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An Assessment of the Impact of the Slowdown of the Chinese Economy on Commonwealth Member Countries

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Abstract

Against a backdrop of faltering economic performance of major economies; the China-US trade tension; a rise in protectionist measures by large developing and major developed countries; and several cyclical and structural factors, global trade has been sluggish in recent years. One of the most prominent factors contributing to this sluggish global trade growth has been the rebalancing of China's investment-oriented to a consumption-driven economy since 2012. China's slowed economic growth has resulted in dwindling import demand for commodities and raw materials from many commodity-based export-oriented Commonwealth countries, as well as a slump in commodity prices worldwide.

This paper explores the impacts of China's sluggish economic growth on Commonwealth member countries' long- and short-run trade dependencies. Such effects along with their economic implications have been econometrically estimated for the Commonwealth sub-Saharan Africa (SSA), small states (also known as small and vulnerable economies, SVEs), small island developing states (SIDS) and least developed countries (LDCs). The estimation methods consider country- and region-specific fixed effects and other important determinants to obtain unbiased impacts of the Chinese economic slowdown.

Results obtained suggest that, while all areas of Commonwealth member countries have suffered from trade contraction, two significantly affected areas are Commonwealth SSA and Commonwealth SVEs. Lost trade for the Commonwealth during 2012–2018 is estimated to be US$664 billion per year; during the same period, US$111 billion in exports to China from the Commonwealth were lost per year. Among the Commonwealth regions, SSA shows the most substantial export loss, followed by SIDS and SVEs. Trade lost to LDCs as a result of the Chinese economic slowdown is negligible.

The decline in Commonwealth exports in the post-2011 years means the contribution of trade to economic growth has declined substantially. The trade elasticity estimation in this paper suggests that Commonwealth trade dependency on Chinese economic expansion has faltered since 2011. For all the Commonwealth regions, the long-run trade elasticity with respect to China's GDP during 2012–2018 is 0.5 percentage points lower than the long-run elasticity of the pre-2011 years. For SSA and SVEs, in the years pre-2011, trade elasticities were, respectively, 1.49 per cent and 1.82 per cent; during the years post-2011, these were 0.99 per cent and 1.31 per cent.

Another important finding from this paper is that, even though during the past decade the Global South's relative significance in Commonwealth trade has been almost stagnant, for Commonwealth SSA and SVEs it has continued to rise. The possible implication of this is a trade deflection from Commonwealth SSA countries and SVEs to other developing nations during the post-2011 years.

JEL Classifications: F10, F63, O11
Keywords: China, trade dependency, Commonwealth sub-Saharan Africa, small states

Contents

Acronyms

CSSA	Commonwealth SSA
ECM	Error Correction Method
EU	European Union
FDI	Foreign Direct Investment
g&s	Goods and Services
GDP	Gross Domestic Product
IMF	International Monetary Fund
LDC	Least Developed Country
REER	Real Effective Exchange Rate
SDG	Sustainable Development Goal
SIDS	Small Island Developing States
SSA	Sub-Saharan Africa
SVE	Small and Vulnerable Economy
UK	United Kingdom
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
US	United States
USA	United States of America
WEO	World Economic Outlook
WTO	World Trade Organization

1. Introduction

During the past decade, growth in world trade has been sluggish, with feeble economic performance of the Eurozone, slowed economic growth in China, lower commodity prices, increasing protectionist measures and a stronger US dollar. This decade's prolonged period of trade deceleration has occurred after about three decades of rapid growth in trade resulting from an increasingly liberalised global environment. However, globalisation and free trade policy regimes have been at a crossroads in the 2010s.

In this context, after a prolonged global trade slowdown for six long years since 2011, global trade flows registered some encouraging signs of momentum in 2017 and 2018. Even though total exports of goods and services in 2017 increased by US$2 trillion over the previous year, reaching US$22.8 trillion, however, the global trade growth rate remained much lower than that achieved in 2011 (9.7 per cent in 2017–2018 against 18.8 per cent in 2011). Against this backdrop, a revival of sustained trade growth would reinvigorate the 'trade engine' to drive economic growth and development in many low-income and vulnerable developing countries.

It was the 2008 global financial crisis that initiated the economic downturn across the world but a wide range of cyclical and structural factors have resulted in the persistence of the global trade slowdown. The cyclical factors of the recent trade slowdown around the world include the post-crisis recession, weakened prices of commodities and energy resources, and faltering economic performance of the large developing countries such as Brazil and China (Razzaque et al., 2016). The structural factors include the protectionist measures undertaken by major economies, China's restructuring of its economic priorities and the recent escalation of the China–US trade tension. After the global financial crisis in 2008, most of the major economies in the world, including the large developing countries and developed nations, undertook several protectionist measures: more than 800 protectionist interventions per year were undertaken worldwide, and, since 2012, on average, World Trade Organization (WTO) members have introduced 13 trade-restrictive measures per month have been introduced by WTO members (WTO, 2018). As a result, large economies such as the USA and China, have initiated the consolidation of the value chain activities in production and trade, which has created a preference for domestic inputs rather than imported inputs.

Among the structural factors, one of the most prominent contributors to sluggish trade growth since 2012 has been the rebalancing of China's economic activities. China has settled onto a lower economic growth path and has undergone a rebalancing of economic activities. In the aftermath of the 2008 global financial crisis, the largest trading partners of China – the EU, Japan, and South Korea – experienced meagre economic growth and reduced their import demand. Additionally, in recent years, US trade barriers have led several of China's trading partners to decrease their import demand for China's exports (Vu and Nguyen, 2019).

In the face of this dwindling import demand from developed countries and in the aftermath of the global financial crisis, in the 12th Five-Year Plan (2011–2015) China prioritised the domestic market by taking measures to promote domestic consumers' demand. It also attempted to regulate investments to avoid slumps and focused on consumption and services instead of investment and manufacturing sector, which had been the priority in the previous decade. China's economy during 2001–2010 can be characterised as an investment-driven export-oriented economy; since 2012, it has been transforming into a consumption-driven economy.

Another important reason for the recent economic slowdown in China is the changing labour market. One of the crucial catalysts of China's economic success was the low wage rate. However, as a result of the One Child Policy of the 1980s, China now has an ageing population, which has shrunk the labour market and raised the wage rate (Igbinoba, 2016). In addition to reducing worldwide import demand, this has played a vital role in China's economic slowdown.

China's economic rebalancing and its slowed growth have had a wide array of effects worldwide, especially for countries that export a

large share of their merchandise and services to China. Between 2001 and 2010, the world underwent a commodities boom, mostly triggered by China's remarkable demand for raw materials such as steel, copper, iron, zinc and petroleum for its large investment and development projects. This substantial demand for raw materials raised commodity prices worldwide and benefited many commodity-exporting Latin American and sub-Saharan African countries, boosting their economic growth. However, China's economic slowdown has led to lower import demand for raw materials and a reduction in commodity prices. According to the International Monetary Fund (IMF), countries dependent on China will experience a 0.3 per cent contraction of their gross domestic product (GDP) as a result of China's economic slowdown (Sada, 2016). Another policy undertaken by the Chinese government that has important adverse implications for exporting countries has been the devaluation of the renminbi by about 2 per cent against the US dollar since 2015 (Igbinoba, 2016).

Global trade has played a vital role in the economic growth of developing economies in past decades. The economics literature considers it one of the crucial drivers of economic development for many least developed countries (LDCs) and small states (also known as small and vulnerable economies, SVEs). The UN-led global development initiative, Transforming Our World: the 2030 Agenda for Sustainable Development, recognises international trade as a means of achieving various Sustainable Development Goals (SDGs). As such, one important question relates to how this current sluggish global trade will affect the poorest, smallest and the most vulnerable developing countries across the world. China's economic rebalancing and currency devaluation, the consolidation of global value chains and declining commodity prices as a result of reduced import demand for raw materials have led to trade policy reversals in major developing countries. China's sluggish economic growth may also affect different regions of the world in different ways.

How international trade affects developing countries and Commonwealth member countries is an important area of the Commonwealth Secretariat's work programme. Work to date has focused on identifying potential policy implications for Commonwealth members and countries in the (not mutually exclusive) LDC, SVE and sub-Saharan Africa (SSA) groups. The present paper explores the major trends in international trade focusing on the impacts of China's economic slowdown since 2011 on Commonwealth member countries. It undertakes a quantitative investigation of implications of decelerated global trade and sluggish economic growth of the Chinese economy for Commonwealth LDCs, SVEs, small island developing states (SIDS) and SSA countries.

In terms of the scope of the work, on reviewing the trade performance of the aforementioned groups of countries over the past four decades, this research quantitatively analyses the impact of the Chinese economic slowdown on the Commonwealth countries' trade expansion and provides an assessment of the trade deflection. The key objectives of this study, as specified in its terms of reference, are as follows:

- A review of relevant literature to provide a clear picture of China's economic growth and determinants of trade between China and the Commonwealth countries;
- Exploration of the effect of the slowdown of the Chinese economy on the trade flows of Commonwealth countries, controlling for country- and region-specific effects;
- Investigating the impact of the Commonwealth trade slowdown on the member countries' economic performances;
- Estimation of the foregone volume of trade for Commonwealth LDCs, SVEs, SIDS and SSA countries had there been no economic slowdown in China;
- Providing a set of policy options and recommendations to improve Commonwealth trade flows with China.

In order to achieve these objectives, this paper has made use of empirical approaches that include a comprehensive review and analysis of studies and datasets from secondary sources (UNCTADstat and the IMF World Economic Outlook (WEO) database). Both descriptive and econometric analyses have been carried out, utilising time-series forecasting techniques and fixed-effect methods.

The paper is organised as follows: after this introduction, Section 2 presents a review of recent global trade trends and performance of four Commonwealth regions (LDCs, SVEs, SIDS and SSA countries). Section 3 provides

an analysis of the nexus between the Chinese economic slowdown and Commonwealth trade deceleration. Section 4 estimates the foregone volume of Commonwealth trade had there been no economic slowdown in China, using the time-series forecasting models. It also investigates the implications of the Commonwealth export slowdown for the economic growth of Commonwealth regions, as well as making the important contribution of an in-depth analysis of the impacts on Commonwealth export dependencies on China's economic growth, utilising Engle-Granger's one-step error correction model and longitudinal model with country and region fixed-effects. Section 5 discusses the recent patterns in trade deflection in the Commonwealth and focuses on the significance of the Global South in Commonwealth trade. It also presents a few policy recommendations for augmenting trade flows with China.

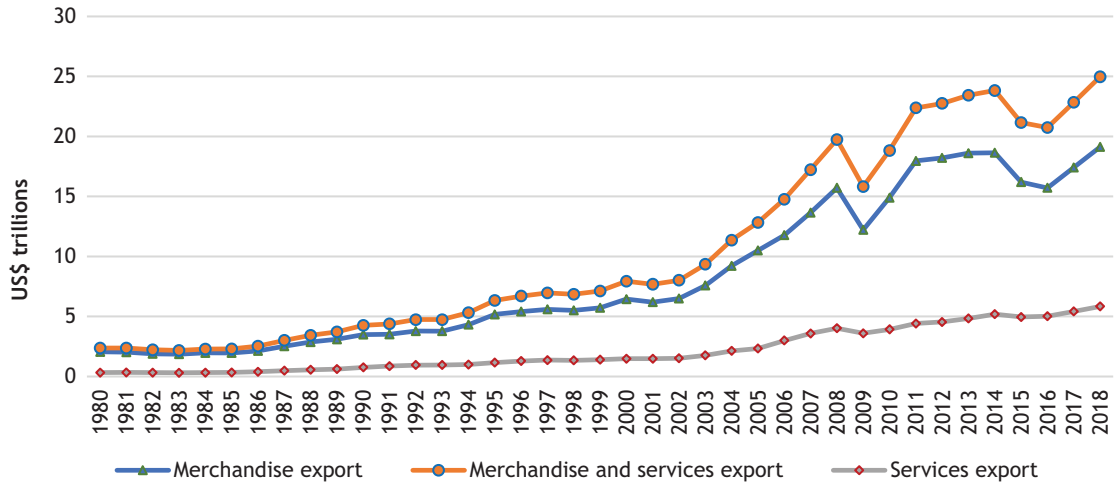
2. Recent trends in world trade and Commonwealth LDCs, SIDS, SVEs and SSA countries

2.1 World and Commonwealth trade scenario: a lost decade of Commonwealth merchandise trade

Since 1980, world exports of merchandise and services have expanded more than tenfold, from US$2.4 trillion to US$24.9 trillion in 2018 (Figure 1). Despite a sluggish export growth rate resulting primarily from the global financial crisis, in 2018 world exports again crossed the 2012 level. However, while the growth rate in world merchandise nominal exports in 2018 was 9.3 per cent, in real terms growth was only 3 per cent, lower than the previous year's growth rate of 4.6 per cent (WTO, 2019). In the aftermath of the global financial crisis, and with the slowdown in China's economy, the increasing adoption by developed and large developing countries of protectionist measures and the recent China–US trade tension, during the past decade real world trade has grown at only 3.9 per cent per year.

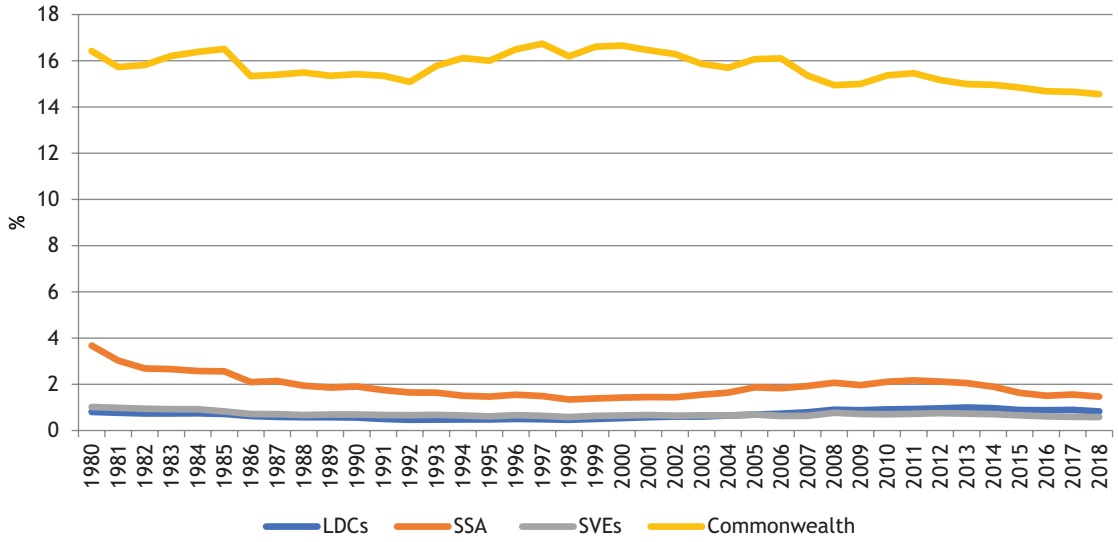
Figure 2 shows the share of global exports from Commonwealth LDCs, SVEs, and SSA countries. According to UNCTADstat 2020, from 1980, developed and developing countries' total exports expanded by about 8 and 14 times, respectively, until 2018. This increase in global integration and rapid rise in trade flows resulted from widespread trade liberalisation in the 1980s and 1990s. From the late 1990s to 2012, the LDC and SSA economic groups managed to reverse the trend of their marginalisation in global trade, with their share in total global exports of goods and services increasing quite

Figure 1. World merchandise and services exports



Source: UNCTADstat (2020).

