

Impact of Economic Policies on the Labour Market and Women's Poverty

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Abstract

This study focuses on the Republic of South Africa. We built a CGE model coupled with a micro simulation module to assess the statistical effects of these economic policies on the evolution of well-being and poverty. We are particularly interested in seeing how women and the female labour market will be affected. The model that takes into account certain market imperfections (notably unemployment) and include a gender-racial skilled labour market. The study analyses the impacts of two economic policy measures. After almost two terms of office of President Zuma, who left the country in a catastrophic state in terms of public finances, the new Ramaphosa government was forced to increase indirect taxes. This economic policy measure is the subject of our first scenario. On the other hand, the government is looking for 5% cuts by 2020-2021 and this economic policy measure is the subject of our second simulation. Our study reveals that the impact of the two policies has negative effects on the well-being of the agents and increases poverty levels. On the one hand, the first simulation is favourable only for the public agent that will see the fiscal increase, however it reduces the welfare of the rest of agents and mainly of households; the results also show that this reform does not pro-growth, but that some categories of employment are positively affected. On the other hand, the second simulation leaves negative effects for all agents and increases poverty levels. In the same way, this reform does not pro-growth either, but the employment of the female labour force is increasing in 13 of the 21 sectors. Nevertheless, this policy would reduce the government's negative balance to around 70%.

Keywords : Computable general equilibrium model, Inequality, Labour market, Poverty, Indirect taxes, Women, South Africa

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1. Introduction

Problems such as poverty, unemployment and inequality are realities in developing countries and it is therefore not surprising to have more and more studies focusing on poverty or inequality analysis. In addition, in the last years many studies have included the gender dimension in their analysis. This study focuses on the Republic of South Africa, a country first known for its apartheid regime, which although abolished in 1994, has left a very deep legacy within the country. For years, the country has faced considerable poverty and inequality, particularly among the black african population. In 2009, the country embarked on a "New Growth Path" which was introduced into a National Development Plan (NDP) that envisages what a South African society should look like by 2030. In this NDP, South Africa has committed itself to eradicating extreme poverty and reducing inequality. In addition, the country also includes in its NDP the objectives of the Millennium Development Goals (MDGs), defined at the United Nations Millennium Summit. The first three objectives³ are directly linked to reducing inequalities in education, poverty and gender equality in the labour market. Therefore, reducing inequalities by 2030 has become a major objective for South Africa. Since attaining democratic rule in 2014, the government has applied measures and policies to promote economic growth, reduce inequality and poverty in order to build a more equal and multiracial society. Compared to the rest of Africa, South Africa remains one of the richest and most developed countries on the continent. However, as already mentioned, the legacy of the apartheid regime has left the country in a complicated situation characterized by high levels of inequality, poverty and unemployment. In addition, problems such as unemployment or poverty are often not racial-gender-neutral. This hypothesis is confirmed by the statistical data obtained for South Africa.

Unemployment is currently a major problem in South Africa. According to the labour force survey (LFS), the official unemployment rate has been relatively high since 2008. In the last decade, the rate has increased from 23.2% in 2008 to 27.2% in 2018; throughout this period, the unemployment rate was higher amongst women than men. In the second quarter of 2018 LFS indicates that the rate of unemployment amongst women was 29.5% compared with 25.3% amongst men. Likewise, the percentage of young people aged 15–34 years old who were not in employment, education or training (NEET) increased and once again this increase was higher for women than for men in all population groups⁴. In fact, in 2017 and 2018 the highest NEET rate of over 40% was recorded among african females. In terms of poverty, national statistics show differences between different population groups. In effect, statistics indicate that the poverty headcounts of the different population groups according to the upper bound poverty line in 2015 were: African (64.2%); coloured (37.1%); Asian/Indian (5.9%); and white (1.0%) (Statistics South Africa, 2017). According to the living conditions survey (LCS) 2014/15 approximately 40.0% of South Africans were living below the upper-bound poverty line (UBPL). Meanwhile, a World Bank report in collaboration with the Government of South Africa by Sulla and Zikhali (2018) assesses poverty and inequality in South Africa between 2006 and 2015. The report indicates that the difference between rural and urban poverty rates is about 40

³ Eradicate extreme poverty and hunger, promote universal primary education, and promote gender equality and women's empowerment

⁴ Throughout the paper we will follow the South African typology which groups races into four population groups: african, coloured, indian and white.

percentage points during this period. In 2015, poverty is consistently higher among South Africans living in rural areas (65.4 per cent) than among those living in urban areas (25.4 per cent). Likewise, in terms of gender differences, the report highlights that poverty is higher among people living in female-headed households (51.2%) than among those living in male-headed households (31.4%). Besides, South Africa is one of the most unequal countries in the world, the inequality of wealth in this country is high and has been increasing over time. If we look at the evolution of the Gini index in recent years, this indicator increased from 57.80 in 2000 to 63 in 2014 (World Bank, 2019). Levels of inequality can be observed not only in terms of wealth, but also in terms of education, poverty or even in the labour market. For their part, Leibbrandt et al. (2010) stated that 85% of income inequality is due to labour market income, and that unemployment is the engine of inequality. Given the racial divisions in South Africa, income disparities are expected to show a racial and gender footprint within each population group.

Gender can intersect with different sources of disadvantage, such as lack of education, place of residence and ethnicity. It is therefore important to highlight biases in the distribution of resources and economic opportunities. Authors such as Hollenbeck (2001) or Spaul (2013), affirm that the type of occupation in the labour market would have a strong association with the level of education. From this perspective, we have seen that the quantity of men and women who do not have an education remains fairly equal according to gender, but it is very unequal according to population groups, for instance 20% of African women have no education, while only 7 and 9% of Indian and white women do not (See table 1).

