Pakistan as a whole, but relative poverty increases among women in poor households and decreases in urban rich households, which leads to an increase in relative poverty among women in urban areas as a whole. This indicates that education can help to reduce bias against women. In rural areas, women's share in the poor population increases in the relatively poor households (self-employed and other), but decreases in rural areas as a whole. Despite a decline in absolute poverty, poverty among women relative to men increases in Pakistan as a whole.

Retrenchment in government expenditure has more negative impacts on women's market employment than on men's. The results indicate that retrenchment in government expenditure is also biased against the poor. All FGT indices show a reduction in poverty among all the urban and rural households except the illiterate urban households. The gender composition of the poor population changes marginally. It increases among men relative to women in the medium- and high-education urban households and female-headed rural households, but increases among women in self-employed households. However, it remains at the base level in Pakistan as a whole.

This study shows that the inclusion of intra-household allocation of resources is as important as resource generation for gender impact analysis. The results indicate that women's consumption is more adversely affected than men's in all but the rich households. From this, we again conclude that prosperity helps to reduce the gender gap in capability indicators. Women's improvement in bargaining power also helps to improve their condition.

The results of the study suggest that education is the single most important variable, which can help to improve the status of women in Pakistan. It reduces the gender gap not only in wage income but also reduces time and capability poverty among women. In this

regard, government can play an important role by opening up more female schools, or by hiring female staff in schools and health centres, further taxing commodities that are consumed by the rich and lowering taxes on basic needs items. Government can foster labour migration by exploring the international market. Finally, microfinance may also help to boost the income of the poor and reduce the gender gap, as prosperity reduces the gender gap in food, clothing, shelter, etc.

However, there are a number of areas where this work can be extended such as inclusion of activities undertaken simultaneously by an individual, capital goods in home production and the role of women not employed in market work<sup>34</sup>. For intra-household allocation of resources, actual income elasticities of consumption by gender would be more appropriate. Government should organize nationwide surveys to develop a comprehensive gender-aware database, especially data on consumption, and promote gender sensitive research. It should also incorporate the findings in its development programs to reduce biases against women. Finally, women's bargaining power can be modelled as being endogenously determined by earned income.

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<sup>34</sup> This is a very important issue in time allocation, which dominates in South Asia. This is because social norms, particularly patriarchy and the norms of female seclusion or *purdha*, dominate economic factors that affect time allocation (Khandker, 1988, Alderman and Chishti 1989). Labour use is motivated by a desire to follow social norms (Facchamps and Quisumbing, 1999). Therefore, in the SAM a distinction is made between individuals involved in household production, those who work in the market economy and those who do not work in the market economy, which can be used in further analysis of gender dimensions.

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## Appendix I.

**Table 1 : Structure of Accounts in Social Accounting Matrix**

Labour	Male	No education, less than five years of education, five and greater than five but less than ten years of education and ten years and above.	
	Female		
Households	Urban Households	Classified by the education of household head: 1. No education 2. Less than five years of education 3. Five and greater than five and less than ten years of education and 4. Metric and above education level.	
	Rural	Male-Headed	These households are classified by the employment status of the head of household, i.e., employees, self-employed, employer, and all others with male household heads.
		Female-Headed	All Female-Headed Households in rural areas.
Activities	Crop, Livestock, Forestry and others, Fisheries, Mining, Food and Beverages, Textile, Wood and Paper, Chemical and Chemical Products, Non-Metallic Industry, Metallic Industry, Machinery, Fabricated and Handicrafts, Gas and Electricity and Water, Wholesale and Retail Trade, Education and Health, Other International Services, Household services, Public Administration and Defence, Construction.		

**Table 2 : Time Allocation by Men and Women in Market Sectors of the Economy (Percent)**

Sectors	Male Labour Hours				Female Labour Hours			
	No Education	Low Education	Medium Education	High Education	No Education	Low Education	Medium Education	High Education
Crop	39.5	21.3	21.8	7.9	66.2	55.5	51.9	0.0
Livestock	11.5	6.5	5.9	1.8	10.0	11.2	6.5	0.0
Forestry and others	0.2	1.2	1.1	0.7	0.0	0.0	0.0	0.0
Fisheries	1.2	6.1	0.6	0.0	0.0	0.0	0.0	0.0
<b>Agriculture</b>	<b>52.4</b>	<b>35.1</b>	<b>29.3</b>	<b>10.4</b>	<b>76.2</b>	<b>66.7</b>	<b>58.4</b>	<b>0.0</b>
Mining	2.0	2.8	2.3	0.6	0.2	0.0	6.0	8.2
Food and Beverages	2.1	2.2	3.2	1.9	0.1	0.0	0.1	0.2
Textile	6.3	6.5	7.9	3.9	9.5	18.6	19.7	27.0
Wood and Paper	1.4	1.6	1.7	0.5	0.0	0.1	0.2	0.0
Chemical and Chemical Products	0.8	1.4	2.0	3.2	0.2	0.0	1.0	1.5
Non-Metallic Industry	2.7	0.9	0.6	0.6	0.1	0.0	0.0	0.0
Metallic Industry	0.5	0.1	0.6	1.3	0.0	0.0	0.0	0.0
Machinery	1.8	4.3	3.4	2.0	0.0	0.0	0.0	0.5
Fabricated and Handicrafts	0.5	1.2	0.5	0.4	0.0	0.0	0.1	0.3
<b>Industry</b>	<b>18.1</b>	<b>21.0</b>	<b>22.2</b>	<b>14.4</b>	<b>10.3</b>	<b>18.7</b>	<b>27.0</b>	<b>37.7</b>
Gas and Electricity and Water	0.2	0.5	0.5	1.0	0.0	0.0	0.0	0.1
Wholesale and Retail Trade	9.7	14.9	15.0	8.4	0.6	0.0	0.5	1.2
Education and Health	1.4	2.3	4.3	13.5	1.3	0.0	0.9	26.7
Other International Services	1.0	1.2	3.7	18.7	0.2	0.0	0.3	1.8
Household services	0.7	0.9	0.8	0.2	0.6	0.1	0.1	0.2
Public Administration and Defence	8.0	13.2	16.8	31.5	4.3	0.0	0.3	13.3
Construction	8.5	11.1	7.4	1.8	6.6	14.4	12.5	18.9
<b>Services</b>	<b>29.5</b>	<b>44.0</b>	<b>48.5</b>	<b>75.2</b>	<b>13.5</b>	<b>14.5</b>	<b>14.6</b>	<b>62.3</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Author's calculations.



