
Trade Liberalisation, Household Welfare and Earnings Inequality in South Africa

Lawrence Edwards and Refilwe Lepelle

Background

Trade liberalisation has unequal distributional impacts, creating ‘winners’ and ‘losers’ in economies. While trade liberalisation is expected to raise aggregate welfare (the gains from trade), there is increasing recognition that the distribution of these welfare gains is not uniform across households and regions. Lower tariffs reduce consumer prices, boosting real consumption expenditure, but workers in industries affected may lose jobs or experience wage reductions. Because the composition of expenditure and sources of income differ for households across the income distribution, trade policy will affect poor and rich households differently. The implication is that trade policy frequently implies a trade-off between consumers and producers, and between rich and poor households.

The distributional effects of trade policy are of particular relevance for South Africa. South Africa embarked on an ambitious programme

of tariff liberalisation from the 1990s, first in the form of multilateral liberalisation, and then from 2000 in the form of preferential trade agreements, commencing with the European Union (EU) and the Southern African Development Community (SADC). The effect was a significant opening up of the economy. Tariff policy remains on the policy agenda, however. Currently, the SA Government, through the Department of Trade, Industry and Competition, pursues a strategic approach to trade policy whereby tariffs are to be “decided primarily on a sector by sector basis, dictated by the needs and imperatives of sector strategies” (DTI 2007:23). The effects of these policies on households therefore continue to be of relevance in the current milieu.

South Africa is also one of the most unequal countries in the world. The income Gini coefficient is above 60 and has been rising since 1993 (Finn and Leibbrandt 2018), driven largely by rising wage inequality (Wittenberg 2017). Wealth inequality is even higher, with

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estimates ranging between 90 and 95 (Chatterjee et al. 2021). The persistence of inequality is also reflected in very low intergenerational earnings mobility (Piraino 2015). The high persistence of inequality suggests that markets and society have replaced the state-led mechanisms that drove inequality earlier (Leibbrandt et al. 2021). This raises the prospect that tariff changes, through their impact on product and factor markets, may contribute to this process.

Poor households in South Africa, however, are often only weakly linked to employment opportunities in industries facing tariff reductions, primarily because they are largely removed from formal employment. The direct exposure of poor household incomes to lower tariffs is therefore primarily through the impact of tariff changes on the cost of the household consumption bundle. Poor households spend greater shares of their expenditure on goods, particularly food products, implying that they may be particularly vulnerable to tariff increases that raise consumer prices.

The implication is that, when setting trade policies, governments may be required to make trade-offs between consumers and producers, and between different households of different income levels. This tension is exemplified by the vigorous debate around the decision by the Minister of Trade, Industry and Competition, Ebrahim Patel, to defer anti-dumping duties on chicken imported from five countries (Brazil, Denmark, Ireland, Poland and Spain) for 12 months in August 2022, citing the fight against food inflation and its effects on the poor (Edwards et al. 2022; SAPA 2022).

In this policy brief, we provide insights into these trade-offs by drawing upon our recent study, [Trade liberalisation, household welfare and earnings inequality in South Africa](#). This paper looks at South Africa's programme of trade liberalisation from 1995 to 2011 and analyses the implications for household welfare. First, we draw on 1995 household

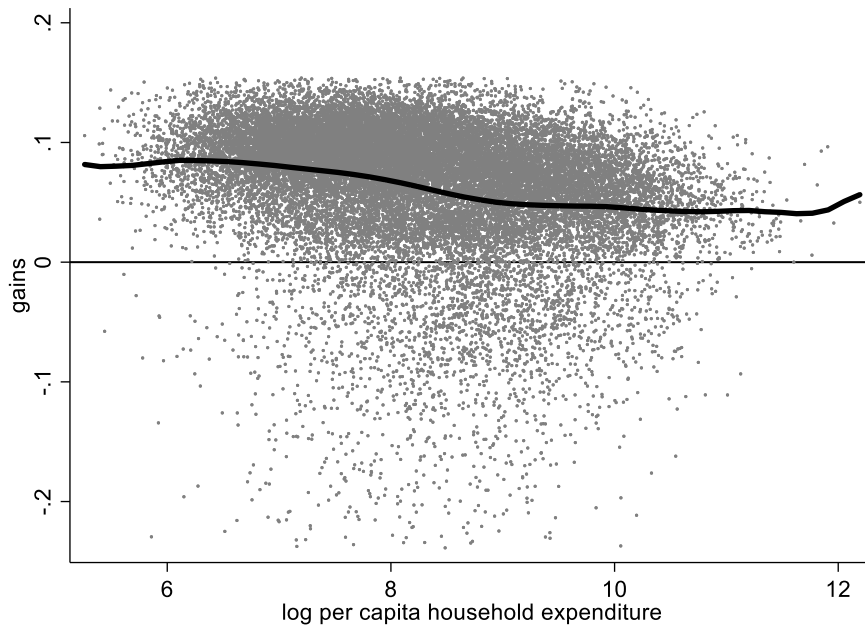
Income-Expenditure Survey (IES) data to simulate the first-order distributional effects on real household incomes through the income and expenditure channels from reductions in import tariffs. Second, to assess actual outcomes in relation to predicted outcomes through the income channel, we follow the local labour market literature and use population census data to estimate the causal effect on regional earnings and inequality following tariff liberalisation from 1996 to 2011.