Figure 2. Share of exports of Commonwealth, LDCs, SSA and SVEs



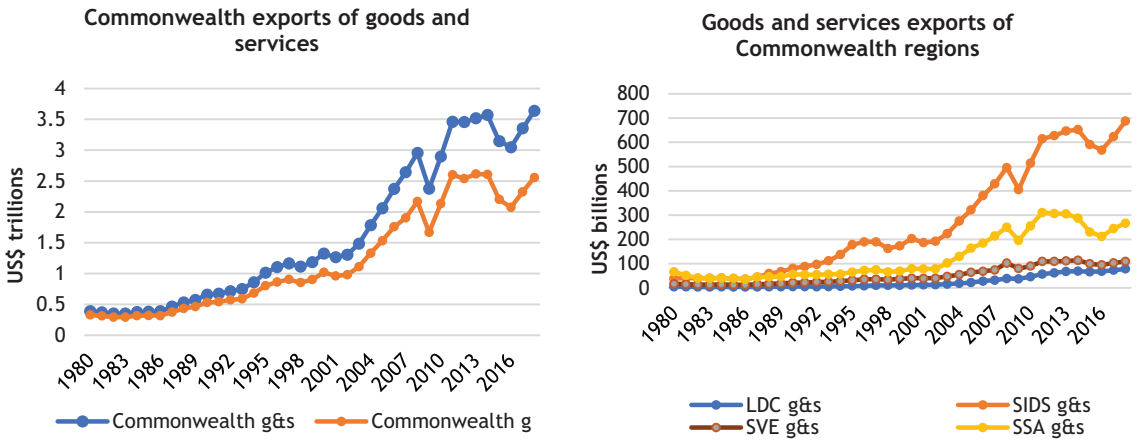
Source: UNCTADstat (2020)

noticeably. Interestingly, the global financial crisis of 2008 did not lead to sustained declines in the relative significance of these groups of countries. However, they were affected by the trade slowdown of 2015/16. Indeed, it seems that the most recent trade crisis has reinforced the marginalisation of the poorest, smallest and most vulnerable economies in the world.

Figures 3a and 3b show the merchandise and services export volume of the Commonwealth and its major four regions (LDCs, SIDS, SVEs and SSA). The Commonwealth export of goods and services has expanded more than nine-fold over the past four decades, from US$0.39 trillion in 1980 to US$3.6 trillion in 2018. It was largest during the 2001–2011 period, when it increased from US$1.26 trillion to US$3.46 trillion. However, from 2011 total exports from Commonwealth regions declined until 2016; this was followed by a slight recovery during 2017 and 2018. While merchandise and services trade for the Commonwealth during the past decade has been almost stagnant, total exports of goods have declined from US$2.6 trillion in 2011 to US$2.5 trillion in 2018.

If we look at the four important Commonwealth regions in Figure 3b, we observe that LDC export of goods and services (g&s) grew almost undisrupted over the four decades, even though the rate of expansion reduced slightly from 2011. Both SIDS and SSA's trade grew the most during the 2001–2011 period; trade was adversely affected by the global financial crisis during

Figures 3a and 3b. Commonwealth exports of goods and services, and by region



Source: UNCTADstat (2020)

2009 but this was followed by a quick recovery. After 2011, while SIDS exports slowed, the total volume of exported goods and services declined for Commonwealth SSA. In 2001, the Commonwealth SSA export volume was US$78 billion; this increased significantly to US$311 billion in 2011. However, between 2011 and 2016, exports from this region declined by almost US$100 billion to US$212 billion.

Another Commonwealth region that saw a tremendous expansion in trade during 2001–2011 is SVEs. During the period, exports grew from US$40 billion to more than US$109 billion; this was followed by a decline of US$14 billion to US$95 billion in 2016.

We also see that, during 2012–2016, merchandise exports suffered much more than goods and services exports for both SVEs and SSA. Hence, we can conclude the most adversely affected Commonwealth area in terms of trade is SSA, followed by SVEs. From this perspective, the 2011–2016 period can be seen as a lost decade of gains from trade for the Commonwealth SSA countries and the Commonwealth SVEs. Nevertheless, both of these two groups saw a slight recovery during 2017–2018.

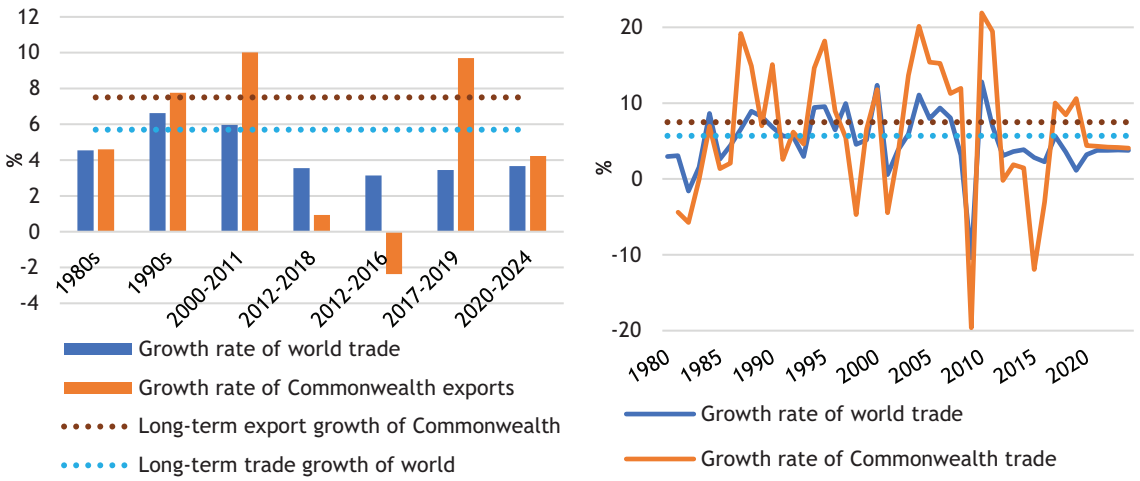
Figure 4 has been constructed utilising UNCTADstat 2020 and the IMF WEO dataset for 2020. For world trade growth rates after 2018, IMF predicted values are used; for Commonwealth trade expansion rates after 2018, values have been estimated using UNCTADstat. From Figure 4, we can observe that, even though in 2017–2018 the world trade growth rate was slightly higher (3.4 per cent) than in the post-global financial crisis years (2012–2016) (an average rate of 3.13 per cent), it is still much lower than the long-term average growth rate of 5.7 per cent.

In 2019, world trade registered an annual growth rate of only 1.13 per cent, one of the lowest rates of the past two decades.[1] According to the IMF projections, during the next five years, global trade expansion will experience slower momentum. The projected growth rate for 2020–2024 is 3.67 per cent, much lower than the long-term (1980–2010) average rate of global trade growth. If these projections turn out to be correct, 2012–2024 could be the slowest trade expansion decade (3.4 per cent) since World War II.

Figure 4 shows that world trade registered the highest average rate of growth in the 1990s, at 6.6 per cent per year. Despite the global financial crisis, the average rate of trade expansion in the 2000s was more than 5 per cent, largely because of high trade growth during the early 2000s and a sharp recovery in 2010 and 2011, following the impact of the global financial crisis. Since 2012, the global trade slowdown has persisted. Figure 4 suggests that global trade has not grown faster than the average growth rate for 1980–2010 in one single year since 2012.

Figure 4 also provides us with a picture of Commonwealth trade expansion for the past four decades. Exports of merchandise and trade by member countries increased consistently for three decades from the 1980s. The most robust trade growth registered was a yearly average rate of 10 per cent during 2001–2011. Despite a high average growth rate of 7.3 per cent

Figure 4. World and Commonwealth trade growth rates



Source: Author's analysis using data from the IMF WEO database and UNCTADstat 2020

for three decades (1980–2010), in the 2010s Commonwealth trade has stagnated at only 0.9 per cent, and that only because of a trade growth recovery during 2017–2018. Between 2012 and 2016, Commonwealth trade was severely disrupted and experienced a contraction at 2.4 per cent per annum.

Figure 4 shows that Commonwealth trade expanded at the highest rate, of 10 per cent per year, in the 2000s, partly because of the stellar economic growth of China and its consequent import demand for a large amount of goods and raw materials. According to our estimates utilising UNCTADstat 2020, during the next five years Commonwealth trade expansion will experience slower momentum. The forecast growth rate for 2020–2024 is 4.22 per cent, much lower than the long-term (1980–2010) average rate of Commonwealth trade growth, at 7.5 per cent. If the forecast expansion rate is realised, 2012–2024 will be the most sluggish decade for trade growth (at 2.95 per cent) since the 1970s. However, one gleam of hope lies in the recent (2017–2018) performance of Commonwealth trade, when exports grew at a rate of 9.7 per cent per year, much higher than the long-term rate of 7.5 per cent. Nevertheless, world trade has remained sluggish, growing at only 3.6 per cent during 2018, lower than the long-term global trade growth rate of 5.7 per cent.

In addition to the several reasons for the global trade slowdown discussed in the previous section, one major structural factor associated with this and the Commonwealth trade slowdown is the consolidation of value chain activities in production and trade (World Bank, 2015). During the 1990s and early 2000s, combined with open trade policies, the global value chain relocated an increasing share of domestic production abroad. However, during the post-financial crisis period, because of the slowing-down of the global value chain, major economies like the USA and China started sourcing intermediate inputs more from their respective domestic markets. Moreover, from 2012, the commodity boom began to fade away, with prices plummeting during 2014–2015. This resulted in a sharp drop in export prices, leading to falling export revenues for major commodity exporters.[2]

Although the global financial crisis-led trade collapse in 2009 was quite straightforward to understand, declining global trade in 2015 and 2016 was unprecedented in nature, and was induced by further shocks. Measured in value terms (using US dollars), world merchandise exports fell by a staggering $2.7 trillion in 2015 (from the previous year), and then again by more than $500 billion in 2016. As many as 183 countries and territories experienced reduced export earnings in 2015 (compared with the previous year), while for 112 countries export earnings similarly declined in 2016 (Razzaque, 2017). Therefore, the robust global trade growth (5.6 per cent) of 2017 was largely attributable to the fact that the world was recovering from an already low base.

2.2 Commonwealth LDCs, SS, SIDS, and SSA: a decade of stagnancy and contraction

Commonwealth trade over the past four decades can be characterised as the increasingly expanding decades of the 1980s, 1990s and 2000s and the contracting decade of the 2010s. Table 1 shows that, while world exports have grown 5.8-fold, Commonwealth member countries' exports of merchandise and services have expanded about 5.4-fold, from US$674 billion in 1991 to US$3,637.4 billion in 2018. However, if we consider the increment over the past seven years, between 2011 and 2018, the volume of Commonwealth trade has increased by only US$177. Table 1 also presents the share of Commonwealth exports of different economic regions. The largest share is contributed by the six developed Commonwealth nations (Australia, Canada, Cyprus, Malta, New Zealand and the UK). However, over the past three decades this share has been declining. During 1991, 2001 and 2011, developed countries' share of total Commonwealth exports was 68 per cent, 64 per cent and 51 per cent, respectively. However, because of the developing Commonwealth nations' sluggish trade expansion during the decade (2011–2018), the share of developed nations was almost stagnant, at around 50 per cent.

The SIDS contribute the second-largest share of Commonwealth exports, and this has been rising undisrupted over the past three decades. During 1991, SIDS' share of Commonwealth exports was 13.1 per cent, and this increased to about 18 per cent in 2011. However, similar to the developed economies' share, the share of Commonwealth SIDS has been fairly stagnant, at 18–19 per cent, during the past decade.

LDCs' share of Commonwealth exports and the total volume these both expanded

consistently between 1991 and 2018. The share of LDCs back in 1991 was less than 1 per cent of Commonwealth exports, at $5.8 billion. However, the region experienced undisrupted growth and reached $78.5 billion in exports in 2018, contributing more than 2 per cent of Commonwealth trade. Hence, our findings suggest the export trend for Commonwealth LDCs has not been affected much during the 2010s.

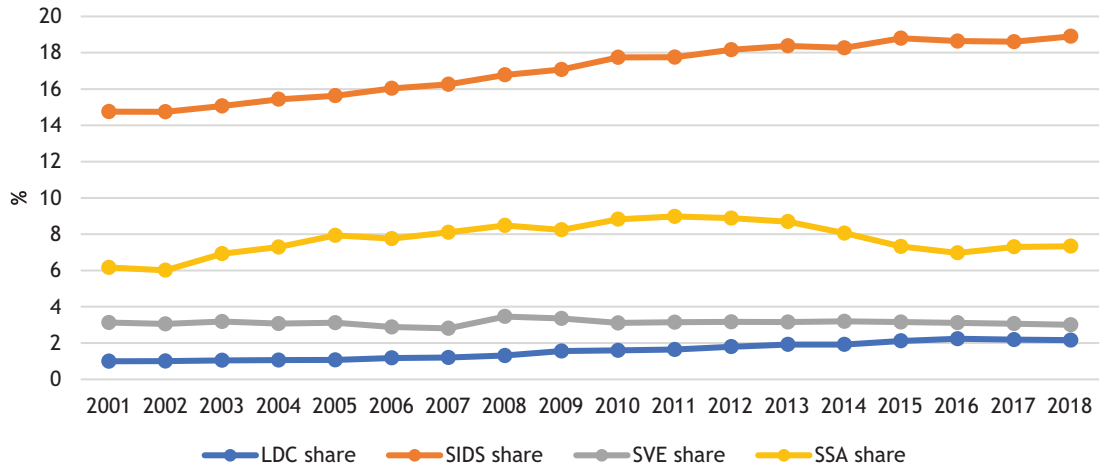
Figure 5 shows that the most adversely affected Commonwealth area in terms of its export share is SSA. The share of Commonwealth exports out of SSA economies in 2001 was 6 per cent. This increased substantially to 9 per cent in 2011, primarily because of the significant economic growth of China and its subsequent import demand for goods and raw materials. However, after 2011, a decline in exports translated into

Table 1. Exports of goods and services by groups of Commonwealth economies

	Year	Exports (US$ billions $)	Share (% of Commonwealth exports)
World	1991	4,386	
	2001	7,682	
	2011	22,378	
	2016	20,745	
	2018	24,971	
Commonwealth	1991	674	100
	2001	1,265	100
	2011	3,460	100
	2016	3,048	100
	2018	3,637.4	100
Commonwealth LDCs	1991	5.8	0.9
	2001	12.6	1.0
	2011	56.9	1.6
	2016	68.3	2.2
	2018	78.5	2.2
Commonwealth SIDS	1991	88.2	13.1
	2001	186.6	14.8
	2011	614.3	17.8
	2016	568.1	18.6
	2018	687.4	18.9
Commonwealth SVEs	1991	22.2	3.3
	2001	39.6	3.1
	2011	109	3.2
	2016	95.1	3.1
	2018	109.3	3.0
Commonwealth SSA	1991	54	8
	2001	78	6
	2011	311	9
	2016	212	7
	2018	267	7.3
Commonwealth developed	1991	459.5	68
	2001	811.4	64
	2011	1,757.9	51
	2016	1,555.6	51
	2018	1,806.1	49.6

Source: Author's estimates using UNCTADstat 2020 dataset

Figure 5. Share of Commonwealth exports from LDCs, SIDS, SVEs and SSA



Source: Author's estimates using UNCTADstat 2020 dataset

a shrunk share of Commonwealth exports (7 per cent) in 2016. Recently, in 2018, this share improved slightly, to 7.3 per cent. Nevertheless, total merchandise and services exports in 2018 were at US$267 billion, lower than the level of 2011 (US$311 billion). As such, the 2010s can be seen as a lost decade of trade for Commonwealth SSA.