Gender biases can also be found in the labour market, where women tend to be less involved. According to the World Bank 2019, women's labour force participation rate is lower than men's (53.45% versus 65.99%). In addition, there are jobs defined as vulnerable. According to ILO estimates (2019), women in these jobs represent 10.16%, while in men the percentage is lower (9.35%). This is explained, among other factors, by the higher proportion of women in the category of "unpaid family workers" (ILO, 2019). Likewise, employers who have the type of employment defined as "self-employment" represent 7.62% in male workers while only 2.69% in female workers (ILO, 2019). In addition, women work in a narrow range of sectors and occupations. According to ILO 2019 estimates for South Africa, the female workforce is larger than the male workforce only in the service sector (85.34% vs 61.88%). In the industrial sector, the male workforce represents almost three times the female workforce (32% vs 12%). The agricultural sector is the smallest sector in the South African economy, accounting for 6.24% of the male workforce and 3.30% of the female workforce. Another important feature in South African labour market is the high levels of the informal economy. Indeed, 1/3 of total employment is in the informal sector where female participation is important. A finer cross-sector breakdown of the service industry and women's participation in the labour market indicates that the female labour force is superior to the male labour force in three sectors: Community, social and personal services (0.62%), wholesale and retail trade (0.52%), and private households (0.80%). (See table 2). Finally, there are gender and population group disparities according to the occupation of the workers; in fact, basic occupation and domestic employment are mainly occupied by women, whose proportion of African women is

the highest (See table 3). It should be noted that these basic occupations are often not well paid, which could complicate the financial situation of african and coloured women.

On the basis of these facts, we can state that, although South Africa has made progress in reducing poverty levels, the levels are very unequal in the different areas of the country according to population groups and gender. This study will allow us to analyse the impact of public policy measures on both the labour markets and women.

2. Literature Review

Plenty of research has focused on studying inequalities, particularly in areas such as education and the labour market. According to Hollenbeck (2001), the educational level of individuals can be important for reasons of equity, indeed according to this author, in developing countries education has a very strong link with the economic situation and therefore an individual's educational level can be the key to their economic situation. In addition, Pavalavalli and Ramesh (1997), argue that women's level of education is a very strong predictor of attempting to reduce infant mortality and morbidity. In Africa, studies on gender-based work show significant differences between men and women (Admassie, 2003). He indicates that women and children in rural areas of Ethiopia are expected to perform a multitude of tasks, which often exceed their physical capacities, even at the expense of their education.

In the case of South Africa, Spaul (2013), affirms that there is a direct correlation between quality, duration and type of education and labour market prospects. « Poor school performance reinforces social inequality and leads to a situation where children inherit the social status of their parents, irrespective of their motivation or ability » (Spaul, 2013). Similarly, Borat (2004) shows a very strong correlation between unemployment and educational attainment South Africa. In addition, Topel (1999) argues that the incomes of poor households are increasing at a slower rate than those of non-poor households, leading to an increase in income inequality. These income inequalities would lead to a weakening of long-term economic growth.

In a context of international crisis, particularly that of 2008, most countries have opted to implement economic reforms, including tax-based reforms, but raising or creating taxes or, removing taxes, will undoubtedly have consequences. In terms of reforms taxes, several studies have highlighted the potential effects of tax reforms on poverty and inequality particularly with CGE models. In a study of Norway with a dynamic CGE model, Bye et al. (2012) indicates that the introduction of a uniform VAT leads to welfare gains for households while the introduction of a non-uniform VAT affects the welfare of households. Kearney (2003), points out that the removing food taxes can provide immediate relief from poverty, as there is a positive effect on well-being. Llambi (2016) studies the impacts of a reduction in VAT and the elimination of taxes on intermediate consumption and health in Uruguay. This study use a static CGE coupled with a micro simulation model, and concludes that such a reform would lead to a 1% increase in GDP.

Some authors are pro tax increase reforms, indicating that through tax increases, a country's population and economy could withdraw benefits. In this regard, Benjasak et al. (2017) built a CGE model to assess the effects of the VAT and corporation tax reform. The authors conclude that a VAT increase of 7% to 10% has positive effects on household welfare.

Muñoz and Cho (2003), show that the tax increase reform for Ethiopia did not have a major negative impact on the poorest 40 percent of the population. However, there are examples where the scenario is not positive at all. In this regard, Ardic et al (2010) argue that the increase in indirect taxes in Turkey's economy is unfavorable for the poor, raising concerns of inequality. Emini et al. (2006) study the introduction of a gradual introduction of VAT with a static CGE model. They conclude that this tax reform has led to increased poverty in Cameroon. Kearney (2005) also suggests that a zero rate tax on food should be accompanied by an increase in direct taxes in order to avoid a decline in government revenues.

So far, the literature review shows that the effects of tax reforms on the economies of countries vary widely from country to country according to the type of reforms, but also according to the economic structure of each country. However, most studies agree on two aspects: on one hand, the introduction of VAT is generally detrimental to households and therefore detrimental to production. On the other hand, only tax reforms that reduce or suppress tax rates have clear positive effects on GDP, and poverty.

In the specific case of South Africa, the issue of taxation has not been addressed specifically with CGE models, according to our knowledge only Go et al (2005), et Mabugu et al (2015) approach this subject. Go et al. (2005) use a CGE model to analyze income distribution effects of possible reforms to South Africa. The authors indicate showing that the VAT is mildly regressive and is an effective source of government revenue, compared to other tax instruments in South Africa. For their part, Mabugu et al (2015) use a dynamic CGE model linked to a microsimulation model to analyze fiscal policy instruments and their implications for poverty and inequality, the authors propose a scenario of fiscal change under a fiscally consolidated framework, i.e. full recovery of tax reductions and exemptions. Their results indicate that increasing VAT and redistributing income to poor and extremely poor households generates pro-poor outcomes. Contrary to tax studies in South Africa a wide variety of CGE models are used to target trade liberalization and tariff reduction. Lepelle et al. (2017) study the differential effect of trade liberalization. The authors found that a decline in tariffs in South Africa had a negative effect on female and male employment. In addition, the effect was more severe for women during the period 1996-2011. They found that trade reform reduced employment in manufacturing for both men and women, but its effect was significantly stronger for women. Other studies use CGE models to integrate the gender dimension and analyze how trade liberalization and international crises affect poverty levels. For example authors such as, Chitiga et al. (2010) approach this subject. They present an integrated CGE microsimulation model with explicit incorporation of non-commercial activities and gender decomposition to assess the impacts of tariff elimination on men and women in South Africa. The findings reveal a strong gender bias against women with a decrease in their participation in the labour market and an increase in poverty levels.

Maisonave et al; (2015) use a CGE model to analyze the impact of the 2008 international economic crisis on child poverty in South Africa. The authors show that a decline in world prices, combined with a fall in world demand, has led to a decline in output in most sectors. This reduces employment and the unemployment rate increases, which is now a reality for South Africa. Similarly, women living in rural areas are the most affected by poverty. « Even if the crisis only lasts for 2008 and 2009, its effects will remain long after that, partly due

to the permanent effect of the decline in investment » (Maisonnave et al, 2015). Fofana (2015) proposes a CGE to evaluate the increase in oil prices in South Africa from a gender perspective that integrates domestic production. The author indicates that although the 2007-2008 energy crisis contributed to slowing South African gross domestic product (GDP) growth and reducing employment and income, the distributional impact between men and women has been neutral.