**Table 3 : Sources of Household Receipts (Percent)**

<i>Households</i>	<i>Male Labour</i>				<i>Female Labour</i>				<i>Total Labour Income</i>	<i>Capital Income</i>	<i>Dividends</i>	<i>Govt. Trans.</i>	<i>Remittances</i>	<i>Total Receipts</i>	<i>Poverty (Head Count Ratio)</i>
	<i>No Education</i>	<i>Low Education</i>	<i>Medium Education</i>	<i>High Education</i>	<i>No Education</i>	<i>Low Education</i>	<i>Medium Education</i>	<i>High Education</i>							
<b>Urban Households</b>															
No Education	27.6	1.0	4.7	3.9	4.8	0.2	4.0	0.5	46.8	45.8	1.3	0.5	5.6	100	39.8
Low Education	2.3	21.5	8.8	3.5	1.8	2.4	17.5	0.3	58.2	38.1	0.5	0.0	3.2	100	34.6
Medium Education		0.3	22.0	4.4	0.7	0.6	6.8	1.2	37.6	47.6	6.5	0.6	7.7	100	35.4
High Education	0.5	0.2	0.9	30.3	0.3	0.1	2.6	3.2	38.0	32.6	20.0	1.0	8.3	100	13.3
<b>Rural Households</b>															
Employee	40.3	2.9	15.5	14.3	3.8	0.5	1.2	0.5	79.1	17.2	1.4	0.4	1.9	100	35.9
Female-Headed Households	2.9	1.3	3.1	1.2	11.0	5.3	11.4	0.9	37.2	15.2	7.6	2.4	37.6	100	26.5
Self-Employed	12.6	1.1	5.0	3.5	6.4	0.6	3.1	0.4	32.6	60.9	0.9	2.4	3.3	100	26.7
Other	9.6	0.9	5.3	8.7	2.3	0.7	2.6	0.9	31.0	28.9	19.1	4.2	16.7	100	19.7
Employer	0.4	0.1	1.1	1.5	0.1	0.0	0.0	1.4	4.5	93.8	0.3	0.0	1.3	100	15.3

Note: Author's Calculations

**Table 4. Consumption by Gender for Basic Needs Commodities**

<i>Goods</i>	<i>Urban Households by Education of the Head of Household</i>				<i>Rural Female-Headed Households</i>	<i>Rural Households by Employment Status</i>			
	<i>Illiterate</i>	<i>Low Education</i>	<i>Medium Education</i>	<i>High Education</i>		<i>Employee</i>	<i>Self Employed</i>	<i>Other</i>	<i>Employer</i>
Crop	F	F	F	F	F	M	M	M	M
Livestock	M	M	M	F	M	M	M	M	F
Fish	F	M	F	M=F	M	M	M	F	F
Food (manufacturing)	M	M	M	M	F	F	F	M	F
Textile (clothing)	M	M	F	F	M=F	M	M	M	F
Social Sector (education and health)	F	F	M	M	M	F	M	M	M
Population Share by Gender by Household Type (Percentages)									
Men	53.31	54.93	53.22	52.33	24.01	36.68	51.85	55.58	52.22
Women	46.69	45.07	46.78	47.67	41.11	29.74	48.15	44.42	47.78
Expenditure On Basic Need Goods (percentages)									
Men	34.04	34.28	32.17	28.19	24.01	36.68	39.60	38.20	34.22
Women	25.01	23.07	25.33	23.85	41.11	29.74	28.09	24.82	28.73
Total	59.04	57.35	57.49	52.03	65.12	66.42	67.69	63.02	62.95
Per Capital Expenditure Ratio									
Women/Men	0.84	0.82	0.90	0.93	1.49	0.89	0.76	0.81	0.92

\*F stands for Females and M for Males. If females consume more of a good than males, then F is presented in the cell and vice versa, M=F implies that males and females consume equally.