SVEs' share of Commonwealth exports has been almost stagnant, at around 3 per cent over the past three decades (Figure 5). While total exports improved during 2001–2011, from US$39.6 billion to US$109 billion, SVEs' exports were almost stagnant, at US$109.3 billion in 2018; this was followed by a contraction till 2016.

Even though SVEs and Commonwealth SSA economies do not contribute much to total Commonwealth exports, these economies are more dependent on international trade for their economic activities. As such, bleak export performance by these regions during the past decade has significantly affected their economic performance.

2.3 Commonwealth trade–GDP nexus

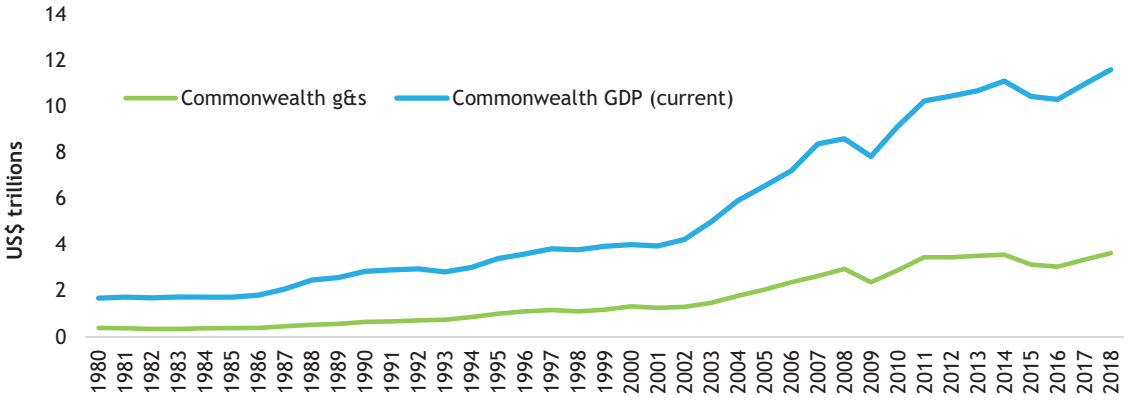
During 1980–2000, Commonwealth trade grew more than threefold; during the same period the GDP of Commonwealth member countries increased little over twofold. Figure 6 shows a stable relationship between Commonwealth GDP and exports for the three decades of 1980–2010. However, this long-run relationship faltered in 2011, and the weak performance of trade has been reflected in the export and trade orientation of Commonwealth member countries. The Commonwealth export-to-GDP share in 1981 was only 21 per cent; this had grown to 30 per cent of GDP in 2000. Followed by a sharp recovery during the two years immediately after the global financial crisis in 2008, the share recovered in 2011 to 34 per cent. However, it has been shrinking ever since; in 2016 it had reduced to only 29 per cent of GDP and in 2018 it was 29.5 per cent – 4.2 percentage points lower than in 2011 (Figure 7).

Of the different Commonwealth areas, the share has faltered the most in Commonwealth SSA. In 2001 and 2011, this was 27 per cent and 28 per cent, respectively. However, during 2016, the trade orientation reduced by 8 percentage points to only 20 per cent, followed by 22 per cent in 2018. A similar pattern can be observed for Commonwealth LDCs, SIDS and SVEs. For all areas, the export-to-GDP share experienced a positive trend until 2011, since when this measure of trade orientation has been declining.

Figure 8 juxtaposes output and export growth rates over four decades for four groups of Commonwealth member countries. It suggests that all of the Commonwealth regions experienced much lower yearly average economic and export growth during the trade slowdown years of 2012–2016 compared with the 2000s. Commonwealth SSA and SVEs saw the worst impact, followed by SIDS. In terms of both economic performance and export expansion, the structural changes of 2011 had mild impacts on Commonwealth LDCs.

Commonwealth SSA and SVEs performed economically much better, at 13.1 per cent

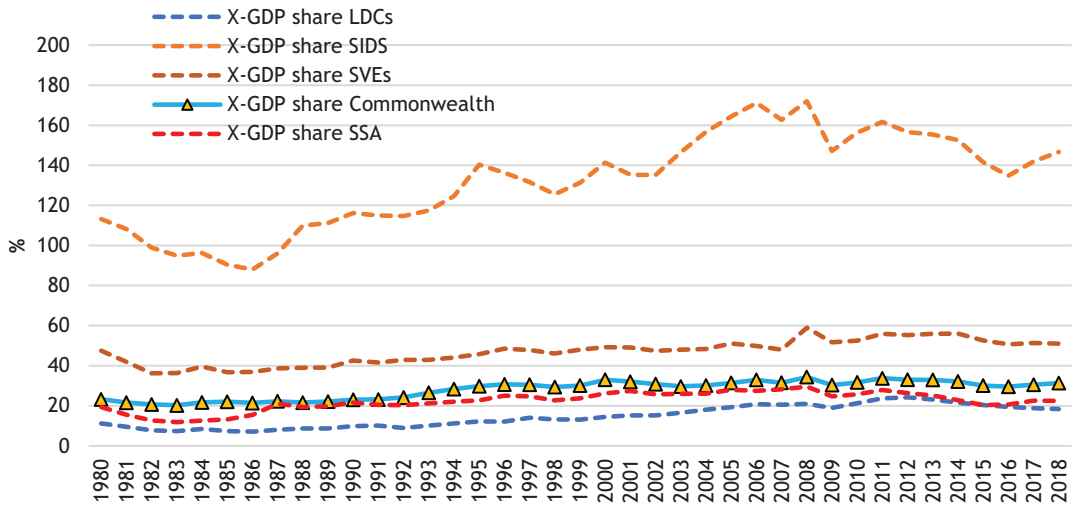
Figure 6. Commonwealth trade–GDP nexus



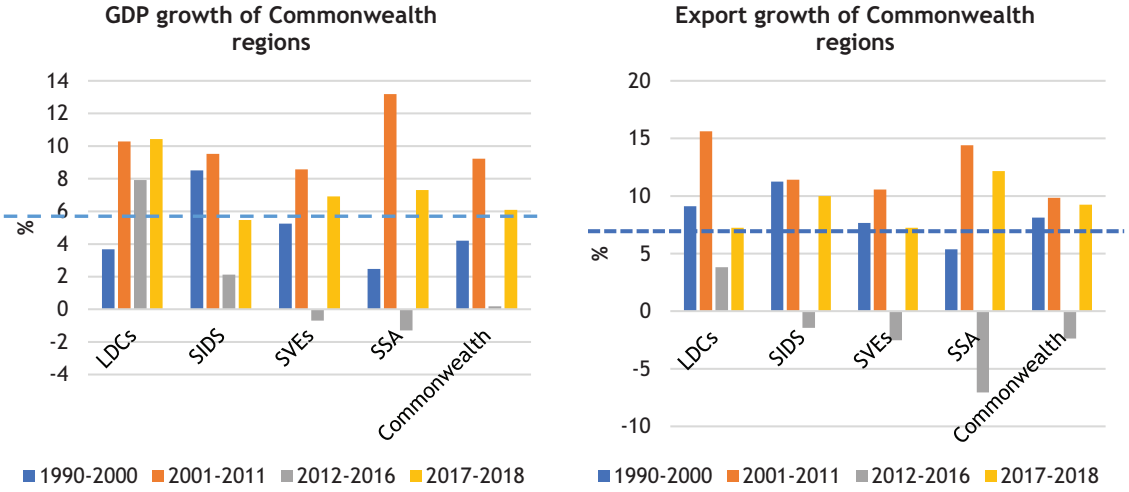
and 8.6 per cent of annual average growth rates, respectively, than the long-term rate of economic growth of the Commonwealth regions (6.04 per cent) during 2001–2011. However, during 2012–2016, although the Commonwealth economy grew at 0.2 per cent per year – much lower than the long-term growth rate – the scenarios for SSA and SVEs were much worse, with a contraction of 1.3 per cent and 0.7 percent per year, respectively, during this time period. Even though the performance of both the SIDS and LDCs faltered during these early 2010s years, their economies were in better shape than those in other Commonwealth regions. However, Figure 8(a) shows that all Commonwealth regions have regained their economic growth pace since 2017. Both SSA and SVEs recovered from the previous years' economic contraction faster (7.3 per cent and 6.9 per cent, respectively) than the overall Commonwealth (6 per cent) during 2017–2018.

Similar but accentuated patterns can be observed in Figure 8(b) for Commonwealth trade expansion over the past three decades. Overall, Commonwealth trade shrank by 2.4 per cent per year during the 2012–2016 time period. The contraction was much larger for SSA, at 7 per cent, followed by SVEs and SIDS, at 2.5 per cent and 1.4 per cent per year. The decline in Commonwealth SSA's trade growth is remarkable because, during the earlier decade of 2001–2011, it registered a 14.4 per cent rate of export expansion per year, much higher compared than in other Commonwealth areas. Figures 8a and 8b suggest that, while all the areas were negatively affected with respect to their economic performance and trade during 2012–2016, the worst affected area was the Commonwealth SSA, followed by the SVEs. In terms of impacts, the least affected region was the LDCs.[3] However, from both Figure 8(a) and 8(b), we can infer that, even though the years 2012–2016 were detrimental economically, in

Figure 7. Export-to-GDP share of Commonwealth regions



Figures 8a and 8b. GDP and export growth of Commonwealth regions



Source: Author's estimates using UNCTADstat 2020 dataset

terms of trade all Commonwealth areas started recovering in 2017, and the worst affected area of SSA has recovered the most.

To enable an in-depth understanding of the economic and trade expansion of Commonwealth countries during the two decades since 2001, Figures 9 and 10 present, respectively, the GDP and export growth rates of 54 Commonwealth countries. For each country, the annual average growth rate has been calculated utilising the UNCTADstat 2020 dataset from three time periods: 2001–2010, 2011–2016 and 2017–2018.

Figure 9 shows that, during 2011–2016, of 54 Commonwealth countries, 27 experienced a rate of economic growth lower than in the previous decade of the 2000s. Out of these 27, 4 (The Bahamas, Brunei, Cyprus and Trinidad and Tobago) registered negative GDP growth during the slowdown period. The other 27 countries seem to have seen no effects from the structural change in the global economy during the sluggish years after 2011. Out of the unaffected 27 countries, 16 had almost the same GDP growth during the sluggish trade years as for the 2001–2010 time period. Bangladesh and Fiji grew at a higher rate during 2011–2016 than pre-slowdown in 2001–2010, whereas Tanzania had almost the same rate of GDP growth during these time periods. The Gambia, Nigeria and South Africa saw economic growth per year during 2001–2010 of 4 per cent, 8.6 per cent and 3.5 per cent, respectively, which reduced to only 1.9 percent, 3.6 percent and 1.9 percent during the structural adjustment periods of 2011–2016. Out of the 27 countries that had a lower GDP growth rate after 2011 compared with pre-2011, 14 experienced an economic recovery during 2017–2018. The five countries whose economies recovered the fastest during 2017–2018 were The Bahamas, Cyprus, The Gambia, Saint Lucia and Uganda.

Figure 10 shows the growth rate of merchandise and services exports for all 54 Commonwealth member countries during 2001–2010, the sluggish trade years of 2011–2016 and the recovery years of 2017–2018. From this graph, we can strongly conclude that, during the post-2011 years, most Commonwealth countries faced a significant drop in their export expansion. Out of 54 member countries, 41 (more than three-quarters) suffered lower export growth during 2011–2016 compared with in the pre-slowdown years; 13 registered negative trade growth. Among the 15 countries experiencing the worst trade expansion situation, 6 were in Commonwealth SSA – The Gambia, Namibia, Nigeria, South Africa, eSwatini and Zambia – and 7 were SVEs – Barbados, Brunei Darussalam, Cyprus, Nauru, Namibia, eSwatini and Trinidad and Tobago). Meanwhile, of the 13 countries whose trade did not stall during the sluggish years of 2011–2016, only 3 were in Commonwealth SSA – Botswana, Seychelles and Sierra Leone; 7 were in the Caribbean region.

These findings reinforce our conclusion in the previous sections of this paper that, while all Commonwealth regions were affected during the 2011–2016 period of sluggish economic performance and shrinking