Another major problem in some governments around the world is that they have very high levels of public deficit, the economic measures taken by countries in these circumstances can be decisive for the development of a country. On one hand we have countries that seek to reduce their public debt and on the other hand we have those that do not give it much importance or urgency. As mentioned earlier in the introduction, South Africa has initiated a decrease in public spending in the country, which aims to reduce the public deficit that has not stopped growing in recent years.

Literature review tells us that through public spending the government can make investments that boost and promote the economic growth of a country, as well as contribute to employment and ultimately the welfare of citizens. According to Scott (2011) Public expenditure is an instrument that serves to promote economic growth; human development and promote its equity. Ariel and Barraud, 2013 indicate that public expenditure is reflected in public policies aimed at improving the well-being of the population, especially the poorest groups. Likewise, public spending on infrastructure helps to reduce poverty levels. Some authors indicate that public expenditures positively influence poverty reduction. Zidouemba and Gérard (2015) use a dynamic CGE model to investigate the effects of public investment in the agricultural sector and food security in Burkina Faso. They show that public investment in the agricultural sector is conducive to improving the country's economic growth and reduce rural poverty. For their part, Andan and Bevan (2015) propose a dynamic CGE model to explore the macroeconomic implications of public investment and tax reforms in an environment where the tax system is distortionary. The authors show that output growth drops sharply (from 13.0% to only 1.9%) when the increase in public investment is not accompanied by a proportional increase in operating and maintenance costs, a situation that often occurs in developing countries. However, a higher tax rate (of between 0.2 and 1.5 percentage-points) is required to maintain baseline O&M levels. This suggests that the shortfall in operating expenditure is more damaging. Feltenstein et al (2015), also propose a dynamic CGE model to analyze tax evasion, public infrastructure provision and growth. The results for the Mauritian economy indicate that the increase in public spending on infrastructure to 10% of GDP, combined with the corresponding decrease in current expenditure, translates into a significant increase in real GDP (around 0.8% per annum), a slight improvement in the trade surplus and a reduction in the budget deficit and interest rates. However, the authors stress that this is only due to the improvement in private sector productivity and not to the increase in direct expenditure.

It should be noted that South Africa's fiscal deficit as a share of national GDP is higher than the average for emerging markets and developing economies as a group. Moreover, given the country's complicated financial situation and revenue shortfall, there is a substantial increase in global public debt. According to IDC report (2019), the gross debt of government loans is expected to increase by almost 31%, from 2.81 trillion rubles in 2018/19 to 3.68 trillion rubles over three years. Reducing public spending helps achieve fiscal balance, but there is doubt about the effect that such a reduction may have on the economy and particularly for households. In a

state where public spending represents a high percentage of GDP, the effect can be devastating. Last but not least, there is literature pointing out important differences between male and female-headed households according to their population group, as well as the existence of highly vulnerable groups, particularly women and children. A work using new data on South Africa and other countries in Sub-Saharan Africa by Charmes 2006, provided evidence that women have to work more than men in Sub-Saharan Africa. In a review of UN surveys on time use, Charmes (2006) estimates that women's domestic working time reached 40.0 hours in South Africa.; In addition, Budlender's study (1997) shows that 75% of black women work in the informal sector and 82% of these women are in basic activities.

Based on these important considerations, the objective will be to analyze the effects of these two public policies (increase in VAT and decrease in public expenditure) on the evolution of poverty, gender inequalities and well-being. The analysis places particular attention to the effects on the labour market based on gender, the population group and the skills of the workers.

3. Model and Data

3.1.CGE model

To evaluate the impacts of fiscal reforms on women's work and poverty, we use the PEP 1-1 model from Decaluwé et al (2009), but several assumptions have been adjusted to adapt to the focus of our paper on gender and to the case of South Africa.

In line with the Social Accounting Matrix (SAM) we used, the model has 21 activities and commodities. Constant returns to scale presented in a four-level production process is assumed for the production function technology. At the first level, for each activity, production is a Leontief type of function of value added and intermediate consumption. At the second level, we assume that composite labour can be substituted with capital following a Constant Elasticity of Substitution (CES) type of function. In our SAM, labour is disaggregated between skilled, semi-skilled and low-skilled. To take into account the South African labour market characteristics, each sectoral labour demand is disaggregated by population group. For historical reasons, job opportunities for the same skill level have not been the same for a White worker as for another race. Therefore, at the fourth level, for each skill category, the labour demand is a CES between the different population groups (African, Coloured, Indian and White). Finally, at the fifth level, for each population group, men and women workers are imperfect substitutes.

The model distinguishes four different institutions: households, firms, the government and the rest of the world. Households are also disaggregated in such a way that we have one representative household for male headed households and female headed households. They retrieve their income from labour income, capital income and transfer income. Their consumption behaviors are specified with a linear expenditure system (LES) of the Stone (1954) type. The income structure is different when households headed by men or women, the main source of income for both is the income from the labour factor, however this represents a more important part in the income of men than in women (86.6% vs. 71.6%), on the contrary, the rest of the income constituted by transfers from government, companies and the rest of the world that are greater in households headed by women. In the same way, the structure of expenses is

also different, both for female and male households, the main expense is made in final consumption goods, however consumption represents a more important part in women's expense than in men's (87.9 vs. 81.7). As for the rest of this agent's expenses (payment of direct taxes and transfers to other economic agents), these represent a more important part of men's expenditure. (See table 4 and 5). Firms' income is based on transfers from other institutions and mainly on capital income. They pay income taxes and dividends and the remaining income constitutes firms' savings. Government's income comes from three different sources; it collects direct taxes from households and firms, indirect taxes (import duties, taxes on commodities & taxes on production) and transfers from other institutions. Government consumption spending is mainly on the non-tradable sector's production. Its savings is equal to its income less its consumption and transfers paid to other institutions.