**Table 5 : Time Allocation between Market and Non-Market Activities**

Urban	Women		Men	
	Minimum	Maximum	Minimum	Maximum
Market	26.5	40.0	50.6	57.4
Social Reproduction	34.1	45.3	2.9	10.7
Leisure	10.0	20.0	40.0	Above 40
Rural				
Market	34.1	45.3	47.5	53.3
Social Reproduction	35.9	47.3	1.6	16.8
Leisure	10.0	20.0	40.0	About 40

**Table 6 Variation in Macro Variables and Domestic Prices over the Base Period (Percent) \***

Sectors	M/Q	E/VA	Simulation I- Trade Liberalization							Simulation II-Cuts in Government Expenditure							
			PC	PM	Q	D	M	E	VA	PC	PM	Q	D	M	E	VA	CG
Crop	5.3	0.7	-1.3	-1.1	-0.2	-0.2	-0.4	3.0	-0.2	0.62	-0.02	0.12	0.09	0.77	-0.72	0.08	0
Livestock	0.5	0.5	-0.8	-1.3	-0.3	-0.3	0.5	2.6	-0.3	1.03	-0.02	0.31	0.3	1.88	-1.05	0.29	0
Forestry and others	5.9	6.9	-6.6	-26.1	0.8	-1.1	33.4	4.4	-0.7	0.24	-0.02	-0.06	-0.08	0.24	-0.3	-0.1	0
Fisheries	0.0	4.1	-1.6	-27.9	-0.3	-0.3	44.7	4.2	-0.1	1.2	-0.02	0.22	0.22	1.7	-1.59	0.15	0
Mining	30.9	2.7	-2.0	-0.1	-2.7	-1.2	-5.2	4.4	-1.0	0.12	-0.02	-0.17	-0.27	0.02	-0.54	-0.28	0
Food and Beverages	11.0	5.0	-1.2	-2.9	-0.5	-0.8	1.7	2.6	-0.6	0.54	-0.02	0.32	0.22	1.05	-0.73	0.17	0
Textile	3.8	42.0	-2.2	-5.4	1.2	1.0	4.7	4.6	2.6	0.55	-0.02	-0.14	-0.16	0.45	-0.76	-0.41	0
Wood and Paper	15.5	0.6	-1.2	-1.3	-0.4	-0.4	-0.2	3.3	-0.4	0.11	-0.02	-0.05	-0.08	0.12	-0.31	-0.08	0
Chemical	33.0	1.6	-5.3	-10.7	0.1	-2.8	6.3	1.0	-2.8	0.1	-0.02	0.05	-0.01	0.17	-0.19	-0.01	0
Non-Metallic Industry	3.6	0.8	-4.2	-16.1	-1.6	-2.2	12.6	3.9	-2.1	-0.4	-0.02	-0.32	-0.3	-0.7	0.17	-0.3	0
Metallic Industry	52.2	3.7	-9.0	-13.5	-1.2	-6.7	4.0	-0.7	-6.4	-0.01	-0.02	-0.5	-0.51	-0.5	-0.53	-0.51	0
Machinery	61.5	3.5	-8.0	-9.5	1.2	-2.4	3.5	6.0	-2.1	-0.17	-0.02	-1.49	-1.17	-1.69	-0.69	-1.15	0
Handicrafts	6.4	14.8	-2.5	-10.5	0.2	-0.6	12.1	3.4	0.1	0.56	-0.02	1.37	1.31	2.13	0.56	1.2	0
Utilities	0.2	0.0	-2.0	1.3	0.0	0.0	-3.9	4.4	0.0	-4.72	-0.02	-0.35	-0.34	-5.94	6.1	-0.34	0
Wholesale and Retail Trade	2.2	9.1	-1.7	1.3	-0.4	-0.3	-3.9	2.2	0.0	0.32	-0.02	-0.08	-0.09	0.32	-0.36	-0.11	0
Education and Health	0.4	0.0	-1.3	1.3	-0.4	-0.4	-3.5	3.6	-0.4	-0.78	-0.02	-3.87	-3.87	-4.75	-2.75	-3.87	-7.3
Other	7.7	0.0	-0.6	1.3	-0.2	0.0	-2.5	2.6	0.0	0.48	-0.02	0	-0.05	0.6	-0.7	-0.05	-8.4
Sanitation and Other Public Administration and Defence	3.0	0.0	-1.2	0.8	-0.1	0.0	-2.5	3.9	0.0	1.54	-0.02	0.19	0.13	2.06	-2.24	0.13	0
Construction	0.0	0.0	-3.1	-	-1.7	-1.7	-	-	-1.7	0.15	-	-0.44	-0.44	-	-	-0.44	0

CG= Government Consumption, D= Demand for Domestically Produced Goods, E= Exports, M=Imports, PC= Consumer Price, PM= Import Price, Q=Domestic Absorption of Composite Good, VA=Value Added,