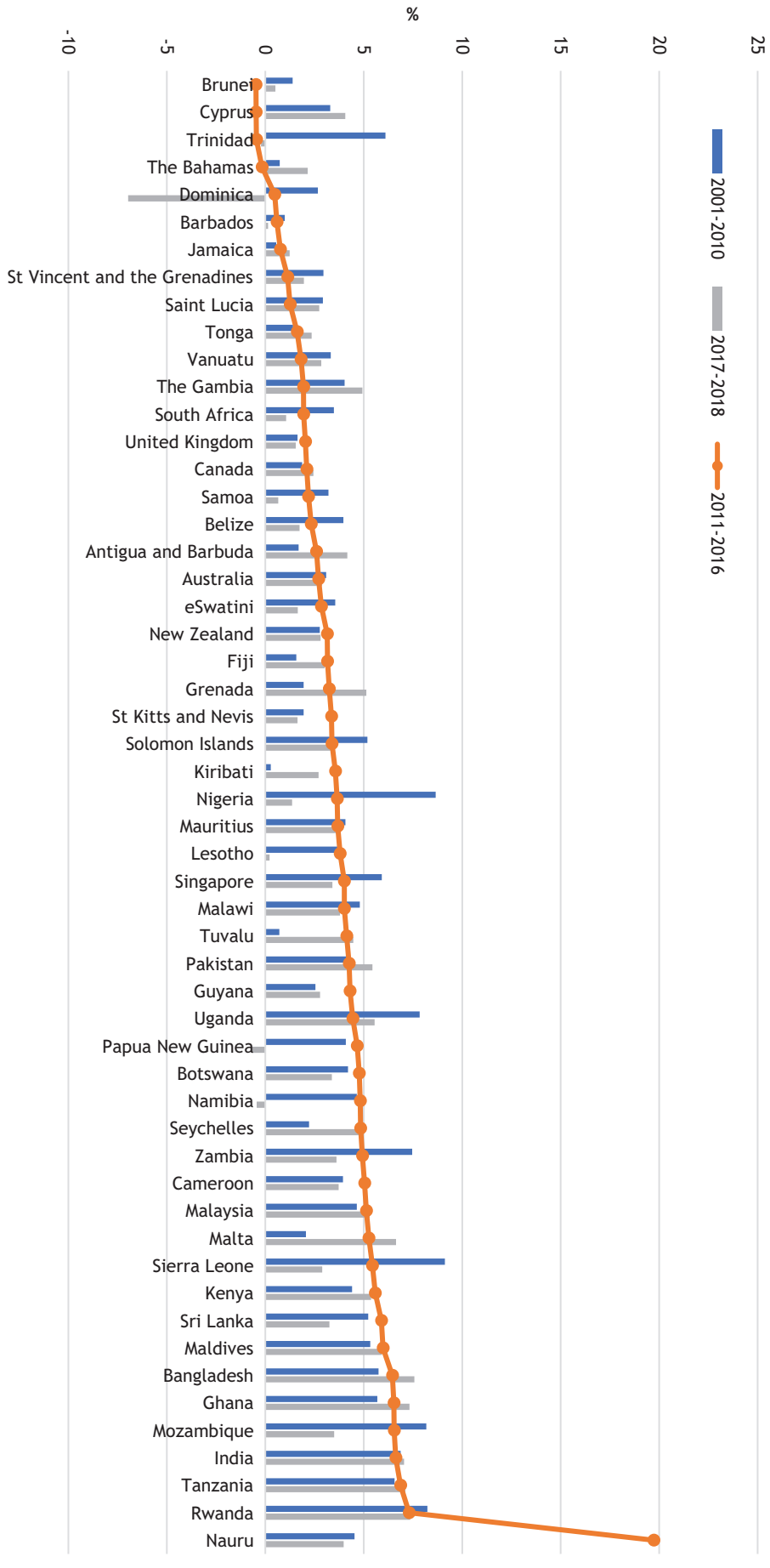


Figure 9. Growth in GDP in Commonwealth countries over different periods

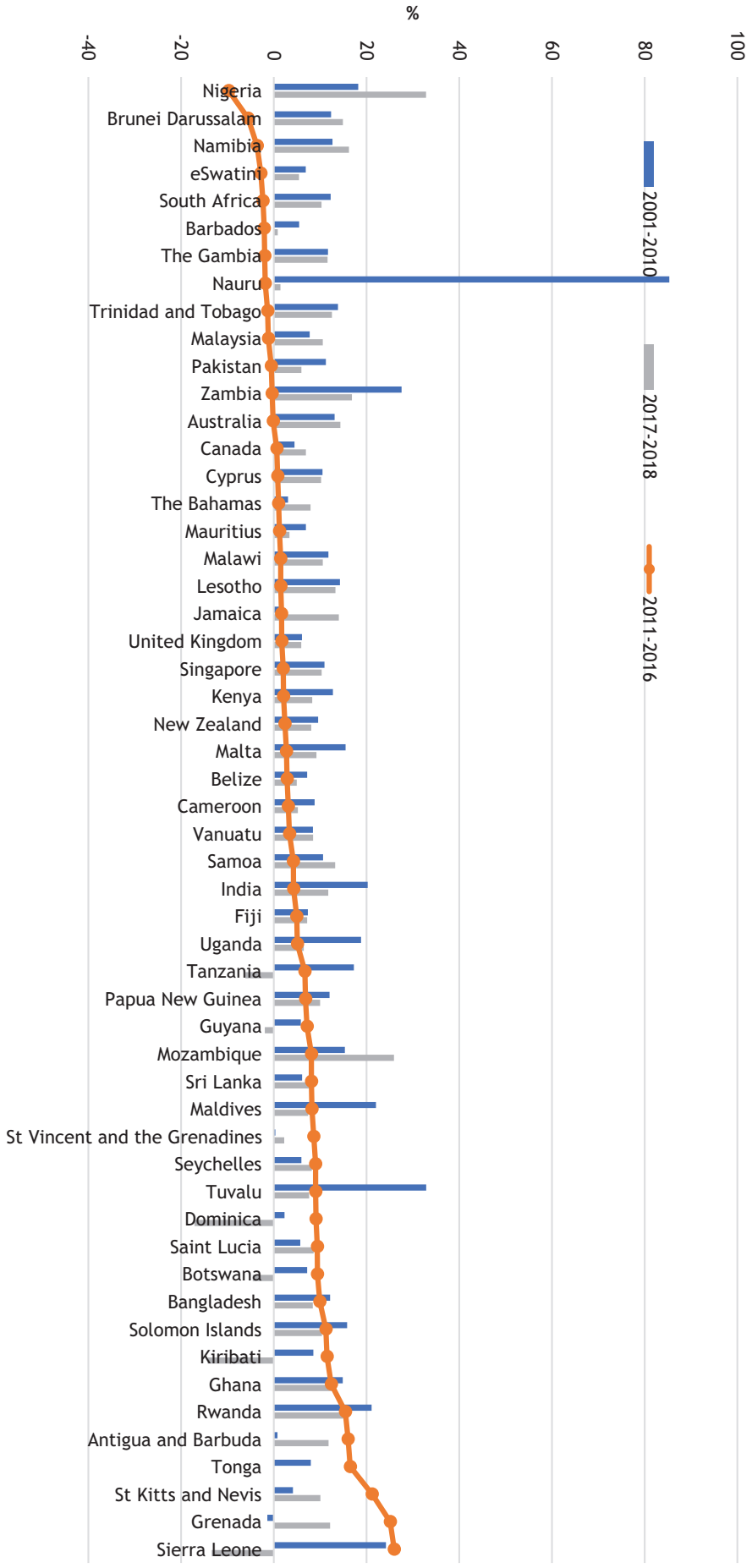


Figure 10. Growth in exports in Commonwealth countries over different periods

Source: Author's estimates using UNCTADstat 2020 dataset

Commonwealth trade, Commonwealth SSA and SVEs registered the worst effects. This has important economic implications. The largest two Commonwealth SSA economies, Nigeria and South Africa, accounting for almost half of the area's total exports, experienced substantial negative trade growth during 2011–2016. As two of China's major trading partners, these countries' economies suffered substantially as a result of the trade slowdown induced by structural changes in the Chinese economy and consolidation of global value chains.

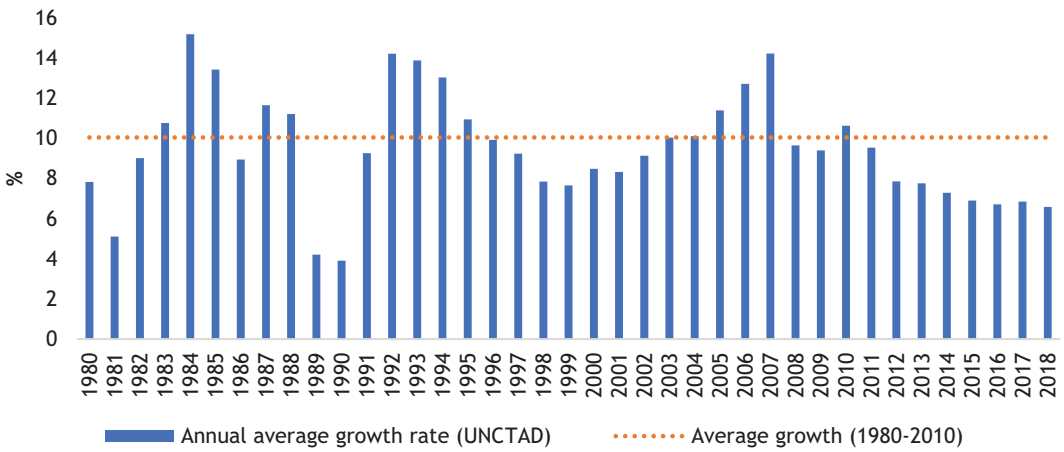
3. China's economic slowdown and Commonwealth trade deceleration

3.1 China's GDP: a rebalanced economy, a decade of growth deceleration and the onset of the Coronavirus epidemic

World GDP and trade suffered significantly as a result of the 2008 global financial crisis. There was some recovery during 2009–2012 but the world's export orientation has been declining gradually over the past few years. Several studies suggest that a 'new normal' is emerging, with trade growth unlikely to regain its pre-crisis strength (Wozniak and Galar, 2018). The World Bank (2015) has analysed the dynamics of the trade and income relationship and suggests that several factors have contributed to the declining long-run response of trade to income, including changes in the composition of world trade, particularly the relative importance of goods and service trade; changes in the structure of trade associated with the international fragmentation of production; changes in the composition of GDP, particularly the share of investment in aggregate demand in large developing countries like China; and changes in trade regimes, especially a rise in protectionism. In addition, several cyclical and structural factors have contributed to the persistence of the Commonwealth trade slowdown since 2012. Among the structural factors, the most prominent is China's settling onto a lower economic growth path.

As Figure 11 shows, over the three decades between 1980 and 2010, the Chinese economy grew at an average rate of 10.05 per cent. This high growth rate of Chinese real GDP has slowed continuously since 2011. Between 2011 and 2018, the average rate of economic expansion in China has not reached the long-term economic growth rate of 10 per cent, achieving instead a modest 7.4 per cent per year (2.65 percentage points less than long-term GDP growth). In 2018, economic growth in China registered its lowest rate (6.6 per cent)

Figure 11. Chinese GDP growth rate



Source: Author's estimates using UNCTADstat 2020 dataset

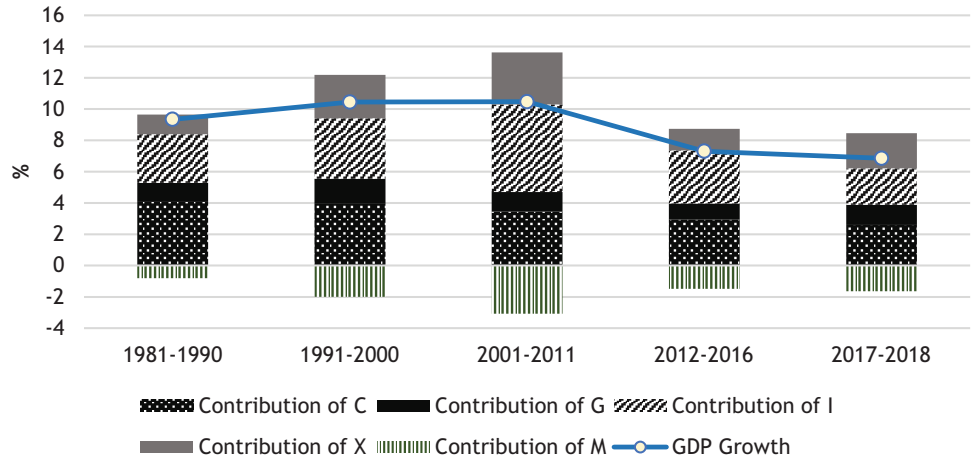
since 1991. GDP growth further dropped to only 6 per cent in the fourth quarter of 2019, according to the National Bureau of Statistics of China.[4] If the IMF's prediction turns out to be correct, economic growth in China will slow further over the next five years, and the rate of growth will be 5.7 per cent per year between 2020 and 2024.

The Chinese economy has been in an even more precarious situation since January 2020 as a result of the outbreak of the novel Coronavirus. Even though it is still too early to comment on the possible impacts of the Coronavirus outbreak, there is strong consensus regarding the huge economic loss that will be brought forth for the Chinese economy as well as for world trade. During the first two months of 2020, retail sales and industrial output plunged 20.5 per cent and 13.5 per cent, respectively, compared with the same period in 2019.[5] China's US$14 trillion economies may contract by as much as 6 per cent in the first quarter of 2020 year on year. According to other estimates, GDP growth in the first quarter of 2020 has slowed to only 1.2 per cent year on year. The economic fallout induced by the epidemic may include recessions in the USA, the Eurozone and Japan, with a total loss of world GDP of as much as US$2.7 trillion.[6] Earlier predictions suggested a slowed economy for China but the epidemic will make the situation much worse. China's economy may experience a significant shrinkage starting from 2020, potentially the worst in almost 50 years. The impacts of the Coronavirus outbreak in China could affect the global economy on both the demand and the supply side.

In the aftermath of the 2008 crisis, the global economic slowdown and the adverse consequences on Chinese exports, along with the China–USA trade war, made the pre-2010 double-digit growth rate unsustainable. Acknowledging this, the Chinese government in its 12th Five-Year Plan (2011–2015) focused on the domestic market, emphasising domestic consumer demand, addressing income inequality and other sustainable practices (Igbinoba, 2016). In addition, the government is now attempting to regulate investment to avoid slumps in key sectors of the economy. Hence, since 2011, the Chinese economy has shifted its focus from import-intensive investment demand for manufacturing production towards consumption of services and domestic value-added manufacturing production.

Figure 12 shows the declining contribution of investment in the economic growth of China. During the three decades beginning in the 1980s, the contribution of investment to GDP growth in China increased, from 3.1 per cent to 3.9 per cent to 5.7 per cent, respectively. However, between 2011 and 2016, this contribution dropped to 3.6 per cent. More recently, during 2017–2018, investment contributed only 2.3 per cent of the 6.7 per cent GDP growth in China. During 2001–2010, owing to its significant investment-based economy, China was one of the world's largest consumers of commodity products (since 2000), such as copper, lead, petroleum, zinc and iron. A large number of commodity-based economies had benefited from this substantial import demand.

Figure 12. GDP decomposition of China's economic growth



Source: Author's estimates using UNCTADstat 2020 dataset

3.2 Commonwealth trade and China's GDP growth

The sluggish economic growth of China since 2011 has affected different regions of the world in different ways depending on their exposure to China's economy. The reduction in China's investment demand resulting from the rebalancing of the Chinese economy led to a weakened import demand for the exports of many Commonwealth nations. The most affected group of Commonwealth countries comprised the Commonwealth SSA countries, which are also among the largest trading partners of China in Africa.

Even though the Africa–China relationship dates back many decades, the economic relationship has surged since 2000. China's Going Global Strategy, announced in 2001, gave rise to and strengthened this (Busse et al., 2016), encouraging foreign trade and outward foreign direct investment (FDI) from China. Even though this strategy was not targeted at African countries, a large portion of China's FDI went to the continent for resource exploration projects. There were three main channels of economic interaction between SSA and China: trade, FDI and aid (economic cooperation). In terms of the trade interaction, this was concentrated largely in a few countries and product groups. In 2012, natural resources accounted for 66 per cent of Africa's exports to China, with the highest contribution from Commonwealth member countries such as South Africa and Zambia.

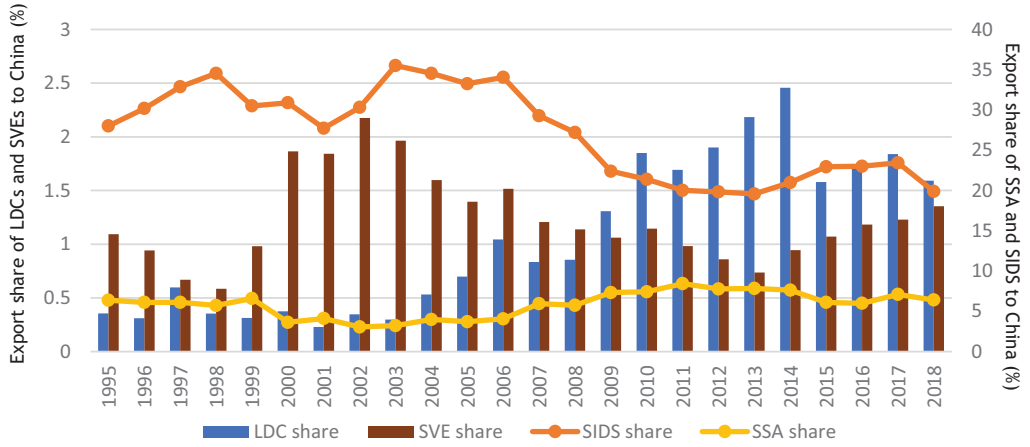
China continues to be the largest trade partner of SSA but Africa–USA trade has dipped in recent years. Along with the reasons mentioned above, several factors have had adverse impacts on many trading partners, and these include SSA's trade relationship with China in recent years. Five factors are mentioned in the literature as an important determinant of China–SSA trade during 2001–2010 (Eisenman, 2012): the comparative advantage of China in labour- and capital-intensive production; abundant natural resources in Africa; China's rapid economic growth; its emphasis on building new infrastructure in China and Africa; and the economies of scale in its light manufacturing sectors. Other Commonwealth regions (SVEs, LDCs and SIDS) also have a substantial trade relationship with China. Some of the major export-oriented countries in particular have benefited from China's investment-induced increased demand for commodities and raw materials since 2000.