South Africa is faced with high unemployment problems (27.6% in 2017 according to the OECD), and the unemployment rate is relatively higher for women than men. Following Blanchflower and Oswald (1995), we assume that there is an equilibrium wage rate compatible with the unemployment rate. The authors show the existence of an empirical relation linking wage rates and unemployment rates, also called "wage curve". The relation shows a negative slope between unemployment rates and wage rates. Kingdon and Knight (2006) have econometrically estimated a wage curve for South Africa. They find the same result as Blanchflower and Oswald and, specifically, that a 10% increase in the unemployment rate leads to a 1% decrease in wages. We used the Kingdon and Knight results in our parameterization of the wage curves. To link South Africa and the rest of the world, we use the traditional approach of CGE modeling. Trade is modelled based on the assumption of imperfect substitutability of commodities given their origin (the Armington assumption). On the exports side, to increase their market shares, South African producers need to be more competitive than other producers. Therefore, we assume that export demand has a finite elasticity, reflecting the competitiveness of local producers on the international markets.

In terms of closure rules, we assume that the nominal exchange rate is the numeraire of the model. Labour is mobile across sectors while capital is sector specific. Government's spending is fixed as well as the current account balance. Finally, following the small country assumption, world prices are fixed.

3.2.Data

The social accounting matrix (SAM) we use is that of Davies and Thurlow (2012). For the purpose of our study, using used in this study was constructed using the national accounts and the labour force survey from Statistics South Africa, we disaggregated the SAM from Davies and Thurlow (2012) to include firstly a skilled labour market. In this base SAM, we had 49 production sectors that produce 85 goods and services, we aggregated these accounts, notably to have a correspondence with an external 2011 matrix for South African industry that includes only 27 production sectors. Our final matrix includes 21 activities and 21 products (See table 3). Concerning production factors, they are labour and capital. To include a gender-racial skilled labour market, we calculated distribution keys in percentages of the labour force from the external 2011 matrix of the South African industry by gender, occupation and

population group for each activity (See table 4). These weights were then reported to the aggregate data into the base SAM (Davies and Thurlow, 2012). Finally, we have 24 categories of labour and one account for the capital factor.

Agents' accounts consist of tax accounts and institutional accounts. Taxes include four types of taxes: direct taxes, indirect taxes, import taxes and producer taxes. The different institutional accounts are: households, firms, government and the rest of the world. In turn, income elasticity of demand was estimated using microdata from Burger et al. (2017). Finally, for production and for the Armington and CET elasticity, we used the estimations based on Lee Gibson (2003).

3.3. Micro simulation module

In recent years, different approaches have been presented using CGE models to analyse poverty. We developed a micro module that integrates a gender decomposition. The idea of combining CGE modeling with a micro-household model (microsimulation) that provides the basis for counterfactual analysis of public policies and their impact on poverty. Therefore, in addition to measuring the intersectoral effects between different sectors of the economy and the interactions between institutions thanks to the CGE model, the Top-Down approach of our micro-module will allow us to carry out microeconomic analyses to evaluate the impacts of fiscal policies on poverty in men and women using standard money-metric techniques such as the Foster-Greene-Thorbecke (FGT) indicators.

4. Analysis of results

4.1. Macro results

With regard to macroeconomic results, the majority of the results of our two simulations do not favour the South African economy, the following table summarizes the results.

Table 6-Macro Results

	Simulation 1 Variation en %	Simulation 2 Variation en %
Real GDP at basic prices	-0.03	-0.19
Consumer price index	0.03	-0.66
Real consumption budget of households	-0.08	-0.40
Total investment expenditures	0.16	4.53
Unemployment rate	0.29	3.36

Source: Calculations based on the CGE model

As for the first simulation, the VAT increase causes some unfavourable effects. First, this policy produces a 0.03% decrease in real GDP, accompanied by a general increase in the level of goods prices of 0.03%. The combination of these two situations can lead to a deterioration in the purchasing power of economic agents, for households the real consumption decreases by 0.08. As for simulation 2, we have a decrease in real GDP which is even more important (0.19%). Despite having a general decrease in the price level of goods of 0.66%, the

real consumption of households falls from 0.40. This situation would make us think that the effects on this agent are harmful. As for unemployment, it increases in both simulations, however the increase is much more marked in the second simulation (0.29 vs 3.36%). Finally, we have a positive impact on the total investment in both simulations, which is more important in the second simulation than in the first (4.53% vs 0.16%).

4.2.Sectoral results:

a) Simulation 1: (VAT increase from 14 to 15%)

The sectors most affected are those that have been affected by the increase in VAT, but the effect extends to all sectors of the economy. Indeed, there is a decrease in the demand for composite work in almost all sectors of the economy, except only three: construction, electrical machinery, and other non-metallic mineral products (See table 7). However, if we look at the demand for labour according to the level of qualification by sector, we find that there is an increase in the skilled labour force in two more sectors (basic metals iron/steel and the public sector) which mainly benefits white and Indian workforce. Likewise, on the women's side, an analysis of the sectors where we have increases in the labour force by population groups reveals that there are significant differences. Firstly, the increase in the public sector is favourable only for female skilled white workers, but it should be noted that the increase in this sector is even more favourable to male workers. Secondly, the increase in demand for labour in the other three sectors (construction, electrical machinery, and other non-metallic mineral products) benefits all female population groups. However, indians and whites women are the most benefited. With respect to african and coloured women, it is the construction sector that favors more employment in them, particularly for semi-skilled and unskilled categories. In short, although there is a general decline in the labour force, it is the skilled workers who are least affected.

Then, with the exception of only three economic sectors, we have a decrease in the global demand for labour so the number of hours worked also decreases. Considering now that the demand for capital (KD) remains fixed in all sectors, and that value added (VA) is a combination of labour and capital, there will be a variation in added value in all sectors that will follow the trend of labour factor changes, so overall the added value also decreases, among the most affected sectors we have: manufacture of textiles and wood (-0.09%), agriculture (-0.06%), water (-0.06%) and petroleum (-0.10%). In addition, given the overall price increase due to the tax increase, demand is expected to decline. We have a decrease in demand for locally produced goods and services (DD) in 17 of the 21 economic sectors. Thus, the decrease in VA and the decrease in demand for goods and services will lead to a decrease in total production (XT) in all sectors, except only in 3 of the 21 sectors (construction, electrical machinery, and other non-metallic mineral products). Once again among the most affected sectors we will have those sectors that suffered the most significant decreases in the labour force (manufacture of textiles and wood, agriculture, water, and petroleum). Finally, if production decreases, then intermediate consumption must also decrease since we need fewer intermediate products to complete the level of production (See table 9). Similarly, since the current account balance is exogenous, the price increase leads to a decrease in exports (EX) for all sectors, as well as a decrease in imports (IM) however imports in some sectors increase (non-metallic mineral products, basic metals iron/steel, electrical machinery, and construction). This suggests that due to the increase in local prices the consumer prefers to replace his consumption with imported products in these four sectors.