**Table 7 : Trade Liberalization-and Employment by Gender (Percentage Change over Base Values)**

Market Sectors	Female Labour					Male Labour					Total Labour Demand
	No Education	Low Education	Medium Education	High Education	Total	No Education	Low Education	Medium Education	High Education	Total	
Crop	0.3	-1.8	-2.4	0.0	-1.02	1.1	-2.2	-0.3	-4.3	0.16	-0.3
Livestock	-0.5	-2.4	-3.5	0.0	-1.79	0.3	-2.8	-1.4	-4.9	-0.55	-0.8
Other	0.0	0.0	0.0	0.0	0.00	-1.7	-4.5	-4.0	-6.7	-4.76	-4.8
Fisheries	-0.2	0.0	0.0	0.0	-0.24	0.6	-2.3	-1.7	-4.6	-0.64	-0.7
<b>Agriculture</b>	<b>0.2</b>	<b>-1.9</b>	<b>-2.5</b>	<b>0.0</b>	<b>-1.12</b>	<b>0.91</b>	<b>-2.40</b>	<b>-0.66</b>	<b>-4.57</b>	<b>-0.10</b>	<b>-0.42</b>
Mining	-1.9	0.0	-4.2	-6.3	-4.80	-1.1	-3.9	-2.2	-5.8	-2.11	-3.1
Food	-1.4	0.0	-4.9	-6.2	-4.05	-0.6	-3.5	-2.9	-5.7	-2.80	-2.9
Textile	7.0	4.7	4.2	1.8	4.34	7.9	4.5	6.4	2.4	6.12	5.3
Wood and Paper	-0.4	-2.2	-3.8	0.0	-3.36	0.5	-2.4	-1.7	-4.7	-1.03	-1.1
Chemicals	-6.1	0.0	-9.2	-10.7	-9.21	-5.4	-8.1	-7.2	-10.2	-8.54	-8.6
Non-Metallic	-6.3	0.0	0.0	0.0	-6.28	-5.5	-8.2	-7.7	-10.4	-6.39	-6.4
Metallic	0.0	0.0	0.0	0.0	0.00	-8.6	-11.2	-10.7	-13.3	-11.62	-11.7
Machinery	-4.0	0.0	0.0	-8.5	-7.68	-3.2	-5.9	-5.4	-8.1	-5.48	-5.5
Handicrafts	1.4	0.0	-2.1	-3.4	-1.99	2.2	-0.7	0.1	-3.0	0.25	0.1
<b>Industry</b>	<b>6.24</b>	<b>4.65</b>	<b>1.72</b>	<b>-0.68</b>	<b>2.17</b>	<b>1.04</b>	<b>-1.91</b>	<b>-0.43</b>	<b>-5.64</b>	<b>-1.21</b>	<b>-0.41</b>
Utilities	2.5	0.0	-1.1	-2.4	-1.41	3.4	0.4	1.0	-1.9	-0.43	-0.5
Wholesale and Retail Trade	1.2	0.0	-2.4	-3.6	-1.37	2.0	-0.9	-0.3	-3.2	-0.17	-0.2
Social Sector	3.1	0.0	-0.6	-1.9	-1.25					-0.42	-0.6
Other	3.8	0.0	0.1	-1.2	0.05	3.9	0.8	1.6	-1.5	-0.10	-0.1
Sanitation	0.7	-1.3	-2.9	-4.2	0.02	4.6	1.6	2.3	-0.8	-0.04	-0.1
Public Administration	3.1	0.0	-0.7	-1.9	0.49	1.6	-1.5	-0.8	-3.7	0.26	0.2
Construction	-2.0	-4.0	-4.7	-6.6	-4.45	1.79	-1.03	0.33	-1.62	-2.27	-3.0
<b>Services</b>	<b>-4.0</b>	<b>-1.0</b>	<b>-1.7</b>	<b>-3.5</b>	<b>-2.66</b>	<b>3.9</b>	<b>0.9</b>	<b>1.5</b>	<b>-1.5</b>	<b>-0.31</b>	<b>-0.54</b>
<b>Total</b>	<b>0.84</b>	<b>-0.99</b>	<b>-1.62</b>	<b>-2.34</b>	<b>-0.73</b>	<b>-1.2</b>	<b>-4.2</b>	<b>-2.6</b>	<b>-6.2</b>	<b>-0.40</b>	<b>-0.47</b>
Real Wage Rate	-2.1	1.5	2.9	6.6		-3.2	1.8	-0.2	5.8		0.66

**Table 8 : Trade Liberalization -Labour in Non-Market Activities (Percentage Change Over Base Value)**

	Female Labour				Male Labour				Total	
	No Education	Low Education	Medium Education	High Education	No Education	Low Education	Medium Education	High Education		
<b>Social Reproduction</b>										
<b>Urban households</b>										
No-Education	-1.0	-2.2	-2.1	-3.5	-0.6	-2.3	-1.2	-3.3	-1.5	
Low-Education	5.2	3.8	4.0	2.3	5.5	3.7	5.0	2.6	4.0	
Med-Education	1.5	0.2	0.2	-1.1	1.9	0.1	1.1	-0.9	0.3	
High-Education	5.2	3.8	4.0	2.4	5.6	3.7	5.0	2.6	3.0	
<b>Rural households</b>										
Employee Male	-0.9	-2.1	-2.4	-3.5	-0.6	-2.2	-1.5	-3.3	-1.6	
Female-Headed	3.6	2.2	2.3	0.9	4.0	2.1	3.3	1.1	2.8	
Self-Employed	-0.6	-1.9	-1.8	-3.2	-0.3	-2.0	-0.9	-3.0	-1.1	
Other	-0.2	-1.6	-1.4	-2.8	0.1	-1.7	-0.5	-2.6	-1.2	
Employer	1.6	0.2	-0.2	-1.0	2.0	0.0	0.7	-0.8	-0.8	
<b>Real Wage rate</b>	-2.1	1.5	2.9	6.6	-3.2	1.8	-0.2	5.8	-	
<b>Wage Income*</b>	-0.6	1.7	3.0	5.6 (1.9)	-2.2	1.0	-0.1	4.4 (0.5)	-	
<b>Leisure</b>										
<b>Urban households</b>										
No-Education	-0.6	-1.7	-2.0	-3.1	-0.3	-1.7	-1.0	-2.9	-0.8	
Low-Education	7.6	6.3	6.2	4.7	7.9	6.2	7.2	5.0	6.4	
Med-Education	2.7	1.5	1.0	0.1	3.1	1.4	2.0	0.3	1.6	
High-Education	6.2	5.0	5.0	3.5	6.6	4.9	5.9	3.7	3.9	
<b>Rural households</b>										
Employee Male	-1.2	-2.3	-2.9	-3.7	-0.9	-2.4	-2.0	-3.5	-1.8	
Female-Headed	5.4	4.0	4.0	2.6	5.8	3.9	5.0	2.9	4.8	
Self-Employed	-0.9	-2.1	-2.4	-3.5	-0.6	-2.2	-1.5	-3.3	-1.4	
Other	-0.5	-1.6	-2.0	-3.0	-0.2	-1.7	-1.1	-2.8	-1.5	
Employer	3.0	1.8	1.1	0.5	3.3	1.7	2.0	0.7	1.2	