Between 2000 and 2016, total trade of the Commonwealth with China expanded 8.4-fold, whereas that with the rest of the world grew only by 1.1 times (UNCTADstat 2020). As well as Commonwealth SSA countries, Australia, Singapore, the UK and several other member countries have strong export reliance on China. However, China's recent unprecedented economic slowdown means that the Commonwealth countries' combined export decline is an estimated US$450 billion. Nearly 54 per cent of this decline is attributed to the advanced economies of Australia, Canada and the UK. Among developing Commonwealth countries, India and Nigeria have contributed about 21 per cent (Commonwealth Secretariat, 2017). While many developing member countries account for a relatively low share of global trade, the economically and socially damaging effects of any trade slowdown are amplified within the context of highly concentrated export baskets.

Figure 13 illustrates the different regions' share of Commonwealth exports to China. The largest share is contributed by SIDS economies, followed by SSA, LDCs and SVEs. During 2001–2011, while SSA and LDCs experienced an increasing share, SVEs and SIDS saw a decline. SSA's increasing share shows a slight decline from 2012. The shares of LDCs, SIDS and SSA during 2011 were 1.7 per cent, 20 per cent and 8.4 per cent, respectively; in 2018, these had dropped to 1.6 per cent, 19.9 per cent and 6.4 per cent. Despite this declining trend, export shares to China of SVEs and SIDS have been increasing consistently over the past decade (2011–2018).

Figures 14 and 15 present China's economic growth and the merchandise and services export volume of different Commonwealth regions since 2001. These two Figures provide a clear picture of the association between China's economic performance and the Commonwealth trade expansion. The Chinese economy registered a remarkable rate of growth from 2001 followed by a temporary disruption during the global financial crisis, a quick recovery and then a deceleration (for several structural reasons, as explained earlier). Hand-in-hand with this, Commonwealth exports experienced a boom during the 2001–2011 time period, then faltered during the 2008 global economic crisis.

Figure 13. Commonwealth regions' share of total export to China



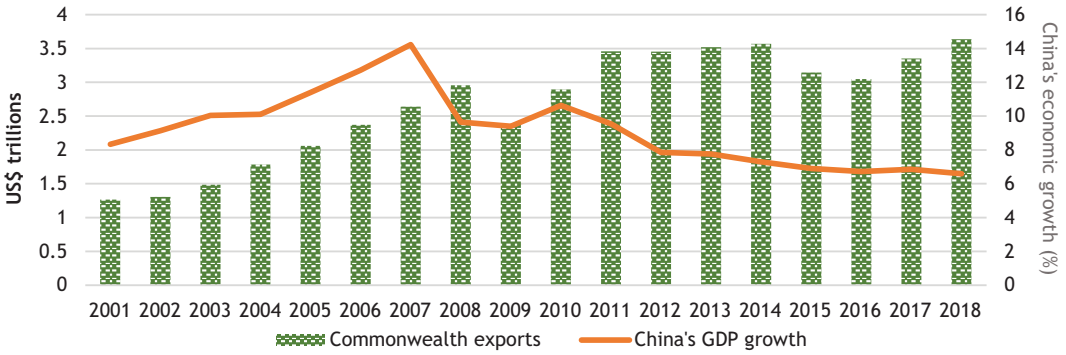
Source: Author's estimates using UNCTADstat 2020 dataset

Despite a modest recovery from the crisis, merchandise and export trade then experienced a contraction until 2016 just like China's economic performance. However, during 2017–2018, Commonwealth trade showed signs of a recovery despite the continual decline in China's economic growth.

Hence, we can conclude that there has been a strong association between China's economic growth and Commonwealth trade for the past two decades, but starting from 2011, and more specifically in the recent years of 2017–2018, this long-term relationship has weakened. Since 2017, we can observe Commonwealth economies' exports increasing despite China's sluggish economic growth.

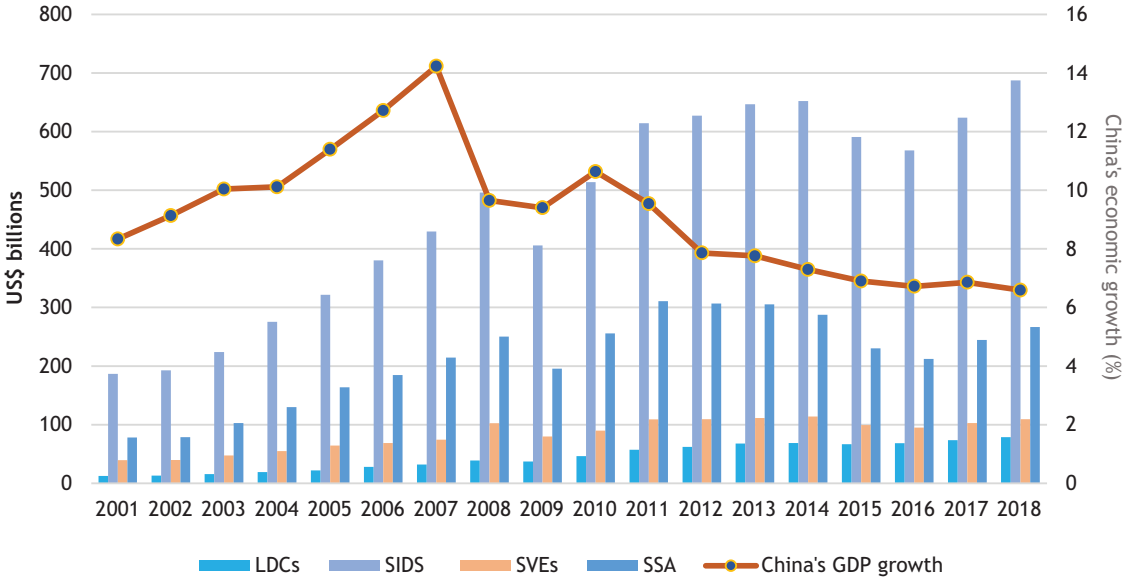
Figure 15 shows the trade association of the Commonwealth with China's economic growth by region. We can see that, during China's double-digit growth years, the export volume of all Commonwealth regions increased, backed primarily up by the revamped investment and manufacturing sector of the Chinese economy. However, from 2011, all regions other than LDCs experienced either a contraction (SSA, SVEs) or stagnancy (SIDS) of their respective merchandise and services exports. During this time period, SSA and SVEs' export volume reduced by about US$100 billion and US$14 billion, respectively. The years of contraction were followed by a modest recovery registered for all Commonwealth areas during 2017–2018. Figure 15 suggests that, since 2011, the association of China's GDP with SSA and SVE weakened only slightly; however, such a long-term relationship has waned substantially for SIDS and LDCs. The recent recovery of Commonwealth regions since 2017 implies that, even though Chinese GDP growth continues to decline, the strength of adverse effects on Commonwealth trade is declining. Findings obtained from this analysis imply that, despite the sluggish economic growth of the Chinese economy, Commonwealth SSA and SVEs continue to have a modest relationship with the economy of China.

Figure 14. China's GDP growth and Commonwealth merchandise and services export



Source: Author's estimates using UNCTADstat 2020 dataset

Figure 15. Merchandise and services export of Commonwealth regions and the Chinese economic slowdown



Source: Author's estimates using UNCTADstat 2020 dataset

4. A decade of lost Commonwealth trade and implications for Commonwealth LDCs, SVEs and SSA

4.1 The Commonwealth's would-be and forecast trade: a decade lost

This paper estimates the volume of trade lost since 2011 as a result of the Chinese economic slowdown. It also forecasts the total export volume for Commonwealth member countries and Commonwealth SSA economies until 2025. Econometric techniques used to calculate the lost amount (the difference between the counterfactual and actual export volumes) of Commonwealth countries and Commonwealth SSA trade owing to the Chinese slowdown include time-series forecasting methods and the IMF WEO 2020's prediction regarding Chinese economic growth until 2024.

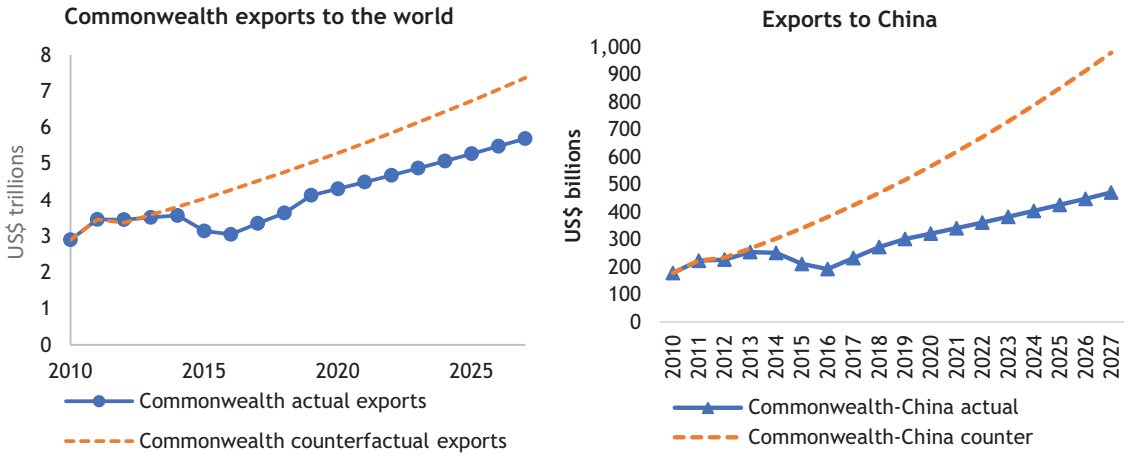
Figures 16a and 16b present several scenarios of Commonwealth exports to the world and to China. It is reasonable to suggest that the volume of Commonwealth trade would have been much larger had there not been an economic slowdown in China. Utilising trend-modelling techniques under different hypothetical scenarios, we have estimated the amount of lost trade from Commonwealth regions. These scenarios include Commonwealth trade expansion under the pre-2011 pattern backed by the tremendous growth rate of Chinese GDP in addition to the business-as-usual growth rate of Commonwealth trade.

The magnitude of foregone Commonwealth trade over 2012–2018 is estimated at, on average, US$663.5 billion per year, and the estimated foregone amount of exports to China at US$111.4 billion per year. According to this estimation, under the current rate of expansion, by 2025 Commonwealth exports to the world will be US$5.3 trillion; in 2018, this Figure stands at US$3.6 trillion. Meanwhile, predicted Commonwealth exports to China in 2025 are US$426 billion (US$272 billion in 2018).

Another important finding is that the amount of foregone trade by the Commonwealth and its regions would increase. Such a conclusion is reasonable: if Commonwealth trade growth resulting from China's restructuring had not slowed, not only would it expand at the long-run rate of 7.5 per cent per year but also the trade growth rate would increase. Hence, lost trade for the Commonwealth and its regions is found to have grown over the years.

Figure 17 presents lost trade and forecast export values from the Commonwealth regions

Figures 16a and 16b. Commonwealth exports to the world and China



Source: Author's estimates using UNCTADstat 2020 dataset

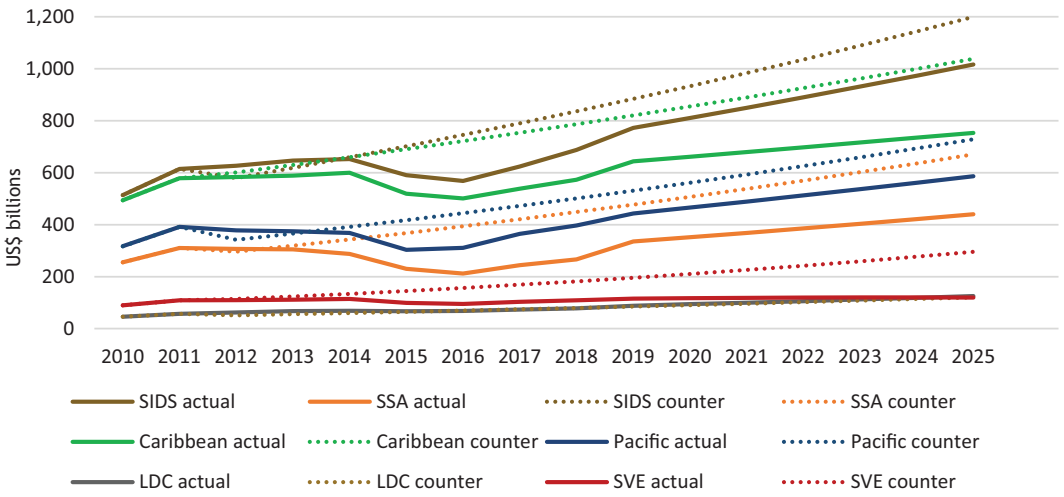
(SIDS, LDCs, SSA, SVEs, Caribbean and Pacific). The largest amount of lost exports between 2012 and 2018 was from Commonwealth SSA (US$105.7 billion), followed by the SIDS (US$76.46 billion) and SVEs (US$40.4 billion per annum). Even though the amount of trade lost for the SVEs is lower than that of SIDS, in terms of their share of trade SVEs lost a much higher portion of would-be trade as a result of the economic slowdown of China.

Unlike the three Commonwealth areas of SSA, SVEs and SIDS, the estimated lost volume of trade from the LDCs is almost insignificant, as found also in previous sections of this paper. The forecast values of trade in 2025 for the Commonwealth SSA, SVEs, SIDS and LDCs are estimated at US$440.5 billion (US$266.7 billion in 2018), US$119.5 billion (US$109.4 billion), US$1 trillion (US$687.4 billion) and US$125.4 billion, respectively (US$78.5 billion).

Figure 17 also shows the forecast and counterfactual values of trade for two important Commonwealth geographical regions. During 2012-2018, the Commonwealth Caribbean and Pacific lost an estimated US$134 billion and US$62 billion per year in trade, respectively, as a result of the Chinese economic slowdown. According to our forecasting, predicted trade in 2025 for the regions is US$753 billion and US$587 billion, respectively.

However, these predictions are far more optimistic if we take the recent event of the novel Coronavirus outbreak into consideration. World trade, as well as GDP, is likely to experience a substantial plunge during 2020 and in subsequent years. According to the United

Figure 17. Commonwealth regions' exports to the world



Source: Author's estimates using UNCTADstat 2020 dataset

Nations Conference on Trade and Development (UNCTAD), the slowdown in the global economy as a result of the Coronavirus outbreak is likely to cost at least US$1 trillion.[7] Even though we do not see much lost trade for Commonwealth LDCs, the substantial drop in trade as a result of the pandemic may present those exporting commodities with an increased threat.

4.2 GDP decomposition and the contribution of exports: a faded role for exports in Commonwealth economic growth

From our discussion so far, we can reasonably conclude, that during 2001–2010, China's remarkable economic growth was one of the main proponents of Commonwealth member countries' tremendous trade expansion. More specifically, Commonwealth SSA exports grew significantly during this period as a result of China's investment-led economic growth. However, China's sluggish economic growth since 2011 has had some adverse impacts on the trade volume expansion of Commonwealth member countries. The most adversely affected regions are Commonwealth SSA and the SVEs.