Table 9 - Sectoral effects (Simulation 1)

Sector	XST	CI	DD	EX	IM	Q	VA
Agriculture	-0.06	-0.06	-0.07	-0.01	-0.09	-0.07	-0.06
Mining and Quarrying	-0.02	-0.02	-0.04	-0.01	-0.05	-0.05	-0.02
Food	-0.04	-0.04	-0.04	-0.04	-0.03	-0.04	-0.04

Manufacture of Textiles and wood	-0.09	-0.09	-0.07	-0.09	-0.04	-0.06	-0.09
Petroleum	-0.10	-0.10	-0.09	-0.08	-0.08	-0.09	-0.10
Other non-metallic mineral pro	0.02	0.02	0.02	-0.02	0.03	0.02	0.02
Basic metals iron/steel	-0.01	-0.01	0.02	-0.03	0.03	0.02	-0.01
Electrical machinery	0.04	0.04	0.04	-0.01	0.07	0.05	0.04
Radio and medical	-0.05	-0.05	-0.02	-0.05	-0.01	-0.01	-0.05
Transport equipment	-0.04	-0.04	-0.01	-0.06	0.02	0.01	-0.04
Other Manufacturing	-0.04	-0.04	-0.06	-0.04	-0.06	-0.06	-0.04
Electricity	-0.04	-0.04	-0.04	0.01	-0.09	-0.04	-0.04
Water	-0.06	-0.06	-0.06	-0.03	-0.06	-0.06	-0.06
Construction	0.06	0.06	0.06	-0.02	0.09	0.06	0.06
Trade, transport, and Communications	-0.03	-0.03	-0.05	-0.01	-0.06	-0.05	-0.03
Hotels and restaurants	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
Financial Intermediation and real estate	-0.03	-0.03	-0.04	-0.01	-0.04	-0.04	-0.03
Bussiness activities	-0.02	-0.02	-0.02	-0.02	-0.01	-0.02	-0.02
General government	-0.01	-0.01	-0.01			-0.01	-0.01
Health and social work	-0.04	-0.04	-0.04	-0.02	-0.04	-0.04	-0.04
Other activities/services	-0.03	-0.03	-0.07	-0.01	-0.09	-0.07	-0.03

Source: Calculations based on the CGE model

Notes: XST=Production, CI= intermediate consumption, DD=domestic demand, EX=exports, IM=imports, VA=value added, Q=domestic production

In relation to the results obtained in terms of unemployment and wages. On the one hand, we have an increase in unemployment for all categories of work in our model. However, the gender and population group analysis allows us to note that there are particular differences within each category of work. First, we find that the increase in unemployment is more pronounced among women (0.29%) than among men (0.28%). In addition, the results by female population groups indicate that the increase in unemployment mainly affects skilled indian and white women (0.50% and 0.63%) and unskilled colored women (0.34%). As for african women, we have the smallest increases in unemployment, mainly for unskilled and semi-skilled women. (0.10% and 0.08%). On the other hand, given the wage curve we used in the model, wages are inversely related to unemployment outcomes. On average there is a decrease in the real wage rate which is slightly higher in the female than in the male labour force. However we can see that in some categories we have real wage increases. As for women in 6 of the 12 labour categories the wages increase. Although we have increases in wages, the decrease in wages is proportionally more significant, mainly the decrease in the skilled labour of indians and white categories. This could be explained by the fact that these categories of labour absorb more of the liberated labour force in the South African economy after shock. As a result, within the category of skilled work for women, wage rates decline for all population groups, with the sole exception of african labour, which has not benefited from increased demand for labour.

b) Simulation 2: (5% decrease in public spending)

The sector directly affected in this simulation is the public administration sector, which is also highly labour-intensive. In fact, the participation of labour in the added value is around 90% for this sector, so the shock will significantly affect the labour factor and production of this sector. However, the effect on the public sector extends to all sectors of the economy. Indeed, in view of the decrease in the labour factor in this sector of the public administration, there will be a freeing up of labour which will have to look for work in other sectors of the economy.

In terms of the effects on sectoral added value. Firstly, in the public sector we have a 4% reduction in the labour force and we have the demand for capital which remains constant.

So, the value added resulting from a combination of these two production factors will be negatively affected and we see that this decreases by 3.42% as does the production of this sector. Secondly, the effects on the rest of the labour-intensive sectors could be positive, as the public sector has freed a large number of workers. It should be noted that, the most sectors in the South African economy use an important part of the labour factor in their production. The results indicate that production and value added increase in 15 of the 21 economic sectors as well as intermediate consumption. Finally, for the remaining 5 sectors, we see that overall demand for labour decreases as well as the value added and production. However, we should note that the most important effect is the reduction of labour factor in the public administration sector by 4% which is proportionally more important than any of the increases in the other sectors (See table 10).

Table 10 - Sectoral effects (Simulation 2)

SIMULATION 2	XST	CI	DD	EX	IM	Q	VA
Agriculture	0.01	0.01	-0.13	0.82	-0.99	-0.18	0.01
Mining and Quarrying	0.80	0.80	0.87	0.80	0.56	0.76	0.80
Food	-0.06	-0.06	-0.14	0.86	-0.73	-0.20	-0.06
Manufacture of Textiles and wood	0.27	0.27	0.18	0.93	-0.54	0.02	0.27
Petroleum	0.17	0.17	0.06	0.84	-0.31	-0.03	0.17
Other non-metallic mineral pro	1.67	1.67	1.82	1.02	1.84	1.83	1.67
Basic metals iron/steel	1.57	1.57	2.11	1.28	2.11	2.11	1.57
Electrical machinery	2.76	2.76	2.59	2.15	2.30	2.49	2.76
Radio and medical	0.68	0.68	0.94	1.02	0.70	0.76	0.68
Transport equipment	1.32	1.32	1.57	1.25	1.38	1.47	1.32
Other Manufacturing	0.31	0.31	0.56	0.73	0.21	0.44	0.31
Electricity	0.18	0.18	0.18	0.91	-0.78	0.17	0.18
Water	-0.08	-0.08	-0.08	0.98	-0.50	-0.08	-0.08
Construction	3.02	3.02	2.95	1.52	3.13	2.95	3.02
Trade, transport, and Communications	0.29	0.29	-0.20	0.95	-0.56	-0.30	0.29
Hotels and restaurants	-0.39	-0.39	-0.47	0.95	-1.08	-0.50	-0.39
Financial Intermediation and real estate	0.28	0.28	0.24	0.99	-0.19	0.22	0.28
Bussiness activities	-0.21	-0.21	-0.21	0.96	-1.19	-0.25	-0.21
General government	-3.42	-3.42	-3.43			-3.43	-3.42
Health and social work	-0.43	-0.43	-0.48	1.06	-1.03	-0.48	-0.43
Other activities/services	0.28	0.28	0.09	0.71	-0.64	0.06	0.28

