# Impact of Cross-Border Digital Transmissions on MSMEs in South Africa

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## Executive Summary

This study delves into the profound impact of digital imports on Micro, Small, and Medium-sized Enterprises (MSMEs) in South Africa, particularly highlighting the positive influence of the World Trade Organization's (WTO) e-commerce moratorium. Utilizing the time-series data on South Africa's MSME macro indicators such as employment, productivity and size variables and digital product imports from OECD Input-Output tables, our data-driven approach precisely identifies the contribution of digital imports.

# Introduction

Since 1998, WTO Members have maintained a moratorium on tariffs for international electronic transmissions (WTO E-Commerce Moratorium). This study explores the moratorium's impact on South Africa's emerging MSME sector, highlighting its crucial role in fostering e-commerce growth. Ceasing the moratorium and imposing import duties on digital goods and services would negatively affect the vast MSME sector in developing countries, including South Africa.

A study by the European Centre for International Political Economy (ECIPE) predicts substantial adverse effects on WTO member countries if the moratorium ends. Developing countries could face an annual GDP loss of around US$4.5 billion, accompanied by job losses and reduced well-being. South Africa, with its growing e-commerce sector, could potentially lose US$25 million in GDP per year, leading to the loss of 100,000 jobs. It's crucial to note that South Africa's GATS commitments in the Computer and Related Services (CRS) sector already prohibit import duties on digital services.

The data analysis presented in this paper underscores the substantial benefits South African MSMEs have gained from the current moratorium. Active engagement in the digital economy and heavy reliance on digital imports highlight the disproportionate negative impact that ending the WTO moratorium on electronic transmissions would have on South Africa's MSME sector. This includes economic losses, job cuts, and reduced well-being -- all factors that underscore the value of maintaining the moratorium.

# Data Sources and Methodology

## Data Sources

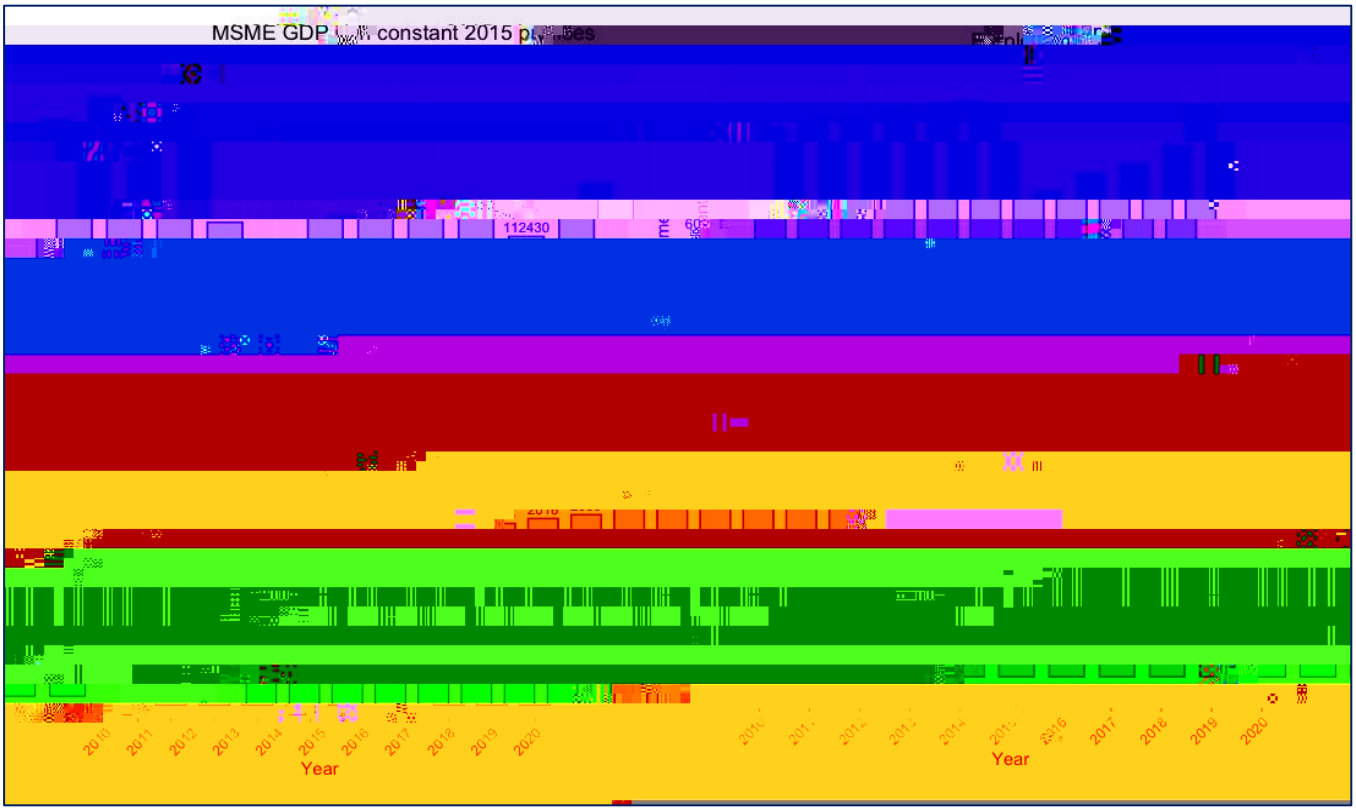
This study draws data on MSMEs from various sources, including 1) Small Enterprise Development Agency (SEDA) of South Africa[2] 2) OECD publications[3], 3) IFC publications[4] 4) UNCTAD (2023)[5] 5) Finmark Trust (2021)[6] and 6) Mashele (2023).[7] Other datasets used include 1) OECD's Inter-Country Input-Output (ICIO) tables, and 2) World Development Indicators from the World Bank. The dataset encompasses a range of variables, such as MSME Employment, MSME Number of Enterprises, Digital Imports for MSMEs, MSME Labour Productivity, and size-related metrics like Employee per MSME. The analysis spans the years 2010 to 2020 at an aggregate level.