As a result of slowed, and for some years (2011–2016) even negative, export growth, the export contribution to GDP of both the Commonwealth and most of its regions has declined, which implies export–GDP linkages in these regions have weakened. Figures 6–8 above have already looked into the export–GDP relationship of the Commonwealth regions, using an export–GDP ratio as well as the GDP and trade growth rates of Commonwealth LDCs, SSA, SIDS and SVEs. Our findings imply that the trade–GDP nexus during the post-2011 years faltered the most in Commonwealth SSA, followed by SVEs.

However, to assess the Commonwealth trade–GDP linkage more rigorously, we consider the contribution of the export sector in Commonwealth regions' economic growth through the national income accounting process. This method is likely to be a better approach than it is possible through focusing just on the export–GDP ratio. In the export-GDP ratio, exports are measured in gross terms (thus include raw materials and imported inputs), whereas in the contribution of export to economic growth approach, GDP is a measure of value added (after excluding raw materials). In national income accounting exercises, GDP (here indicated by Y) on the expenditure side is decomposed into five macroeconomic components: household consumption, government expenditure, investment, exports, and imports denoted by C, G, I, X, and M. This allows for assessing the relative contribution of all of these components and their evolution over time. The computation method for contribution to GDP growth by various components is given below; Figures 18–19d depict decomposition results for the Commonwealth and its four regions – LDCs, SIDS, SS, and SVEs – respectively.

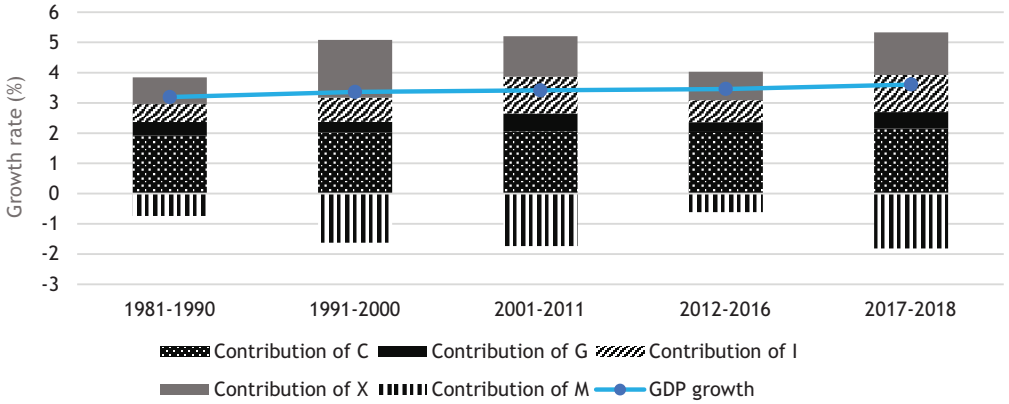
$$Y = C + I + G + X - M$$

$$\frac{\Delta Y_t}{Y_{t-1}} = \frac{\Delta C_t + \Delta I_t + \Delta G_t + \Delta X_t - \Delta M_t}{Y_{t-1}}$$

$$\Rightarrow Y_t^{growth} = C_t^{growth} C_{t-1}^{share\ of\ Y} + I_t^{growth} I_{t-1}^{share\ of\ Y} + G_t^{growth} G_{t-1}^{share\ of\ Y} + X_t^{growth} X_{t-1}^{share\ of\ Y} - M_t^{growth} M_{t-1}^{share\ of\ Y}$$

For the overall Commonwealth, economic growth remained almost the same during the

Figure 18. GDP decomposition of Commonwealth growth

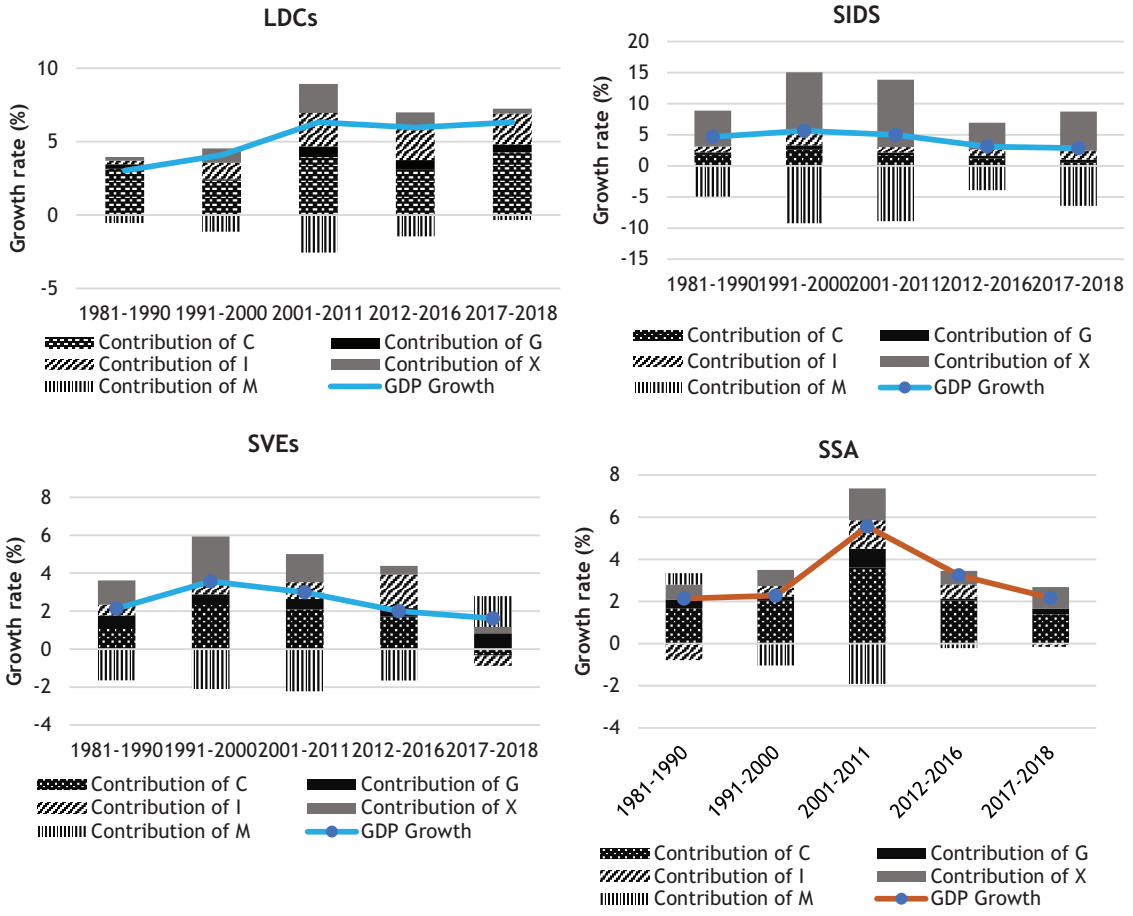


sluggish export growth period of 2012-2016, compared with the previous two decades (slightly more than 3 per cent). However, the contribution of exports to GDP growth was 1.34 percentage points (39 per cent of GDP growth) during the high trade growth period of 2001–2011, and this rate declined to only 0.9 percentage points (23 per cent of the economic expansion rate) during the sluggish trade years. This reduced contribution of trade to economic growth revived slightly during 2017–2018 years to 1.4 percentage points of the 3.6 per cent economic growth of the Commonwealth nations.

In line with our previous findings, Figure 19d shows that the part of the export contribution to GDP growth reduced by more than half, from 1.5 per cent during 2001–2011 to only 0.63 per cent in 2012–2016, for Commonwealth SSA. Alongside this, we also observe a significant drop in the economic growth of SSA during this time period, to 3.2 per cent from 5.55 per cent in the pre-2011 years. This decline in the contribution of exports to GDP growth revived for SSA in 2017–2018 to about 1 per cent. Hence, Commonwealth SSA countries exhibit an interesting evolution in the contribution of exports to economic growth. The contribution for 2001–2011 was about 27 per cent, which decreased to only 19.6 per cent during 2012–2016, as a result of declining economic growth and falling commodity prices. During 2012–2016, SSA's growth owed largely to growth in consumption expenditure (63 per cent of GDP growth). However, during the recent years of 2017–2018, the export contribution to GDP growth increased substantially, to 46.7 per cent. One primary reason for this drastic change in the economic growth contribution of exports is the slowed economy of the SSA countries. During 2012–2016, the rate of economic growth was 3.2 per cent; in 2017-2018 it was only around 2 per cent.

The most adversely affected Commonwealth region in terms of export contribution to GDP is the SVEs, where this reduced to a meagre 0.45 percentage points (of 1.99 per cent of GDP

Figures 19a, 19b, 19c and 19d. GDP decomposition of Commonwealth growth by region



Source: Author's estimates using UNCTADstat 2020 dataset

growth), which is 23 per cent of GDP growth, in 2012–2016, from a modest 1.5 percentage points (of 2.99 per cent of economic growth) in 2001–2011, which was 50 per cent of economic expansion. The export contribution of SVEs declined even more to 0.33 per cent in 2017–2018.

The SIDS have also been affected by the economic slowdown of the Chinese economy and the global trade slowdown. The net (export-import) contribution of trade to economic expansion for Commonwealth SIDS during 2001–2011 was 1.98 percentage points of the GDP growth of 5 per cent. This reduced to only 0.38 percentage points of 3.11 per cent economic growth in 2012–2016.

Our previous findings suggest the LDCs were almost unaffected by the slowed economic growth of China during the post-2011 years. However, Figure 19a shows the export contribution of GDP growth for LDCs reduced slightly, which can be explained by their lower economic growth (5.9 per cent) during 2012–2016 compared with the 6.3 per cent of the previous decade of the 2000s.

One important finding from this decomposition of economic growth is that, while the Commonwealth SSA's export contribution to GDP growth has improved significantly in recent years, that of the SVEs continued to shrink during 2017–2018.

4.3 Econometric analysis: long- and short-run elasticities of China's GDP–Commonwealth exports: a dwindled association

Analysis conducted so far in this paper implies that China's economic expansion had a strong positive association with the merchandise and services export of Commonwealth member countries, which has weakened in recent years since 2012. This section econometrically estimates the impacts of the sluggish economic growth of China on Commonwealth regions' export expansion. Using UNCTADstat 2020 and taking 1980–2018 years into account, both the long- and short-run elasticities, as well as the speed of convergence to the long-run equilibrium, are estimated for the four different Commonwealth developing regions. The structural rebalancing of the Chinese economy since 2011 is also considered by introducing a structural break dummy variable in the model. The estimation techniques follow Engle-Granger's one-step error correction method (ECM) for finding out the long- and short-run elasticities. This approach is widely practised in the empirical trade literature.[8] The long- and short-run export elasticity analysis in this paper specifies the regression of the following form, which has been estimated by the one-step ECM:

$$\Delta \ln(x_t) = \alpha + \gamma \ln(x_{t-1}) + \beta \Delta \ln(y_t) + \delta \ln(y_{t-1}) + u_t \quad (1)$$

$$\ln(x_t) = \tau + \theta \ln(y_t) + \lambda d_{year>2011} + \eta \ln(y_t) * d_{year>2011} + \varepsilon_t \quad (2)$$

In the above equations, equation (1) shows the model specification for Engle-Granger's one-step ECM, whereas equation (2) estimates the long-run export elasticities of Commonwealth regions taking the structural change of China's economy (since 2012) into consideration. Δ denotes first differences, *xt* is the value of exported goods and services of the Commonwealth area and *yt* is the real GDP of China at period *t*. In order to address the structural change in the Chinese economy since 2011, a dummy variable $d_{year>2011}$ has been introduced, and to estimate the effect of China's economic growth on Commonwealth trade during 2012–2018 an interaction variable of the structural dummy and the log of China's GDP has been constructed. In equation (1), α is a constant term and *ut* is the residual part of export unexplained by China's GDP. In this framework, the short-run elasticity is β, the long-run elasticity of export is $-\delta/\gamma$ and $-\gamma$ is the speed of adjustment to the long-run equilibrium.[9] In equation (2), the parameter τ which represents a constant term and θ indicates the long-run elasticity of Commonwealth export during 1980–2011. In contrast, the long-run elasticity during the sluggish trade years of 2012–2018 is denoted by $(\theta + \eta)$. The λ is the difference in Commonwealth's export growth between the pre-2011 and post-2011 years. Table 2 presents the estimated short-run and long-run trade-elasticities, as well as the speed of convergence to the long-run equilibrium for Commonwealth regions. This following table also shows how the long-run trade elasticities of Commonwealth regions differ during the pre and post-slowdown years.

On average, the long-run 'China's GDP' elasticity of Commonwealth exports from 1980 to 2018

Table 2. Long run and Short export elasticity of Commonwealth with China's GDP

	Short-run trade elasticity	Long-run trade elasticity	Convergence/ adjustment speed	LR elasticity (1980–2011)	LR elasticity (2012–2018)
Commonwealth	1.13*	0.77*	–0.3*	0.79***	–0.06***
LDCs	0.84	1.16**	–0.22**	0.89***	0.46
SIDSs	1.12	0.94*	–0.2*	0.98***	0.03**
SVEs	0.75	0.74**	–0.36**	0.72***	–0.19**
SSA	1.56*	0.80*	–0.25***	0.63***	–0.62*

*** p<0.01, ** p<0.05, * p<0.1.
Source: Author's estimates from ECM with structural break in 2011, using UNCTADstat data.

is 0.77, which implies that a 1 per cent expansion of China's GDP is associated with a 0.77 per cent increase in Commonwealth exports. However, the long-run response of exports with respect to the GDP of China differs considerably across the different Commonwealth regions. The highest long-run elasticity can be observed for LDCs, followed by SIDS, SSA and SVEs. Meanwhile, in the short run, for a 1 per cent increase in the GDP of China, the largest export response is for SSA, at 1.56 percent, followed by SIDS, LDCs and SVEs, at 1.12 per cent, 0.84 per cent and 0.75 per cent, respectively.

Interesting findings can be obtained from Table 2, once the structural break in 2011 is included in the ECM. We can observe that the long-run elasticity of SSA and SVEs during the pre-2011 years was considerably higher than that in 2012–2018, and all the results are statistically significant. These findings have important implications for the association of Commonwealth trade with China's GDP and restate our conclusion in previous sections. Hence, we can conclude that the strong long-term linkages between the export growth of Commonwealth regions and the economic expansion of China waned substantially during the 2012–2018 years.

In this paper, given Commonwealth SSA's importance, country-level export elasticities are also estimated for these economies. The largest long-run response to China's GDP is observed for Rwanda (1.81 per cent), followed by Ghana, Mozambique and Uganda, all of which have about 1.3 per cent export elasticity. The lowest long-run association is found for The Gambia, at 0.15 per cent. For South Africa and Nigeria, the two largest exporting countries of SSA, a 1 per cent increase in the GDP of China is associated with a 0.69 per cent and 0.89 per cent rise in long-run exports, respectively.

Using the ECM method, we also calculate the short-run export elasticities of the Commonwealth SSA countries. The largest short-run response to China's GDP is observed for Namibia (4.12 per cent), followed by Uganda, Zambia and Nigeria (3.77 per cent, 3.19 per cent and 1.84 per cent, respectively). The lowest positive short-run association is found for Rwanda, at 0.15 per cent. For South Africa, one of the two largest exporting countries of SSA, a 1 per cent increase in the GDP of China is associated with a 1.65 per cent temporary rise in long-run exports. For three of the countries, short-run responses are negative. A 1 per cent rise in the GDP of China is associated with a 0.24 per cent, 0.33 per cent and 0.71 per cent temporary contraction in the exports of eSwatini, Malawi and Mozambique, respectively.