Source: Calculations based on the CGE model

Notes: XST=Production, CI= intermediate consumption, DD=domestic demand, EX=exports, IM=imports, VA=value added, Q=domestic production

In relation to the results obtained in terms of unemployment and wages. On the one hand, the results show us that there is a general decrease of wage rates driven by sectors that free labour, mainly the public administration sector. Indeed, the dismissed workers will seek employment in the other economic sectors, which will take advantage of the availability of the labour factor to lower wage rates. In short, we can say that the effect on the public sector extends to all sectors of the economy and leads to a deterioration of wage rates for all labour categories that decrease by an average of 0.97 in the case of male labour and 0.98 for female labour. Additionally, we have that the most affected wage rates in the case of women are the rates corresponding to indian and white women that decrease around 2%. On the other hand, given the wage curve we used in the model, unemployment rates are inversely related to wages

outcomes. We find that, on average, there is a slightly higher increase in unemployment for women (3.43%) than for men (3.29%). The effects on unemployment by skill level indicate an increase in all categories of skilled and semi-skilled work, however there is an atypical result in unskilled work where unemployment decreases for both men and women.

4.3. Impacts on agents

As for the effect on economic agents, the first simulation is favorable for a particular agent (the government). We must remember that government income comes mainly from two sources: direct taxes representing 55% and indirect taxes representing 28% of total government income, the remaining 17% comes from sources such as import taxes, transfers from other agents and remuneration from the capital factor. In this sense, given the increase in VAT, we expect an increase in government revenues. According to our results, indirect tax revenues increase by a total of 0.64%. For its part, direct taxes from households decreased by 0.05%, as well as that of businesses by 0.06%. Likewise, government revenue from import duties decreased by 0.01%. However, the fiscal revenue of indirect taxes is proportionally higher than the decrease of other sources of revenue, as a result total public revenue increases by 0.14%. The introduction of VAT will generate additional revenue, which the government may redistribute. Since the balance is negative for the government and the expenditure is fixed in our model, what we have then is a reduction of this negative balance of 2.83%. As far as firms are concerned, we see that their income from the capital factor decreases and we know that capital is their main source of income, which is why we have a decrease in their total income and savings of -0.04%. Finally, in respect of South African households, given that the results indicate a decrease in wage rates in most labour categories, we expect a decrease in the level of income. The results confirm this hypothesis and indicate a greater decrease in income in male-headed households than in female-headed households (5.58% vs 5.19%). Moreover, this situation is aggravated by the general increase in prices, which has a negative impact on the household consumption budget. In other words, there is a deterioration in purchasing power that explains why consumption is falling in all sectors of the economy. However, it should be noted that consumption of some products is less affected than that of others, such as food or transport products. This result is not surprising, as these sectors are exempt from VAT increases. We also note that the consumption of food products is the least affected in households headed by men and women, for both consumption decreases by 0.04%. This would suggest that food security in the country will not worsen despite the decrease in household income.

As for the second simulation, the effects for the government are not entirely favourable. We have a decrease in all sources of fiscal revenue, with the only exception of revenue from import duties which increase by 0.67%, however this is not the main source of revenue. In sum, total government revenue decreased by 0.62 per cent, as did final public consumption of products which falls by 3.78%. In the accumulation account of the government agent, we probably have the most salient effects. As mentioned above, the savings balance is negative and the level of public spending remains fixed. Therefore, the government's decision to reduce the level of public spending to reduce the level of public debt should have a substantial impact on the accumulation account. The results show a reduction of this negative balance of about 70%. This suggests that this economic policy responds favourably to the Government's objective of reducing the public deficit. As for the companies, we see that the effects for them are also

negatives. We have a decrease in their income by the capital factor by 0.49% and a decrease in the transfers received by 0.78%, in total their income decrease (0.54%), as well as the decrease in savings of 0.55%. Finally, in respect of South African households, given that the results indicate a decrease in wage rates in all labour categories, we expect a decrease in the level of income. The results indicate a decrease of 1.16% in the income of male-headed households, and a drop of 1.01% for the income of female-headed households. This situation could be reversed thanks to the general decline in prices in the economy. However, we see that the fall in income is proportionally greater than the fall in prices, which will have a negative effect on the real household consumption budget. In other words, there is a deterioration in the purchasing power of South African households that is slightly higher in male-headed households than in female-headed households (0.51% vs 0.30%). Similarly, the results of consumption by product show that consumption only increased for households headed by women in one of the 21 economic sectors, it is the consumption of public sector goods that increased by 0.06%. In male-headed households, consumption is negative for all 21 economic sectors (See table 10). Finally, household savings that are defined as a fixed proportion of income will vary according to income variation. We therefore have that savings decreases in the same proportion as income decreases, for households headed by men and women.

4.4. Poverty impact

To assess the evolution of poverty, we analyzed the evolution of the FGT0, FGT1 and FGT2. These indicators reflect changes in the incidence of poverty, the depth of poverty measured by the poverty gap, and the severity of poverty. The following graph summarizes the results obtained from the microsimulation module.

Figure 1 – Poverty effects



Source: Calculations based on the Micro simulation model

Notes: S1=Simulation 1, S2=Simulation 2, BASE=Baseline scenario

The results of the first simulation show an increase in our three poverty indicators with respect to the baseline scenario. In addition, the results suggest that the increases hurt women more than men. Indeed, we have a 3.1% increase in the number of poor and a 1.3% increase in the depth of poverty in female-headed households; these increases are smaller in male-headed households (2.5% and 1.0%). Moreover, the increase in the proportion of women in poverty

severity is 0.2 percentage points higher than the increase in the proportion of men (0.9% versus 0.7%).