Figures in brackets are total change in labour income

**Table 9 : Trade Liberalization, Income and Demand for Basic Needs Goods-Real (Percentage Change over Base Values)**

	<i>Simulation I- Trade Liberalization</i>									
	<i>Urban households</i>					<i>Rural Households</i>				
	No- Education	Low Education	Med Education	High Education	Employee Male	Female- Headed	Self- Employed	Other	Employer	
Income Real	-1.80	-1.11	-1.12	-0.23	-1.67	-0.16	-1.60	-0.75	-1.53	
Women Wage Income	1.3	2.6	3.0	4.1	0.8	1.5	0.9	2.0	5.2	
Men Wage Income	-1.2	0.9	0.5	4.1	-0.3	0.0	-0.5	0.7	1.8	
<b>Consumption of Good</b>										
Crop	-1.7	3.21	0.57	2.78	-1.19	0.94	-1.65	-0.92	1.09	
Livestock	-1.98	2.4	0.18	3.55	-1.77	1.48	-1.8	-0.93	1.05	
Fish	-1.46	3.46	0.54	4.38	-2.24	2.48	-1.31	-0.73	1.23	
Food Manufactured	-1.32	1.61	0.3	3.05	-1.3	1.75	-1.77	-1.22	1.48	
Textile	-2.11	4.36	0.7	4.28	-2.26	2.64	-1.27	-0.45	2.1	
Education and Health	-2.89	3.91	0.49	5.48	-3.03	2.21	-2.02	-0.96	1.0	
Total Household Consumption Exp.	-1.69	3.49	0.78	4.10	-1.61	1.61	-1.52	-0.71	1.70	
Consumer Price	-1.64	-1.64	-1.7	-1.62	-1.72	-17.3	-1.71	-1.81	-1.73	
	<b>Simulation II: Cuts in Government Expenditure</b>									
Income Real	-0.89	-0.17	-0.54	-0.29	-1.38	-0.41	-0.75	-0.63	-0.45	
Women Wage Income	1.60	3.25	3.29	3.27	0.92	1.82	1.11	2.04	3.01	
Men Wage Income	-1.31	0.84	-0.30	2.13	-0.76	-0.41	-0.88	-0.07	0.62	
<b>Consumption of Good</b>										
Crop	-0.83	5.36	1.96	3.55	-0.87	1.12	-0.62	-0.62	2.65	
Livestock	-1.06	4.13	0.99	4.6	-1.33	1.83	-0.79	-0.66	2.81	
Fish	-1.03	5.14	1.14	4.98	-2.15	2.16	-0.78	-0.84	2.41	
Food Manufactured	-0.6	2.76	1.32	3.97	-0.9	2.19	-0.62	-0.74	3.73	
Textile	-1.3	6.35	1.26	4.86	-2.1	2.4	-0.61	-0.52	3.84	
Education and Health	-0.34	7.46	2.4	8.08	-1.13	3.74	0.03	0.02	2.95	
Total Household Consumption Exp.	-0.88	5.43	1.78	4.95	-1.36	1.72	-0.64	-0.63	3.49	
Consumer Price	0.45	0.43	0.42	0.41	0.53	0.50	0.54	0.51	0.541	