One important drawback in estimating equations (1) and (2) is that the effect of China's GDP on Commonwealth trade may be biased, as it assumes China's GDP is an exogenous variable. Many other factors that can affect exports should ideally be controlled in these specifications to get unbiased results for elasticities.

In order to obtain more robust findings regarding the Chinese GDP–Commonwealth trade nexus, this paper estimates another econometric model (following the Gravity model specification), where several types of fixed effects are considered. In order to obtain the unbiased impacts of China's GDP growth on Commonwealth exports, in addition to country-specific and region-level fixed effects, the model includes several other relevant factors that may affect export levels. In order to investigate the impact of the economic slowdown of China on Commonwealth countries' exports, this specification utilises the longitudinal data of SSA countries' exports and China's real GDP over 24 years between 1995 and 2018.

China's structural rebalancing occurred during the 12th Five-Year Plan, when the Chinese government re-emphasised the domestic market and focused on the promotion of consumer demand instead of promoting investment and expanding the manufacturing sector. Hence, we assume 2011 is the year when the structural break occurred in the Chinese economy. A Wald test for a structural break also suggests a significant structural change in the Commonwealth export–Chines GDP nexus since 2011.

To analyse the impact of China's economic slowdown on the exports of Commonwealth countries, we estimate three specifications, all of which use 'log of Commonwealth exports' as the dependent variable and 'log of China's GDP' as the independent variable of interest. In Model 1, we control for three other factors: the time effect, the GDP of the exporting Commonwealth SSA country and the real effective exchange rate (REER) of the exporting country. In Model 2, in addition to all the regressors of Model 1, country-specific effects are controlled for. In addition to all the variables included in Model 1 and 2, in Model 3 we include a dummy for the years after the structural break since 2011 and an interaction term of the dummy variable and 'log of China's GDP'. Including the country fixed effects, we estimate the following regression function:

$$\log(\text{export}_{it}) = \beta_0 + \beta_1 \log(\text{China's GDP}_t) + \beta_2 \log(\text{exporter's GDP}_{it}) + \beta_3 \,\text{time} + \beta_4 \,\text{REER}_{it} + \beta_5 \underbrace{\text{dummy}_{year>2011}}_{\text{Structural break dummy}} + \beta_6 \underbrace{\log(\text{Chain's GDP}_t) * \text{dummy}_{year>2011}}_{\text{Interaction term}} + \underbrace{\mu_i}_{\text{Country fixed effects}} + u_{it} \quad (3)$$

In equation (3), the parameter β_1 is the export elasticity with respect to China's GDP, β_2 shows the percentage change in export due to a one-percent increase in the GDP of the exporting country, β_3 is the export trend over the years, β_4 indicates the percentage change in export for one unit change in the real effective exchange rate (REER) of the exporting country, and β_5 represents the percentage change in export due to the structural break that occurred during 2011. Considering the GDP growth of China might affect the Commonwealth export differently during the pre and post-slowdown years, we have included an interaction term '$\log(\text{China's GDP}_t) * \text{dummy}_{year>2011}$'. Hence, the β_6 parameter shows, how differently the Chinese GDP growth affected the Commonwealth export during post-structural break years, compared to the years before 2011. Lastly, the parameter μi indicates the country-specific effects on the growth rate of export.

Table 3 presents the results from the estimation of equation (3). Additionally, to find out the Commonwealth region-specific results, the specification of equation (3) introduces the region-specific dummies as well as the interaction terms of the regional dummy and 'log of China's GDP'. Table 4 presents the results from this model specification.

All models fit the data relatively well in Tables 3 and 4, which can be observed from the adjusted R^2 indicating that the regressors account for about 90 per cent of the observed variation in the exports of Commonwealth countries. A second

Table 3. Estimated effect of China's economic slowdown on Commonwealth export growth

Variable	Model 1 (pooled model)	Model 2 (with country fixed effects)	Model 3 (with country fixed effects and structural change at 2011)
Log (Chinese GDP)	2.05***	2.02***	1.81***
Log (exporting country's GDP)	.95***	1.57***	1.58***
Time	–0.0020	0.0014	–0.15***
REER (based on CPI)	–0.004	0.0007	0.0012
$\text{Dummy}_{year>2011}$			7.08*
Log (Chinese GDP)*$\text{Dummy}_{year>2011}$			–0.44*

*** p<0.01, ** p<0.05, * p<0.1; Adj-R^2 : 0.88.
Source: Author's estimates from UNCTADstat data

Table 4. Estimated effect of China's economic slowdown on Commonwealth regional export growth

Commonwealth regions	SSA		SVEs		SIDS		LDC		Commonwealth	
Time period	Pre-2011	Post-2011	Pre-2011	Post-2011	Pre-2011	Post-2011	Pre-2011	Post-2011	Pre-2011	Post-2011
Chinese economic growth	1.49**	0.99*	1.82	1.31	1.58	1.08	2.1**	1.51**	1.71***	1.21***

*** p<0.01, ** p<0.05, * p<0.1; Adj-R^2 : 0.99.
Source: Author's estimates from UNCTADstat data (controlled for country and region fixed effects). Complete table with results of country and region fixed effects presented in the Appendix

indication that these specifications are performing well is that the model F-test is highly statistically significant: that is, it rejects the hypothesis that all coefficients are jointly 0 at the 1 per cent level. Additionally, the residuals from these models were found to be white-noise, indicating the correct specification of the models.

From all the model specifications from Table 3, we can see that China's economy and exporting Commonwealth countries' GDP are both positively associated with Commonwealth exports. In the pooled model (Model 1), a 1 per cent increase in China's GDP is associated with a 2.05 per cent increase in Commonwealth exports. However, this impact reduces slightly to 2.02 per cent and substantially to 1.81 per cent in Model 2 and Model 3, respectively, when we control for country-specific dummies and structural change dummies. In Model 1 and Model 2, the time variable is no statistically significant indication of no time trend in Commonwealth export growth. However, Model 3 indicates that, when country fixed effects are taken into account, on average there is a slight downward trend in the export of Commonwealth countries' growth over the years (coefficient of time is -0.15, which is statistically significant). This slight negative trend indicates that, over the years of 1995–2018, there was a gradual decline in the expansion of Commonwealth exports. We can also identify that a 1 per cent expansion of the exporting Commonwealth country's economy is associated with a statistically significant 1.58 per cent rise in its exports of merchandise and services. Quite interestingly, REER does not play an important role in Commonwealth exports.

One of the most important regressors in Table 3 is the interaction term of China's GDP with the structural break dummy. In Model 3, where country-specific fixed effects and the structural dummy have been included, coefficients of both 'log of China's GDP' and its interaction with the structural dummy are statistically significant. Hence, the marginal effect of 'log of China's GDP' in Model 3 is $(1.81 - 0.44 * \text{dummy}_{\text{year}>2011})$. This result indicates that, compared with the years before 2011, during 2012–2018 the nexus between Commonwealth exports and China's economic expansion weakened substantially. During 1995–2011, 1 per cent Chinese economic growth was associated with 1.81 per cent growth in Commonwealth exports, whereas during 2012–2018 the same growth was associated with an only 1.37 per cent rise in the exports of Commonwealth countries.

Table 4 presents the Commonwealth and its regions' export elasticities with respect to China's economy, including the regional dummies, in addition to following the specification of equation 3. Results suggest that, while the export elasticity of the Commonwealth was 1.71 per cent during 1995–2011, it declined to 1.21 per cent in 2012–2018. For Commonwealth SSA, a 1 per cent increase in Chinese GDP was associated with a 1.49 per cent expansion of SSA exports during pre-2011 years, whereas this response reduced to only 0.99 per cent in the post-2011 period. For SVEs, SIDS and LDCs pre-2011, trade elasticities were 1.82 per cent, 1.58 per cent and 2.1 per cent, respectively, whereas during the post-2011 years these Figures were respectively 1.31 per cent, 1.08 per cent and 1.51 per cent. The relatively lower elasticity values during the post-2011 years imply a weakened long-term association between China's GDP growth and Commonwealth regions' exports.

5. Commonwealth trade deflection and way forward for improving trade flows with China

5.1 Trade destination of Commonwealth trade

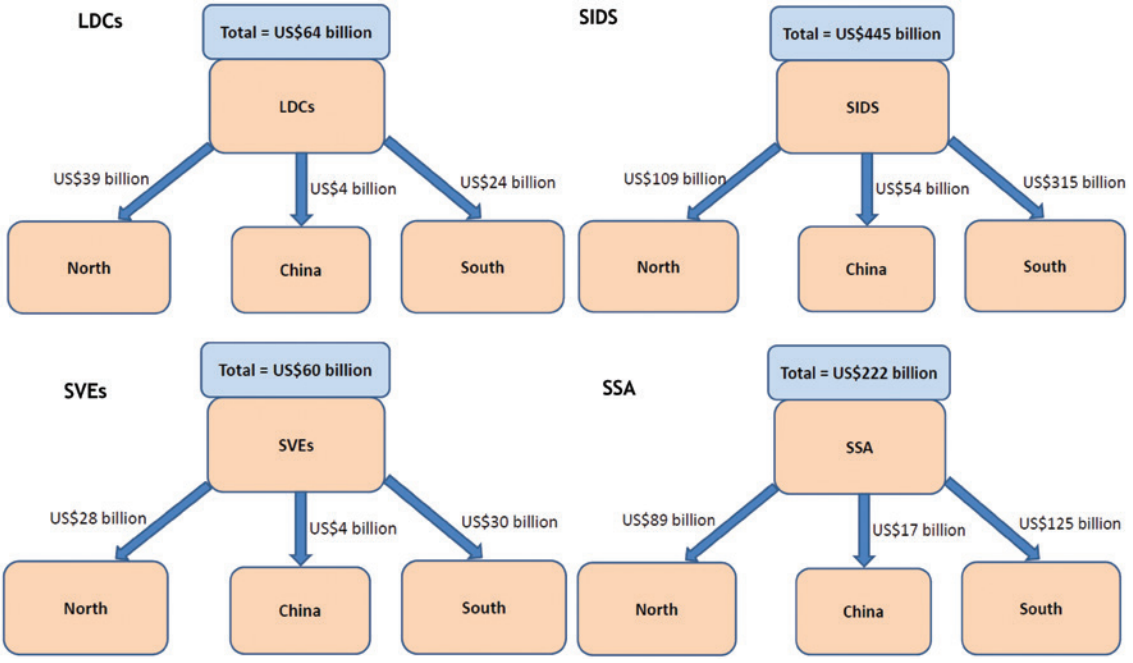
One of the major developments in the world economy over the past three decades or so has been the rapidly growing share of the developing countries. Indeed, the rise of developing countries as significant drivers of global growth and trade has been recognised as the defining feature of globalisation. Another important related trend is that increasingly more trade is taking place between developing countries. While the traditional developed country markets remain important, intra-developing countries' trade, as well as Commonwealth trade with the developing countries, have been gaining prominence during the last two decades.

Out of the 54 Commonwealth member countries, 48 are developing economies. Hence, in the context of the declining economic expansion of China – one of the major trading partners of the developing Commonwealth countries – it is of crucial importance to investigate whether Chinese sluggish economic growth and global trade turmoil have affected developing countries' significance in Commonwealth trade. The Commonwealth is not a trading bloc; nevertheless, trade between its members is substantial. Between 2000 and 2014, intra-Commonwealth merchandise exports more than tripled, from US$150 billion to US$463 billion. This section explores the trade deflection and the relative significance of the Global South in Commonwealth exports.

Figures 20a–20d show the merchandise export volume of our four developing Commonwealth regions to the Global North, the Global South and China in 2018. During 2018, out of the four regions, the LDCs exported a larger share of their exports to developed countries. For all other regions, the volume of exports to the developing world was substantially larger than that of exports to the Global North. This finding indicates a larger reliance on the Global South of the Commonwealth regions in terms of trade. SIDS have the highest export volume as well as share of exports to China (US$54 billion), followed by SSA (US$17 billion).

UNCTADstat 2020 data show that, from the early 1990s to 2018, the share of

Figures 20a, 20b, 20c and 20d. Merchandise export flows for 2018 for Commonwealth regions



Source: Author's estimates from UNCTADstat data

Commonwealth merchandise exports to developing nations was always larger than the share to the Global South. During 1995, 71 per cent of exports from Commonwealth nations went to the Global North (Figure 21); the share of Commonwealth exports to developing nations was only 29 per cent, out of which only 1.7 per cent was exports to China. However, over the years, the relative significance of the Global North for Commonwealth trade has registered a secular decline, and the developing nations have an increasingly more robust significance in terms of destination for Commonwealth exports.

The modest 29 per cent share of Commonwealth merchandise exports to the developing economies in 1995 had increased substantially by 2011, to 45.5 per cent, with the Global North as a destination taking up 54 per cent. One interesting finding that can be gleaned from Figure 21 is that, between 2001 and 2011, the Commonwealth export share to the Global South (excluding China) and to the Chinese market improved remarkably, from 24 per cent and 2.3 per cent to 37 per cent and 9 per cent respectively. However, the significance of the Global South and the Chinese market for Commonwealth trade has been almost stagnant in the past decade. From 2012 to 2018, the share of Commonwealth merchandise exports to the Global South has been stuck at around 38 per cent; for the Chinese market, it has increased by only 1.8 percentage points, and only owing to slightly improved performance in 2017–2018.

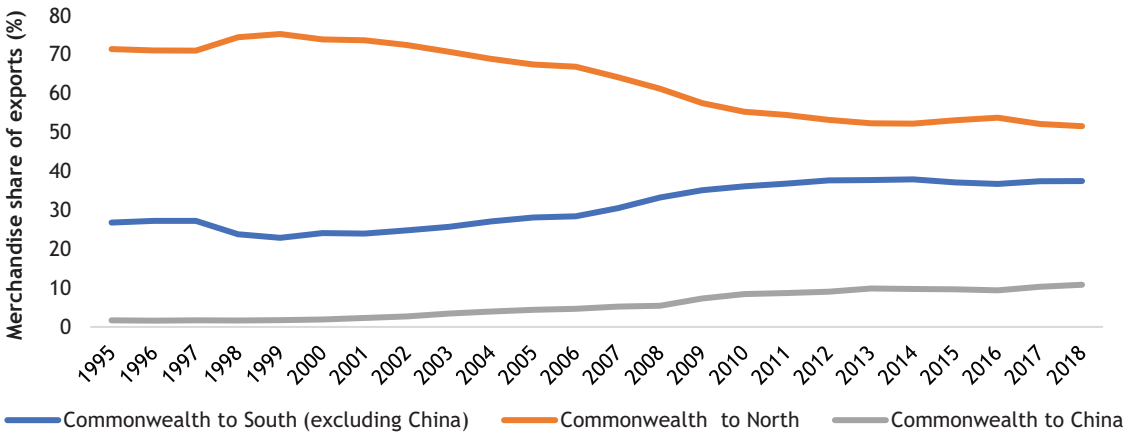
Figure 22 shows the relative significance of the Global South for the four developing regions of the Commonwealth. Of the four regions, that with the largest share of exports going to the Global South is the SIDS, followed by SSA, SVEs and LDCs.

From the SIDS and LDCs during 2000–2013, the export share to developing nations increased without disruption from 54 per cent to 73 per cent and from 21 per cent to 42 per cent, respectively. Since 2013, for these two regions, the relative significance of the Global South has been almost stagnant.