To determine digital imports for South Africa, OECD's ICIO data (OECD, 2022) is utilized. The classifications ZAF_J61 and ZAF_J62_63, representing Telecommunications and IT and Other Information Services, respectively, serve as proxies for all digital products in South Africa. Digital imports into different sectors are identified using rows ending with _61 or J62_63, with columns representing various sectors in South Africa. Rows from countries other than South Africa indicate digital imports into South Africa. The column summation provides total digital imports into different sectors, and the overall summation across sectors yields the country's total digital imports. The digital import share is calculated as a percentage of total value added in the economy. This share is then multiplied by Real MSME GDP to derive Digital Imports of MSMEs in the country. This process is repeated for each year, generating a time series of Digital Imports of MSMEs in

The most recent estimate indicates a total of 2.6 million MSMEs in 2020, reflecting a 2.8 percent compound annual growth rate compared to the 1.9 million firms estimated in 2010. This suggests a gradual growth trend in the MSME sector over the last decade.

Fig. 1 also illustrates that MSME employment in South Africa exhibited gradual growth from 2010 to 2015, followed by a slowdown during the period 2016-2019. Employment levels returned to normal in 2020. According to a World Bank and IFC (2018) report[8], the majority of MSMEs in the formal sector are small enterprises, with a significant number of micro enterprises and a relatively small number of medium enterprises. The prevalence of micro and very small enterprises creating opportunities for self-employment, coupled with the limited capacity of medium to large enterprises to employ more people, could be a contributing factor to the observed low employment levels in the country's MSME sector.

Figure 1: MSME GDP, Employment, Number of Enterprises: 2010-2020




Furthermore, we analyse cross-border digital imports in South Africa's MSME sector over the same time period (2010-2020) in Fig. 2. Similar to MSME GDP, the trend of digital imports in the MSME sector exhibits fluctuating growth, with average digital imports in the sector totalling USD