With respect to the second simulation, the results also show an increase in the three poverty indicators, however the effects are smaller with respect to the previous simulation. The analysis of the poverty indicators shows an increase in the number of poor by 0.01% for men and 0.05 for women. Similarly, we have an increase in the depth of poverty by 0.23% for women and 0.18% for men. In terms of poverty severity, which in the baseline scenario is already higher in female-headed households than in male-headed households, we also have an increase. However, the severity of poverty affects female-headed households more than male-headed households with respect to the initial situation. (0.18% vs. 0.13%). It should be noted that both policies had the greatest impact on poverty in female-headed households. Furthermore, poverty levels are already higher in the baseline situation for women than for men.

5. Conclusions

This study provides some ideas on the effects of two current public policies for South Africa on growth, household income, consumption, and savings. We found that the most negative effects would concentrate on households. The first simulation leaves negative results in production, exports, and a fall by 0.03% of real GDP which suggests an unfavorable macroeconomic scenario. Sectorially in this simulation, in this simulation we have that the sectors most affected are those that have been affected by the increase in VAT, but the effect extends to all sectors of the economy. In fact, there is a decline in the demand for composite labour in all sectors except in only 3 of them: construction, electrical machinery and other non-metallic mineral products. However, if we look at the demand for labour by sectors for the workers according to their skills and their population group, we find that there is an increase in skilled and semi-skilled labour in 2 sectors more (business activities and public sector), nevertheless this increase benefits only two population groups in the case of women (Indian and white women). On the other hand, for most sectors we have a decrease in the labour force, which is proportionally larger than the increases in some sectors. This leads to a decrease in the composite labour force. In terms of employment, we find that the increase in unemployment is more pronounced among women (0.004%) than among men (0.03%). Although there is a general decline in the labour force, it is the skilled workers who are least affected.

On the other hand, the second simulation also presents a negative panorama. This time the real GDP decreases even more than in the previous simulation (0.19%). As we expected, the most significant effects occur in the government agent, since this is directly affected by a decrease in public spending. However, the effects extend to other sectors and economic agents negatively affecting their well-being. Likewise, despite the fact that the price level decreased by 0.66%. The decline in income was proportionally greater, affecting the purchasing power and consumption of all economic agents, particularly households. Besides, this reform does not pro-growth, but female labour force employment is increasing in 13 out of 21 sectors. However, the decline in labour force in the public administration sector is strong and undermines dynamics in the rest of the economy.

The evolution of poverty indicators confirms the dynamics of macroeconomic results. The latter already highlighted the fact that household incomes were decreasing, as was their consumption. This suggested a deterioration their well-being, which confirmed with the results in presence. In addition, in the two public policy scenarios studied in this paper, we have found that the greatest impact on poverty was in female-headed households rather than male-headed households. In the same way, by comparing the poverty situation before and after the shock, we see that poverty levels among women remain higher than among men. This is aggravated by the decline in male and female household incomes, suggesting that the policies studied in our two simulations increase poverty levels and harm the well-being of economic agents. These results are also in line with macroeconomic results, since unemployment is on the rise, except for some categories of work, real wages, on the contrary, tend to decrease which leads to a decrease in household income.

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Table 1- Household education level by race and gender, 2017 (percentage)

Education level	African		Coloured		Indian		White	
	M	F	M	F	M	F	M	F
No education	20%	20%	17%	15%	8%	9%	7%	7%
Primary school start	22%	21%	21%	18%	10%	12%	8%	6%
Completed primary school	5%	5%	7%	6%	2%	5%	2%	2%
Secondary beginning	30%	31%	32%	35%	27%	22%	17%	17%
Completed high school	15%	15%	17%	19%	34%	36%	33%	38%
Superior	6%	6%	5%	6%	17%	15%	32%	30%
Other and not specified	1%	1%	2%	1%	1%	0%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Source: Calculations based on the labour force survey 2017

Notes: M=Male, F=Female

Table 2: Main industry by gender, 2011 (percentage)

Main industry	Share of labour in %		Total Labour	Ratio M/W
	Men	Women		
Agriculture, hunting, forestry and fishing	0.7	0.3	1.0	2.2
Mining and quarrying	0.9	0.1	1.0	6.9
Manufacturing	0.6	0.4	1.0	1.8
Electricity, gas and water supply	0.8	0.2	1.0	5.5
Construction	0.9	0.1	1.0	7.0
Wholesale and retail trade	0.5	0.5	1.0	0.9
Transport, storage and communication	0.8	0.2	1.0	3.6
Financial intermediation, insurance, real estate and business services	0.5	0.5	1.0	1.2
Community, social and personal services	0.4	0.6	1.0	0.6
Private households	0.2	0.8	1.0	0.3
Other	0.7	0.3	1.0	2.5

Source: Calculations based on the labour force survey 2011

Notes: M=Male, F=Female

Table 3- Main occupation by population groups and gender, 2017 (percentage)

Employment status	African		Coloured		Indian		White		Total	
	M	F	M	F	M	F	M	F	M	F
Legislators, senior officials and managers	6%	3%	6%	6%	24%	15%	36%	21%	9%	5%
Professionals	3%	4%	4%	5%	12%	17%	15%	17%	5%	6%
Technicians and associated Professionals	6%	9%	8%	11%	13%	16%	14%	21%	7%	11%
Office employees	5%	13%	7%	21%	13%	36%	4%	30%	5%	16%
Sales in services & shops	17%	19%	11%	18%	14%	9%	7%	9%	15%	18%
Skilled work in agriculture and fisheries	1%	0%	0%	0%	0%	0%	2%	0%	1%	0%
Crafts and tying	20%	3%	20%	3%	12%	2%	16%	1%	20%	3%
Installation, operation and assembly machines	15%	2%	12%	4%	7%	2%	3%	0%	13%	2%
Elementary occupation	27%	27%	30%	22%	5%	3%	3%	0%	24%	24%
Domestic workers	1%	17%	0%	10%	0%	1%	0%	0%	1%	15%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Calculations based on the labour force survey 2017

Notes: M=Male, F=Female

Table 4: Household income sources by gender, based on SAM

	Male Households	Female Households
Income-transfers (from firms)	12.0%	22.5%
Income-transfers (from government)	1.3%	5.1%
Income-transfers (from rest of the world)	0.1%	0.9%
Labour-Income	86.6%	71.6%
TOTAL INCOME	100.0%	100.0%