**Table 10 : Monetary and Non-Monetary Indicators of Poverty (Percentage Variation over Base Values)**

<i>Monetary Indicators (FGT-Indices)</i>	No Education	Low Education	Med Education	High Education	Total Urban	Employee Male	Female Headed	Self- Employed	Other	Employer	Total Rural	Pakistan
	<b>Simulation I – Trade Liberalization</b>											
Head Count	3.68	-11.84	-1.45	-13.97	<b>-3.55</b>	3.03	-3.27	2.78	1.73	-3.51	<b>2.33</b>	<b>-0.29</b>
Poverty Gap	5.56	-11.11	-1.22	-13.79	<b>-2.63</b>	6.17	-5.56	5.17	2.17	-5.41	<b>4.46</b>	<b>1.31</b>
Severity	6.90	-12.50	-3.57	-13.33	<b>-2.51</b>	7.69	-5.88	5.56	7.14	-8.33	<b>5.67</b>	<b>2.03</b>
<b>Change in Gender Composition in Poor Household</b>												
Men	-0.11	-0.99	0.03	0.00	-0.08	0.0	0.08	-0.03	-0.07	0.00	0.02	-0.03
Women	0.11	0.99	-0.03	0.00	0.08	0.0	-0.08	0.03	0.07	0.00	-0.02	0.03
<b>Non-Monetary Indicators</b>												
Infant Mortality Rate	0.08	-0.21	-0.06	-0.24	<b>-0.06</b>	0.08	-0.10	0.07	0.03	-0.11	<b>0.06</b>	<b>0.004</b>
Literacy Rate	-0.80	0.46	0.09	0.05	<b>-0.29</b>	-1.59	0.75	-0.57	-0.11	0.29	<b>-0.81</b>	<b>-0.58</b>
<b>Relative Time Poverty</b>												
Men	-0.7	6.4	1.7	3.8	<b>1.87</b>	-1.7	4.8	-1.3	-1.4	1.7	<b>-1.49</b>	<b>0.15</b>
Women	-1.3	6.3	1.2	4.3	<b>1.74</b>	-1.9	4.8	-1.5	-1.5	0.6	<b>-1.68</b>	<b>-0.09</b>
	<b>Simulation II-Cuts in Government Expenditure</b>											
Head Count	1.96	-14.33	-5.22	-16.91	<b>-6.16</b>	-1.93	0.00	-4.86	-5.63	0.00	<b>-3.55</b>	<b>-4.71</b>
Poverty Gap	2.22	-16.67	-4.88	-17.24	<b>-6.14</b>	-2.47	-3.70	-5.17	-4.35	-5.41	<b>-4.04</b>	<b>-4.97</b>
Severity	3.45	-16.67	-7.14	-17.78	<b>-6.33</b>	3.85	-5.88	0.00	7.14	-8.33	<b>1.74</b>	<b>-1.85</b>
<b>Change in Gender Composition among poor Population (percentage points)</b>												
Men	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	-0.4	0.0	0.0	0.0
Women	0.0	0.0	-0.1	-0.1	0.0	0.0	-0.1	0.0	0.4	0.0	0.0	0.0
<b>Non-Monetary Indicators (Percentage Change over Base Values)</b>												
Infant Mortality Rate	0.47	0.12	0.31	0.14	<b>0.32</b>	0.49	0.32	0.45	0.45	0.22	<b>0.45</b>	<b>0.39</b>
Literacy Rate	-4.36	-0.05	-0.27	-0.01	<b>-1.9</b>	-9.31	-1.46	-3.24	-1.78	-0.29	<b>-5.13</b>	<b>-3.69</b>
<b>Time Poverty</b>												
Men	-0.3	8.5	2.8	5.1	<b>2.84</b>	-2.0	3.6	-0.6	-2.0	4.5	<b>-1.53</b>	<b>0.61</b>
Women	-1.1	8.2	1.9	5.3	<b>2.43</b>	-2.3	3.4	-1.0	-2.4	3.6	<b>-1.87</b>	<b>0.13</b>

\*Base Year Poverty Line for Urban Rs 318 per capita per month and Rural Poverty line is Rs 264 per capita per month

**Table 11 : Demand for Basic Needs Goods by Gender-Real (Percentage Variation over Base Values)**

Consumption of		Simulation I-Trade Liberalization									
		Urban Households by Education of the Head of Household					Rural Male-Headed Households classified by Employment Status				
		No	Low	Medium	High	Rural	Female-Headed	Employee	Self-Employed	Other	Employer
		Education	Education	Education	Education	Households	Households	Households	Households	Households	Households
Crop	Women	-1.65	3.01	0.55	2.63	1.15	-1.12	-1.56	-0.89	1.08	
	Men	-1.63	3.08	0.48	2.71	1.0	-1.21	-1.57	-0.93	0.94	
Livestock	Women	-2.01	2.26	0.17	3.35	1.69	1.71	-1.67	-0.9	1.09	
	Men	-2.11	2.28	0.13	3.46	1.71	-1.76	-1.75	-0.96	0.89	
Fish	Women	-1.42	3.31	0.51	4.43	2.82	-2.15	-1.34	-0.7	1.12	
	Men	-1.41	3.26	0.48	4.07	2.82	-2.22	-1.12	-0.75	1.16	
Food-Manuf.	Women	-1.26	1.49	0.33	2.97	1.12	-1.3	-1.67	-0.86	1.34	
	Men	-1.3	1.52	0.28	2.87	1.08	-1.28	-1.77	-0.89	1.38	
Textile	Women	-1.93	4.29	0.74	4.25	3.36	-2.16	-1.12	-0.38	1.92	
	Men	-2.15	4.36	0.72	4.18	3.33	-2.29	-1.23	-0.43	2	
Social Sector	Women	-2.87	3.9	0.47	5.36	2.52	-3.04	-1.84	-0.9	0.91	
	Men	-2.71	3.59	0.4	4.86	2.55	-3.0	-1.97	-0.98	0.94	
		Simulation II- Cuts in Government Expenditure									
Crop	Women	-0.81	5.23	1.94	3.47	1.41	-0.83	-0.61	-0.67	2.77	
	Men	-0.81	5.41	1.96	3.6	1.15	-0.89	-0.62	-0.68	2.48	
Livestock	Women	-1.08	4.06	0.95	4.5	2.16	-1.3	-0.75	-0.71	3.12	
	Men	-1.14	4.15	0.97	4.67	2.03	-1.32	-0.8	-0.73	2.66	
Fish	Women	-1.02	5.11	1.11	5.2	2.52	-2.1	-0.84	-0.92	2.32	
	Men	-1	5.09	1.14	4.8	2.39	-2.13	-0.7	-0.94	2.47	
Food-Manuf.	Women	-0.58	2.64	1.33	4	1.45	-0.91	-0.59	-0.58	3.6	
	Men	-0.6	2.73	1.31	3.9	1.3	-0.89	-0.64	-0.58	3.83	
Textile	Women	-1.22	6.48	1.37	4.98	3.12	-2.05	-0.57	-0.55	3.69	
	Men	-1.35	6.64	1.41	4.91	2.95	-2.13	-0.63	-0.58	3.93	
Social Sector	Women	-0.31	7.73	2.3	8.18	4.4	-1.13	0.05	0.03	2.84	
	Men	-0.33	7.2	2.28	7.46	4.14	-1.12	0.01	0.01	3.02	