Trade liberalisation and impact on household welfare

We find substantial heterogeneity in the vulnerability of households to tariff reductions from 1995 across regions and income levels. Liberalisation from 1995 to 2011 was predicted to have been pro-poor, with poorer households benefitting more than rich households. This outcome is reflected in the scatter plot in [Figure 1](#), which simulates the household gains from liberalisation from 1995 to 2011 against the initial level of per-capita household expenditure. Welfare gains are calculated by simulating the losses from lower tariffs on the incomes of workers in the affected industries, plus the gains to households associated with lower consumer prices. Also shown are the smoothed values of a kernel-weighted local polynomial regression of the two variables.

The figure reveals the wide variation in the welfare effects from trade liberalisation across households. Most households lie above the zero-gain line on the vertical axis, reflecting broad-based gains across most households. The kernel slope is negative, indicating that the poor stood to gain most from the tariff reductions from 1995. The mean gain for households in the lowest decile group is equivalent to 8.5% of expenditure, whereas the gain for households in the top decile group is 4.4%.

Figure 1: Household welfare gains from trade liberalisation from 1995 to 2011 against initial level of per capita household expenditure



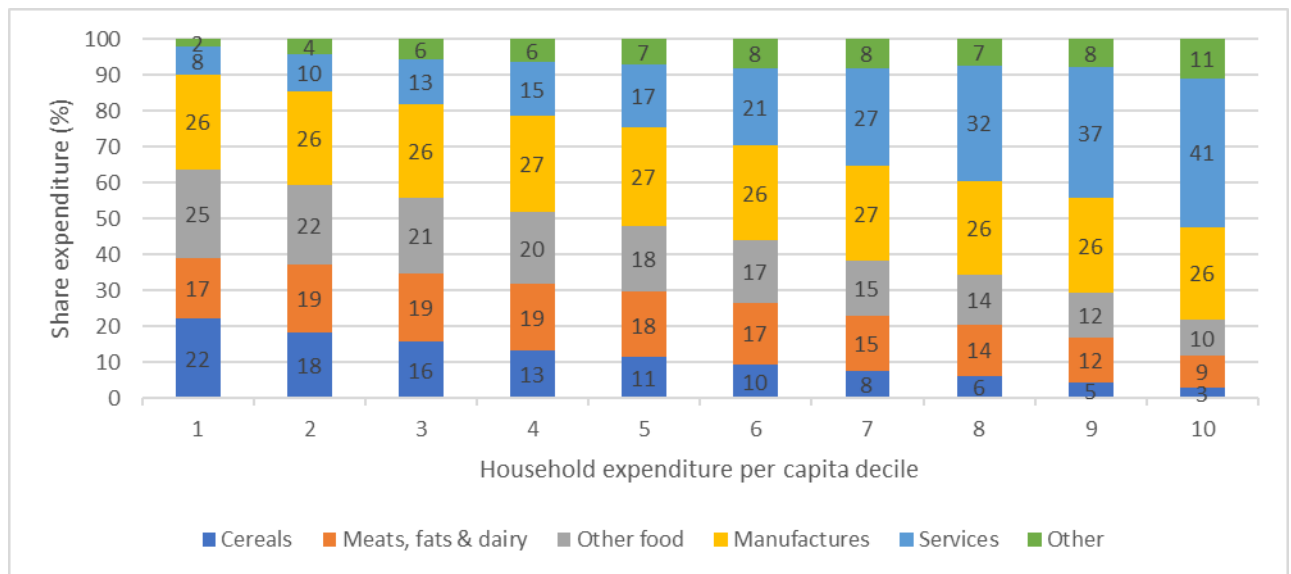
Notes: Own calculations using income and expenditure data from the 1995 Income-Expenditure Survey (IES), and tariff data obtained from Edwards (2005) and TRAINS. The calculation of welfare gains follows the approach of Artuc et al. (2019).

These pro-poor gains are attributed to consumption gains associated with relatively high shares of expenditure by poor households Figure 2, which shows the product composition of household expenditure across expenditure deciles in South Africa using the 1995 IES. Expenditure patterns differ considerably across the household expenditure distribution. Households in the lowest four per-capita expenditure decile groups spend over half their expenditure on food products. In contrast, for households in the top expenditure decile, very high shares of

on goods, particularly food products. This can be seen in

expenditure are allocated to services. The implication is that poor households, by virtue of their high share of expenditure on goods, stood more to gain from lower prices associated with reduced import tariffs than relatively wealthy households. While the pass-through of tariffs to consumer prices affects the size of the welfare gain to households, the relative impact across households is unaffected.