Source: Calculations based on SAM

Table 5: Household expenditure structure by gender, based on SAM

	Male Households	Female Households
Transfers to firms	3.4%	1.8%
Direct taxes	14.7%	10.2%
Transfers to rest of the world	0.2%	0.1%
Final consumption	81.7%	87.9%
TOTAL EXPENDITURE	100.0%	100.0%

Source: Calculations based on SAM

Table 7 - Effects on labour force by gender and skills (Simulation 1)

	SKLF	SEKF	USKF	LF	LQH	LMQH	LNQH	LH	LDC
Agriculture	-0.18	-0.21	-0.2	-0.2	-0.18	-0.2	-0.21	-0.2	-0.2
Mining and Quarrying	-0.05	-0.07	-0.07	-0.07	-0.04	-0.06	-0.07	-0.06	-0.06
Food	-0.07	-0.09	-0.09	-0.09	-0.06	-0.09	-0.1	-0.08	-0.09
Manufacture of Textiles and wood	-0.1	-0.12	-0.12	-0.12	-0.09	-0.12	-0.13	-0.11	-0.12
Petroleum	-0.21	-0.24	-0.23	-0.22	-0.21	-0.23	-0.24	-0.22	-0.22
Other non-metallic mineral	0.08	0.05	0.05	0.05	0.08	0.06	0.05	0.06	0.06
Basic metals iron/steel	0	-0.03	-0.03	-0.02	0.00	-0.02	-0.03	-0.02	-0.02
Electrical machinery	0.06	0.03	0.03	0.04	0.06	0.04	0.03	0.04	0.04
Radio and medical	-0.05	-0.08	-0.08	-0.07	-0.05	-0.07	-0.08	-0.07	-0.07
Transport equipment	-0.05	-0.07	-0.07	-0.07	-0.04	-0.06	-0.07	-0.06	-0.06
Other Manufacturing	-0.1	-0.13	-0.13	-0.13	-0.10	-0.12	-0.13	-0.12	-0.12
Electricity	-0.12	-0.14	-0.14	-0.13	-0.11	-0.14	-0.15	-0.13	-0.13
Water	-0.17	-0.2	-0.19	-0.19	-0.16	-0.19	-0.2	-0.18	-0.18
Construction	0.15	0.12	0.13	0.13	0.16	0.13	0.12	0.13	0.13
Trade, transport, and Communications	-0.08	-0.11	-0.1	-0.1	-0.07	-0.1	-0.11	-0.09	-0.1
Hotels and restaurants	-0.08	-0.11	-0.11	-0.1	-0.08	-0.1	-0.11	-0.09	-0.1
Financial Intermediation and real estate	-0.07	-0.09	-0.09	-0.09	-0.06	-0.09	-0.1	-0.08	-0.08
Bussiness activities	-0.01	-0.04	-0.04	-0.03	-0.01	-0.03	-0.04	-0.02	-0.02
General government	0	-0.03	-0.02	-0.01	0.01	-0.02	-0.03	-0.01	-0.01
Health and social work	-0.08	-0.11	-0.1	-0.1	-0.08	-0.1	-0.11	-0.09	-0.09
Other activities/services	-0.06	-0.08	-0.08	-0.08	-0.05	-0.07	-0.08	-0.08	-0.08

Source: Calculations based on the CGE model

Notes: SKLF=Female skilled labour, SEKF=Female semi-skilled labour, USKF=Female unskilled labour, LF=Demand for female labour, SKLH=Male skilled labour, SEKH=Male semi-skilled labour, USKH=Male unskilled labour, LH=Demand for male labour, LDC=Demand for composite labour

Table 8 - Effects on labour force by gender and skills (Simulation 2)

	SKLF	SEKF	USKF	LF	LQH	LMQH	LNQH	LH	LFC
Agriculture	0.70	-0.01	-0.11	-0.01	0.81	0.02	-0.10	0.05	0.03
Mining and Quarrying	2.64	1.92	1.82	2.04	2.76	1.96	1.84	2.15	2.12
Food	0.46	-0.25	-0.35	-0.17	0.57	-0.21	-0.33	-0.09	-0.11
Manufacture of Textiles and wood	0.95	0.24	0.14	0.30	1.07	0.28	0.16	0.38	0.35
Petroleum	0.66	-0.05	-0.15	0.28	0.77	-0.02	-0.14	0.40	0.37
Other non-metallic mineral products	4.75	4.01	3.91	4.06	4.86	4.05	3.92	4.14	4.12
Basic metals iron/steel	3.20	2.47	2.37	2.56	3.31	2.51	2.38	2.64	2.62
Electrical machinery	3.76	3.04	2.93	3.23	3.88	3.07	2.95	3.33	3.30
Radio and medical	1.41	0.70	0.60	0.89	1.53	0.73	0.61	0.99	0.96
Transport equipment	2.40	1.68	1.58	1.79	2.52	1.72	1.59	1.86	1.84
Other Manufacturing	1.50	0.79	0.69	0.82	1.62	0.83	0.71	0.89	0.87
Electricity	0.96	0.25	0.15	0.47	1.07	0.28	0.16	0.59	0.56
Water	0.15	-0.55	-0.65	-0.33	0.26	-0.52	-0.64	-0.21	-0.25
Construction	7.65	6.89	6.79	6.91	7.77	6.93	6.80	6.99	6.97
Trade, transport, and Communications	1.41	0.70	0.59	0.80	1.52	0.73	0.61	0.89	0.86
Hotels and restaurants	-0.78	-1.47	-1.57	-1.24	-0.67	-1.44	-1.56	-1.14	-1.16
Financial Intermediation and real estate	1.21	0.50	0.40	0.66	1.33	0.54	0.42	0.76	0.73
Business activities	0.05	-0.65	-0.75	-0.40	0.17	-0.61	-0.73	-0.29	-0.32
General government	-3.69	-4.37	-4.47	-4.10	-3.58	-4.34	-4.45	-3.98	-4.02
Health and social work	-0.64	-1.34	-1.43	-1.05	-0.53	-1.30	-1.42	-0.93	-0.96
Other activities/services	1.34	0.63	0.53	0.64	1.46	0.66	0.54	0.71	0.69

Source: Calculations based on the CGE model

Notes: SKLF=Female skilled labour, SEKF=Female semi-skilled labour, USKF=Female unskilled labour, LF=Demand for female labour, SKLH=Male skilled labour, SEKH=Male semi-skilled labour, USKH=Male unskilled labour, LH=Demand for male labour, LDC=Demand for composite labour