**Table 12 : Non-Monetary Indicators of Poverty (Percent Change over Base Values)**

	Urban Households					Rural Households					Total	Pakistan
	No	Low	Medium	High	Employee	Female	Self-	Other	Employer			
	Education	Education	Education	Education	Male	Headed	Employed	Other	Employer			
<b>Simulation I- Trade Liberalization and Intra Household Allocation of Resources</b>												
Female Infant Mortality Rate	0.07	-0.2	-0.06	-0.24	<b>-0.05</b>	0.07	-0.11	0.07	0.02	-0.1	<b>0.05</b>	<b>0.01</b>
Female Literacy Rate	-0.92	0.95	0.17	0.08	<b>-0.33</b>	-3.33	1.57	-1.12	-0.1	0.59	<b>-1.69</b>	<b>-1.11</b>
Male Infant Mortality Rate	0.07	-0.2	-0.06	-0.23	<b>-0.08</b>	0.07	-0.11	0.07	0.02	-0.1	<b>0.04</b>	<b>0.03</b>
Male Literacy Rate	-0.6	0.24	0.04	0.02	<b>-0.20</b>	-0.92	0.49	-0.3	-0.04	0.15	<b>-0.37</b>	<b>-0.29</b>
<b>Simulation II-Cuts in Government Expenditure with Intra-Household Allocation of Resources</b>												
Female Infant Mortality Rate	0.48	0.13	0.32	0.15	<b>0.35</b>	0.5	0.33	0.46	0.46	0.23	<b>0.46</b>	<b>0.42</b>
Female Literacy Rate	-5.64	-0.15	-0.57	-0.02	<b>-2.79</b>	-21.61	-3.07	-7.54	-3.35	-0.67	<b>-11.92</b>	<b>-8.05</b>
Male Infant Mortality	0.48	0.13	0.32	0.15	<b>0.31</b>	0.5	0.33	0.46	0.46	0.23	<b>0.39</b>	<b>0.25</b>
Male Literacy Rate	-3.69	-0.04	-0.14	-0.01	<b>-1.42</b>	-5.99	-0.96	-2.02	-1.18	-0.17	<b>-2.71</b>	<b>-2.10</b>
<b>Simulation III-Improvement in Bargaining Power and Capability Development by Gender</b>												
Female Infant Mortality Rate	0.01	-0.27	-0.12	-0.3	<b>-0.11</b>	0.01	-0.15	0	-0.05	-0.17	<b>-0.01</b>	<b>-0.05</b>
Female Literacy Rate	0.09	1.26	0.33	0.1	<b>0.19</b>	0.1	2.07	0.36	0.58	0.9	<b>0.36</b>	<b>0.29</b>
Male Infant Mortality	0.13	-0.15	0	-0.18	<b>-0.03</b>	0.13	-0.05	0.12	0.08	-0.05	<b>0.09</b>	<b>0.06</b>
Male Literacy Rate	-1.15	0.17	0.01	0.02	<b>-0.42</b>	-1.77	0.25	-0.62	-0.22	0.08	<b>-0.77</b>	<b>-0.60</b>