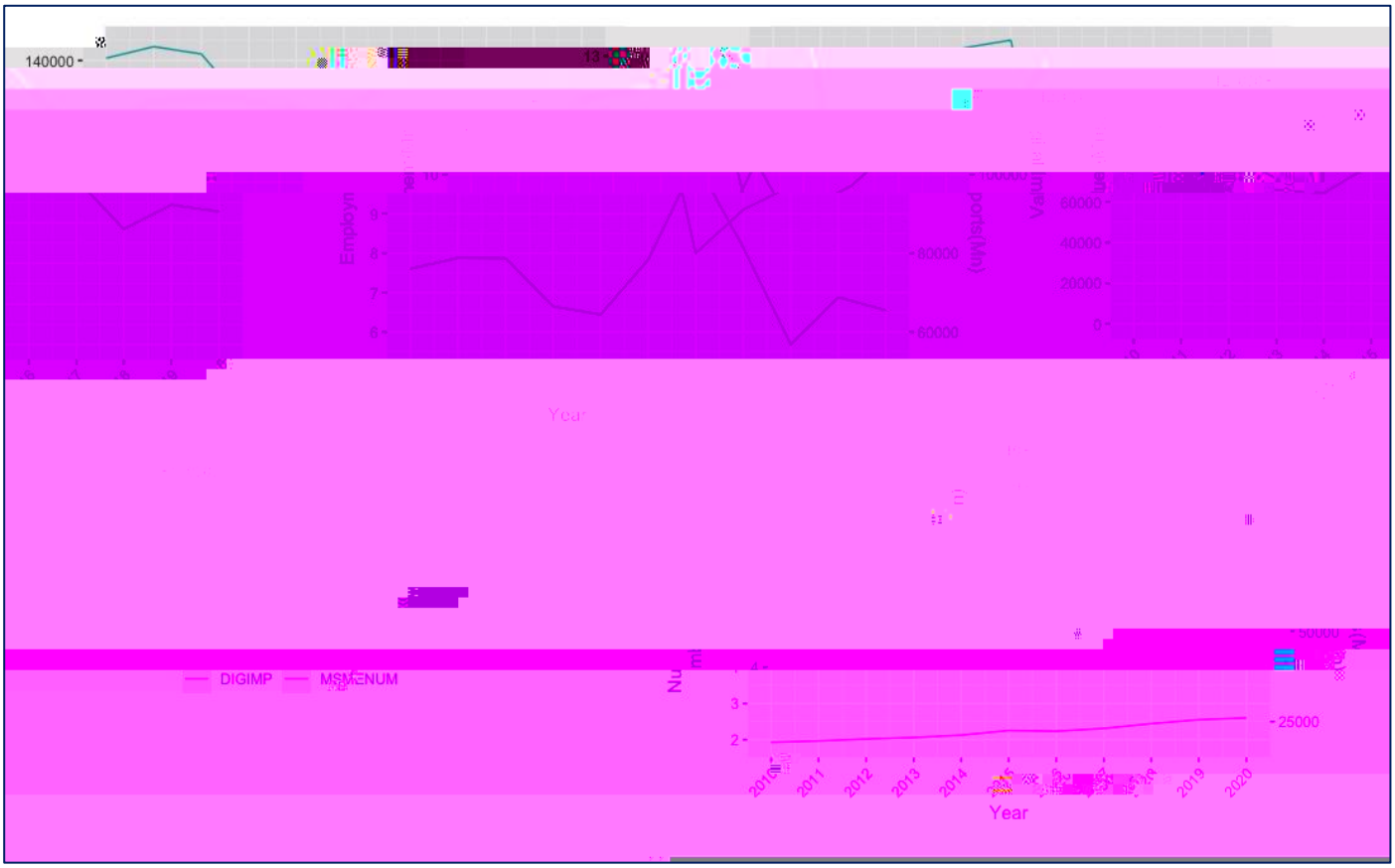
[8] *The Unseen Sector : A Report on the MSME Opportunity in South Africa (English).* Washington, D.C. : World Bank Group.

74.4 billion over the period 2010-2020, as depicted in Figure 2. Regarding the share of digital imports in MSME GDP, it has consistently exceeded 50 per cent over the last decade, underscoring the pivotal role that digital imports play in influencing the performance of the country's MSME sector.

Figure 2: Cross-Border Digital Imports in MSME Sector: 2010-2020

Figure 3 provide a comprehensive insight into the trajectory of digital imports with each macroeconomic variable (MSME GDP, Employment, and Number of Enterprises) at an aggregate level over the period spanning from 2010 to 2020. Analys

Figure 3: MSME Digital Imports Versus MSME GDP, Employment and Number of MSMEs: 2010-2020




## Simple Linear Regressions

The variables in the data have been normalized to ensure the consistency of the estimates in the model, utilizing R software for model execution. The results of the linear regression models (equations 1-4) are presented in the following tables. Table 1 demonstrates that digital imports are significant at a 5% level, at a minimum, in all the linear regression models specified in equations 1-3. The positive coefficient of digital imports across all regression models signifies that an increase in digital imports for the country corresponds to an increase in the macro-indicators (Employment and Number of MSME Enterprises) of the MSME sector in the economy. In simpler terms, a 1 per cent increase in MSME digital imports results in a 0.18 per cent increase in MSME Employment and a 0.09 per cent increase in the Number of Enterprises.

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| Adj. R Square | 0.32 | 0.98 |

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