Figure 2: Composition of household expenditure by household expenditure per-capita decile groups, 1995

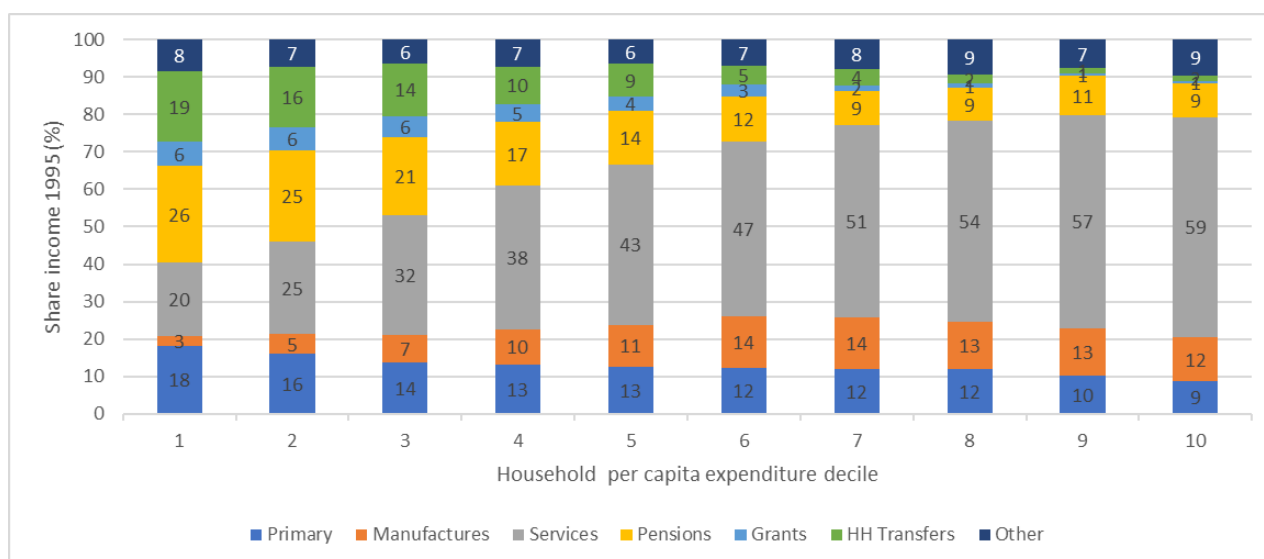


Source: Own calculations using 1995 IES. Uses household weights. Expenditure excludes housing (purchase and rental) and purchases of vehicles. In calculating household per capita income, children and adults are treated as equivalent units.

These consumption gains, however, were partially offset by income losses associated with lower tariffs, with middle-income households affected the most. **Figure 3** plots the share source of household income in 1995 by household expenditure decile group. The figure illustrates a distinct rise in the importance of labour earnings as household per-capita expenditure rises. Poor households were the least vulnerable when considering the *direct* effect of lower tariffs on household income through the employment and wage channel. One of the defining features of poor households is the lack of connections of household members to the labour market. These households are located in rural areas away from job opportunities, and the skills of individuals within these households overlap strongly with those required for employment in the manufacturing and services sectors (see also Pauw et al. 2007). Levels of income are very low in poor households relative to wealthy households, and this income is mostly

obtained from transfers, pensions, grants, etc., rather than from wages. The implication is that reductions in tariff protection from 1995 are predicted to have only had a modest direct impact on poorer households through the income channel.

Middle-income households, for whom the manufacturing sector accounts for a much higher share of employment and income, were more exposed to tariff reductions through the income channel. This can be seen in **Figure 3**, where the share earnings from the primary and manufacturing sectors are highest (around 26% share) for the 6th and 7th decile groups. As households become richer, employment and income shares accounted for by services, government administration and manufacturing rise. Lower tariffs on manufacturing products therefore disproportionately reduce the income of households in the middle of the expenditure distribution.

Figure 3: Sources of household income by household per-capita expenditure decile, 1996

Source: Own calculations using 1995 IES. Uses household weights. Income includes regular income from salaries and wages, receipts from pensions, social welfare and grants, alimony and maintenance payments, net profits of business or professional activities, and other income from hobbies, sidelines and part-time activities. In calculating household per-capita income, children and adults are treated as equivalent units.