**Table 13 : Cuts in Government Expenditure and Change in Macro Aggregates  
(Percentage Change over Base Values)**

Market Sectors	Women Employment (market)					Men Employment (market)					Total Labour Demand
	No Education	Low Education	Medium Education	High Education	Total	No Education	Low Education	Medium Education	High Education	Total	
Crop	0.59	-1.22	-2.53	0	<b>-0.87</b>	1.53	-2.55	0.54	-3.31	<b>0.70</b>	0.12
Livestock	1.15	-0.43	-2.44	0	<b>-0.35</b>	2.09	-1.77	0.63	-2.66	<b>1.28</b>	0.9
Other	0	0	0	0	<b>0.00</b>	2.29	-0.86	-0.11	-2.31	<b>-0.70</b>	-0.72
Fisheries	1.28	0	0	0	<b>1.28</b>	2.22	-0.94	-0.18	-2.39	<b>0.92</b>	0.9
<b>Agriculture</b>	<b>0.7</b>	<b>-1.1</b>	<b>-2.5</b>	<b>0.0</b>	<b>-0.81</b>	<b>1.67</b>	<b>-2.07</b>	<b>0.52</b>	<b>-3.13</b>	<b>0.80</b>	<b>0.29</b>
Mining	0.21	0	-2.58	-3.69	<b>-2.84</b>	1.14	-2	0.48	-3.01	<b>0.27</b>	-0.9
Food	1.96	0	-2.54	-2.41	<b>-0.86</b>	2.91	-0.27	0.52	-1.73	<b>0.80</b>	0.76
Textile	0.54	-1.54	-2.52	-3.72	<b>-2.03</b>	1.48	-2.31	0.54	-3.04	<b>0.07</b>	-0.86
Wood and Paper	0.38	-1.06	-3.89	0	<b>-3.31</b>	1.31	-1.84	-0.87	-3.25	<b>-0.13</b>	-0.23
Chemicals	2.28	0	-1.74	-2.13	<b>-1.34</b>	3.23	-0.01	1.35	-1.44	<b>0.12</b>	-0.04
Non-Metallic	-0.96	0	0	0	<b>-0.96</b>	-0.04	-3.13	-2.39	-4.55	<b>-0.91</b>	-0.93
Metallic	0	0	0	0	<b>0.00</b>	2.08	-1.07	-0.31	-2.51	<b>-0.92</b>	-0.96
Machinery	-1.76	0	0	-5.87	<b>-5.10</b>	-0.85	-3.91	-3.18	-5.3	<b>-3.08</b>	-3.12
Handicrafts	3.87	0	-0.48	-0.46	<b>0.29</b>	4.83	1.58	2.65	0.15	<b>2.96</b>	2.8
<b>Industry</b>	<b>0.58</b>	<b>-1.54</b>	<b>-2.51</b>	<b>-3.64</b>	<b>-2.15</b>	<b>1.33</b>	<b>-1.99</b>	<b>-0.12</b>	<b>-2.77</b>	<b>-0.28</b>	<b>-0.72</b>
Utilities	-4.65	0	-8.86	-8.65	<b>-8.12</b>	-3.76	-6.73	-5.99	-8.09	<b>-6.95</b>	-6.99
Wholesale and Retail	0.48	0	-3.95	-3.74	<b>-2.20</b>	1.41	-1.73	-0.93	-3.16	<b>-0.65</b>	-0.7
Social Sector	-2.35	0	-6.57	-6.5	<b>-6.05</b>	-1.44	-4.64	-3.63	-5.94	<b>-5.10</b>	-5.28
Other Gov. Sectors	2.98	0	-1.53	-1.37	<b>-0.60</b>	3.94	0.69	1.57	-0.78	<b>-0.23</b>	-0.25
Sanitation	1.8	0.07	-2.78	-2.58	<b>1.06</b>	2.75	-0.61	0.27	-1.99	<b>1.17</b>	1.13
Public Admin.	-5.73	0	-9.99	-9.75	<b>-7.88</b>	-4.85	-7.88	-7.16	-9.21	<b>-7.91</b>	-7.93
Construction	0.1	-1.79	-3.14	-3.93	<b>-2.47</b>	1.03	-2.45	-0.09	-3.35	<b>0.06</b>	-0.77
<b>Services</b>	<b>-1.8</b>	<b>-1.8</b>	<b>-3.5</b>	<b>-6.2</b>	<b>-4.08</b>	<b>-0.45</b>	<b>-3.87</b>	<b>-3.04</b>	<b>-5.67</b>	<b>-3.71</b>	<b>-3.74</b>
<b>Total</b>	<b>0.32</b>	<b>-1.27</b>	<b>-2.66</b>	<b>-5.24</b>	<b>-1.76</b>	<b>0.98</b>	<b>-2.84</b>	<b>-1.35</b>	<b>-4.99</b>	<b>-1.6</b>	<b>-1.6</b>
Real Wage Rate	-1.60	1.77	4.33	6.09		-2.88	2.92	-0.18	5.04		0.8

**Table 14. Cuts in Government Expenditure and Labour in Non-Market Activities  
(Percentage Change over Base Values)**

	Females				Males				Total	
	No Education	Low Education	Medium Education	High Education	No Education	Low Education	Medium Education	High Education		
<b>Employment</b>										
<b>Urban Households</b>										
No-Education	-0.93	-2.21	-2.12	-3.23	-0.54	-2.54	-0.81	-2.94	-1.44	
Low-Education	6.39	4.98	5.17	3.79	6.81	4.62	6.57	4.1	5.19	
Med-Education	1.78	0.28	0.3	-0.52	2.19	-0.06	1.64	-0.22	0.58	
High-Education	5.46	3.92	4.24	2.96	5.88	3.56	5.63	3.27	3.52	
<b>Rural Households</b>										
Employee Male	-1.31	-2.53	-2.97	-3.61	-0.92	-2.86	-1.67	-3.32	-1.88	
Female-Headed	2.58	1.06	1.27	0.19	2.99	0.72	2.63	0.5	1.77	
Self-Employed	-0.39	-1.76	-1.69	-2.66	0.01	-2.09	-0.37	-2.36	-0.82	
Other	-1.07	-2.49	-2.34	-3.35	-0.67	-2.82	-1.03	-3.06	-1.98	
Employer	3.46	1.88	1.23	1.12	3.87	0	2.59	1.43	1.3	
Real wage Rate	-1.60	1.77	4.33	6.09	0.98	1.02	1.04	1.06		
Real Wage Income	-0.4	1.9	3.8	3.2	-2.0	1.5	-0.7	2.3		
<b>Leisure</b>										
<b>Urban Households</b>										
No-Education	-0.3	-1.25	-1.87	-2.51	0.09	-1.58	-0.56	-2.21	-0.44	
Low-Education	9.61	8.47	8.05	7.03	10.04	8.1	9.49	7.36	8.39	
Med-Education	3.67	2.43	1.6	1.32	4.08	2.08	2.96	1.62	2.6	
High-Education	7.13	5.88	5.76	4.68	7.55	5.52	7.18	5	5.11	
<b>Rural Households</b>										
Employee Male	-1.66	-2.54	-3.67	-3.82	-1.27	-2.87	-2.38	-3.53	-2.07	
Female-Headed	4.14	2.69	2.56	1.67	4.55	2.35	3.93	1.98	3.47	
Self-Employed	-0.32	-1.41	-2.03	-2.61	0.07	-1.74	-0.72	-2.32	-0.73	
Other	-1.3	-2.33	-3.01	-3.52	-0.91	-2.66	-1.71	-3.23	-2.12	
Employer	5.72	4.52	3.38	3.48	6.14	4.16	4.76	3.79	4.15	