Welfare gains and inequality trade-offs

These results reflect a trade-off from tariff reductions between consumers and producers, with relatively strong pro-poor gains in consumption effects, but negative income effects that affect middle-income households the most. However, a further trade-off to consider is whether the income losses from tariff reductions contributed towards rising earnings inequality across households. Globally, South Africa has extreme levels of income inequality, with high and rising wage or earnings inequality an important contributor to its persistence post-Apartheid (Wittenberg 2017).

To assess the potential trade-off between income inequality and welfare gains, we analyse how tariff liberalisation from 1995/1996 to 2011 affected earnings inequality across regions in South Africa. We adopt two approaches. First, we use the 1995 income expenditure data to simulate how tariff changes affect earnings inequality as

measured using the Atkinson (1970) inequality index. These results are presented in

Table 1. The first column presents the Atkinson inequality indices for 1995. Inequality is very high, with the index averaging 0.468 across municipalities. This reflects the high degree of inequality in expenditure in South Africa, and implies that around 47% of expenditure is wasted due to inequality. The values in column (2) show how the consumption effects from liberalisation helped to reduce the inequality of real expenditure (average inequality index falls to 0.461). However, as shown in column (3), wage reductions tended to raise inequality. Rises in earnings inequality from lower tariffs are widespread, with nearly two-thirds (238) of districts experiencing rising inequality of expenditure from changes in wage income. The increases in inequality are highest in districts that are close to large markets. Nevertheless, even after accounting for rising earnings inequality, the net welfare gains from liberalisation were positive for most regions, and for most households.

Table 1: Changes in inequality of earnings and expenditure from liberalisation at the magisterial district level

	(1)	(2)	(3)
	Inequality expenditure initial 1995	Inequality consumption channel 2011	Inequality earnings channel 2011
Mean	0.468	0.461	0.470
Median	0.468	0.461	0.469
Minimum	0.086	0.084	0.086
Maximum	0.724	0.720	0.724

Note: The number of magisterial districts is 358. Inequality is measured using the Atkinson (1970) inequality index with an inequality aversion parameter (ϵ) of 1.5, and is calculated using per-capita expenditure values and population weights. No adjustments to expenditure per capita are made to account for children. An Atkinson inequality index value of 0.47 implies that, if incomes were equally distributed across households, it would require only $1-0.47 = 0.53\%$ of current expenditure to achieve the same level of current welfare.

We test our findings by estimating the causal impact of tariff changes from 1996 to 2011 on household employment, income and inequality at the regional level, following a similar local labour market approach to that of Erten et al. (2019), Bastos and Santos (2022) and Lepelle and Edwards (2023) for South Africa. The results confirm household welfare simulations that tariff liberalisation contributed towards lower earnings in households with resident workers employed in traded sectors. Furthermore, the estimates support, albeit weakly, the household welfare simulation predictions that liberalisation from the early 1990s to 2011 contributed to rising inequality of earnings. These effects are found to be more pronounced in those regions exposed to relatively large tariff reductions compared to other regions.

Policy implications

The research has several implications for trade policy in South Africa. Much of the focus of empirical work and industrial policy has been on the impact of tariff changes on employment. Our results indicate that tariff protection can be effective in protecting employment and earnings within targeted industries, but that the consumer effects of the

price increases are more widespread and can be particularly detrimental to poor households. Given their weak linkages to the labour market and lack of requisite skills for entry into manufacturing, poor households are also unlikely to benefit directly from the tariff increases through the employment channel. In the deliberation of tariff applications, greater weight can therefore be placed on the distributional impact of tariffs on household welfare through their impact on consumer prices and the cost of consumption.

The results also highlight one of the risks associated with liberalisation in South Africa, namely a rise in earnings inequality. The results of this paper, and others (Erten et al. 2019; Bastos and Santos 2022; Lepelle and Edwards 2023) show that the rise in inequality works primarily through reductions in employment, not wages. Lepelle and Edwards (2023) also show very weak labour reallocation from manufacturing to services in response to liberalisation. These outcomes point to strong rigidities within the South African market. Rigidities in the regional mobility of workers gives rise to persistent disparities in outcomes across regions in South Africa (Bastos and Santos 2022; Mudiriza and Edwards 2021). Rigidities in the labour market also constrain

the reallocation of workers across industries, while rigidities in product markets prevent entry of new firms that can absorb unemployed labour. These rigidities exacerbate the negative and unequal effects across households of adverse trade shocks.

As argued by Bastos and Santos (2021), there is no one-size-fits-all strategy to deal with trade shocks. Nevertheless, policies to improve the mobility of workers across regions, including better transport links to remote areas and improved peri-urban infrastructure, can be adopted. The provision of training programmes may enable workers to learn new skills required for employment in alternative industries. Further analysis of current labour market regulations, including the setting of minimum wages and the degree to which they constrain adjustments by firms to international price shocks, can also be considered. Finally, identifying and resolving barriers to firm entry can assist employment creation by giving rise to more dynamic, responsive and competitive product markets.

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