For both SSA and the SVEs, during 2001–2011, the relative significance of the Global South improved considerably. During 2001, the share of exports to developing economies from Commonwealth SSA was 31 per cent; by 2011, this had risen by 18 percentage points to 49 per cent. The same share for the SVEs had increased from 29 per cent to 37 per cent. Despite the contraction in the volume of trade for these two regions during the post-2011 years, the relative significance of the Global South continued to increase. From 2011 to 2018, the export share to developing economies from SSA and SVEs grew by 10 and 15 percentage points, respectively. Hence, we can conclude that, even though during the 2010s the Global South's relative significance for Commonwealth trade has been almost stagnant, for Commonwealth SSA and SVEs this significance has continued to increase. These findings imply a trade deflection of Commonwealth SSA and SVEs to other developing nations resulting from China's economic slowdown during the post-2011 years.

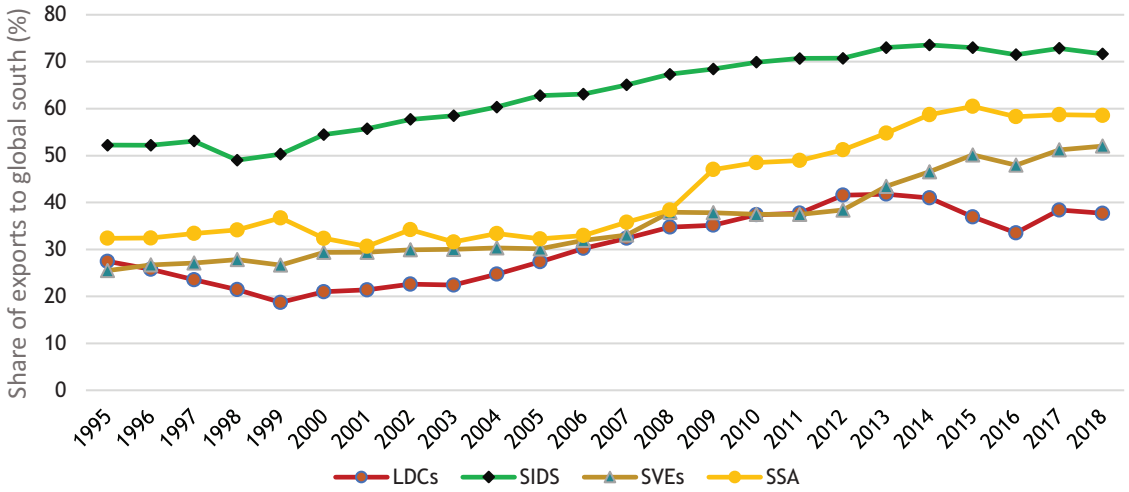
Figure 23 presents the share of Commonwealth exports to different geographic areas (developing economies and the Global North) over 1995–2018. In 2001–2010, we can see,

Figure 21. Share of Commonwealth merchandise exports to different regions



Source: Author's estimates from UNCTADstat data

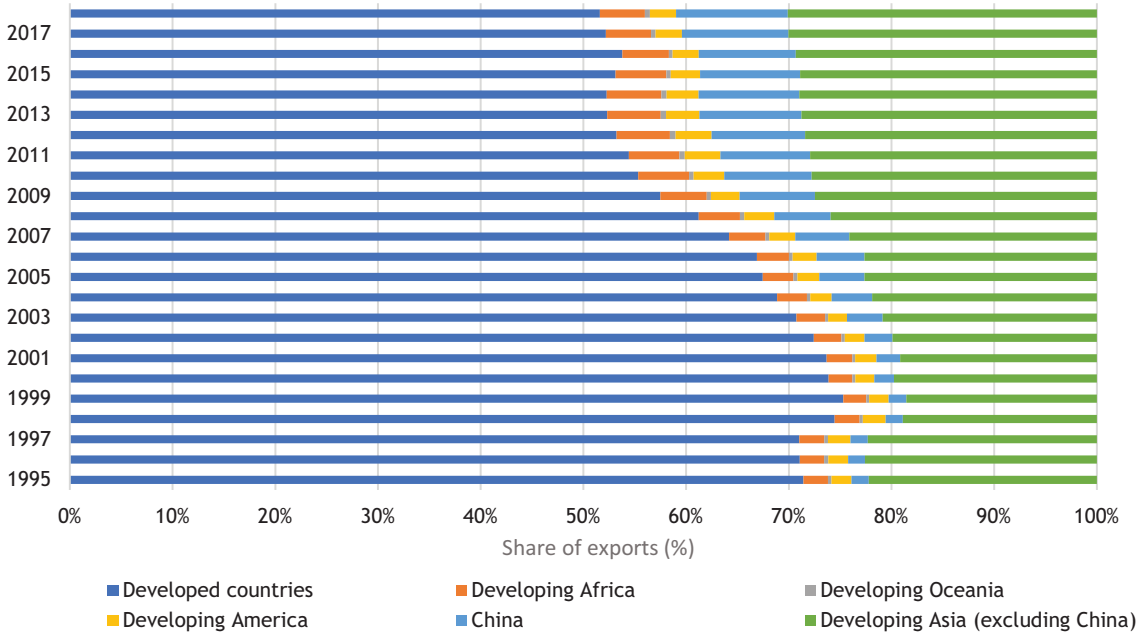
Figure 22. Relative significance of the Global South in Commonwealth LDCs, SIDS, SVEs and SSA



Source: Author's estimates from UNCTADstat data

the share of Commonwealth export to China increased, whereas that to the developed economies declined. The share of exports to Asian developing countries, excluding China, and African developing nations, also rose during this time period. However, during the sluggish years of 2012–2016, the share of Commonwealth exports to China declined; a similar trend can be observed for the share to developed economies. Nevertheless, Commonwealth nations were increasingly involved in exporting to developing Asian and developing African countries. Given that most SSA countries and many exporting developing Asian countries are members of the Commonwealth, we can say that, after 2011, in the face of reduced import demand for raw materials in China and sluggish growth in the exports of Commonwealth member countries, intra-trade of the Commonwealth nations increased. In 2012, Commonwealth member countries exported 10 per cent and 28 per cent of merchandise exports to China and developing Asian countries, respectively; in 2016, the export share to China had declined to 9.4 per cent and that to Asian developing economies had increased to 29.3 per cent.

Figure 23. Share of Commonwealth exports to the Global South and the Global North



Source: Author's estimates from UNCTADstat data

5.2 Way forward

Over the past decade, the global trade landscape has gone through several fundamental changes, which, like for most regions of the world, have affected Commonwealth trade significantly. These structural changes in global trade offer a wide range of opportunities in addition to a broad array of challenges for the Commonwealth member countries. From the discussion above, we can conclude the Commonwealth, more specifically, SSA and the SVEs, have suffered significant adverse impacts on their exports as a result of China's slowed economic growth. However, the structural changes in the economy and the labour market in China, coupled with increasing wage rates, may lead to several opportunities for the Commonwealth economies in terms of their comparative labour advantage.

In order to address the impacts of slowed trade, Commonwealth policy makers should undertake structural reforms to increase productivity and growth in all sectors of the economy. In the face of the growing wage rate in China, the devalued renminbi and less emphasis on investment, China's firms can be provided with incentives and Commonwealth countries can invest in infrastructure to attract more FDI from China.

However, Commonwealth countries should also be cautious in making deals with China of tying natural resources and minerals to financing key infrastructure and incentivising Chinese firms. One example of a precarious situation arising from such an experience is of Angola, an oil-rich nation, which had to send oil to China in exchange for financing major infrastructure and incurred a large loss as a result of the slump in commodity prices worldwide. Hence, one major issue with such barter deals is that contracting countries are not assured of obtaining a certain amount in exchange for the bartered commodities and are thus exposed to volatile market conditions. One way the Commonwealth, more specifically Commonwealth SSA, can capitalise on itself is to implement the continental free trade agreement.

Many Commonwealth countries can engage in currency devaluation to improve export volume, as suggested by the IMF. A weaker currency may reduce import demand in favour of domestically produced goods in Commonwealth member countries. This may also reduce unemployment and accelerate economic growth. However, in doing so, governments should undertake additional measures to dampen the inflationary tendencies in the economy induced by currency devaluation. Moreover, Commonwealth country governments should focus on governance and trade facilitation measures, which may enable Commonwealth countries to cope with sluggish trade growth.

The FDI climate in the Commonwealth regions should also be fostered, to increase FDI flows among Commonwealth member countries. Additionally, the Commonwealth should encourage its members to engage in more intra-bloc trade in the face of declining trade with China. Trade costs are already 19 per cent lower when two trading partners are both from Commonwealth member countries (Mendez-Parra et al., 2017). Commonwealth trade linkages with China can also be improved if the Commonwealth can accrue benefits from China's sweeping Belt and Road Initiative. This initiative was set up by the Chinese government in 2013 as a global development strategy to expand global trade links and connect China to the rest of Asia, Europe and Africa through infrastructural development and investments in nearly 70 countries.

Annex: Estimated effects of China's economic slowdown on CSSA export with country fixed effects

Dependent variable is 'log(CSSA's export);	With Country and region fixed-effects
log (Chinese GDP)	1.7128704***
log (exporting country's GDP)	1.5640014***
REER (CPI-based)	0.00182193
dummy (year>2011=1)	8.0701636
dummy (year>2011=1)*log (Chinese GDP)	–0.50593177
Time	–.13947335***
Ldc	–4.7166068*
Sids	–28.861289***
Ss	–0.04120269
Ssa	–28.188574***
LDC*log (Chinese GDP)	.30963494*
SS*log (Chinese GDP)	0.10919039
SSA*log (Chinese GDP)	–0.2200639
SIDS*log (Chinese GDP)	–0.13454347
country_code	
Australia	–34.448122***
The Bahamas	–1.6963401**
Bangladesh	–32.995326***
Barbados	–.9503278**
Belize	.1143093***
Botswana	–0.76593031
Brunei Darussalam	–32.240881***
Cameroon	–.31462802***
Canada	–33.907694***
Cyprus	–32.725153***
Dominica	0.26711651
Fiji	–.48497139*
The Gambia	1.085023
Ghana	–.72197402***
Grenada	–.22915122*
Guyana	–.42466748**
India	–34.538049***
Jamaica	–1.8275578**
Kenya	–.72381381***
Kiribati	–0.38782097
Lesotho	–0.1376632
Malawi	0.19170879
Malaysia	–31.811612***
Maldives	–0.29951459
Malta	–31.340532***
Mauritius	30.362217***

Dependent variable is 'log(CSSA's export);	With Country and region fixed-effects
Mozambique	.47979881**
Namibia	–1.085194
New Zealand	–32.652878***
Nigeria	–1.9802042***
Pakistan	–33.4058***
Papua New Guinea	–1.6920627**
Rwanda	–0.21715964
St Kitts and Nevis	–0.05022648
Saint Lucia	–.17628989***
St Vincent and The Grenadines	–0.08512475
Samoa	–.33597062*
Seychelles	32.420353***
Sierra Leone	0.90598582
Singapore	(omitted)
Solomon Islands	.08676763*
South Africa	–1.742779**
Sri Lanka	–32.312667***
eSwatini	–0.21822869
Tonga	–.57933234*
Trinidad and Tobago	–1.4975232*
Tuvalu	1.1765091
Uganda	–.56265758***
United Kingdom	–34.209843***
United Republic of Tanzania	–.74593079***
Vanuatu	(omitted)
Zambia	(omitted)

Notes

1 Only during the year of global financial crisis was the trade growth rate lower than this, at -10.4 per cent.

2 Between 2015 and 2016, 111 countries experienced a fall in merchandise export earnings (UNCTADstat 2018).

3 Our geographic region-based analysis shows similar results, where the least affected area in terms of both economic and trade impacts was the Commonwealth Asian countries, which are made up mostly of the Commonwealth LDCs. The rates of economic and export growth of Commonwealth Asian countries during the sluggish years (2012–2016) were 5.5 per cent and 2.3 per cent, respectively, the highest among the five Commonwealth geographic regions (Asia, Caribbean, America, Pacific, Europe).

4 http://www.stats.gov.cn/english/PressRelease/202001/t20200120_1724023.html

5 https://edition.cnn.com/2020/03/16/economy/china-economy-coronavirus/index.html

6 https://www.bloomberg.com/graphics/2020-coronavirus-pandemic-global-economic-risk/

7 https://www.weforum.org/agenda/2020/03/coronavirus-covid-19-cost-economy-2020-un-trade-economics-pandemic?fbclid=IwAR27dU5D1Vql5gehm7_wM6yXmuv9cZB_Wt3Co6E3nYbvlFMCePO3Bb3FWqM

8 A similar approach is used in Irwin (2002) and Escaith et al. (2010), and explained in detail in Caporale and Chui (1999).

9 One of the major drawbacks of this model is that it assumes China's GDP is an exogenous variable and it has effect on Commonwealth exports, while both variables are likely endogenous. Hence, the estimation results should be interpreted with caution, as this specification reflects the reduced-form correlation between exports and income. It is not possible to capture the complex and structural relationship between these two variables and their several determinants.

However, this form of estimation technique has been used in recent studies (e.g. World Bank, 2015). Here, we use a similar specification to study the relationship between exports of the Commonwealth regions and China's GDP.

References

Busse, M., C. Erdogan and H. Mühlen (2016) 'China's Impact on Africa: The Role of Trade, FDI and Aid'. *Kyklos* **69**(2): 228–262.

Caporale, G. M. and M. K. Chui (1999) 'Estimating Income and Price Elasticities of Trade in a Cointegration Framework'. *Review of International Economics* **7**(2): 254–264.

Commonwealth Secretariat (2015) *The Commonwealth in the Unfolding Global Trade Landscape-Prospects, Priorities, Perspectives*. Commonwealth Trade Review 2015. London: Commonwealth Secretariat.

Commonwealth Secretariat (2017) 'The Commonwealth in the Great Global Trade Slowdown'. Commonwealth Trade Policy Briefing. London: Commonwealth Secretariat.

Commonwealth Secretariat (2018) *Strengthening the Commonwealth Advantage: Trade, Technology and Governance*. Commonwealth Trade Review 2018. London: Commonwealth Secretariat.

Escaith, H., N. Lindenberg and S. Miroudot (2010) 'International Supply Chains and Trade Elasticity in Times of Global Crisis'. Staff Working Paper 2010-08. Geneva: Economic Research and Statistics Division, WTO.

Eisenman, J. (2012) 'China–Africa Trade Patterns: Causes and Consequences'. *Journal of Contemporary China* **21**(77): 793–810.

Igbinoba, E. (2016) 'China's Economic Slowdown: Assessment and Implications for Africa'. Policy Briefing. Stellenbosch: Centre for Chinese Studies.

Irwin, D. A., (2002) 'Long-Run Trends in World Trade and Income'. *World Trade Review* **1**(1): 89–100.

Mendez-Parra, M., S. Mills-Smith, T. Pengelly, H. Santos and D.W. te Velde (2017) '10 Commonwealth Policy Priorities for Trade and Development'. London: ODI.

Razzaque, M. A., (2017) 'Global Trade Slowdown and Globalisation Backlash: Trade and Development perspectives from Bangladesh. ISAS Workshop

Razzaque, M. A., B. Vicker and P. Goel (2016) 'Trading with the Rising South: Challenges and Opportunities for Sub-Saharan Africa'. *Trade Hot Topics 132*. London: Commonwealth Secretariat

Sada, M. (2016) 'Ripple Effects of China's Slowdown on Latin America'. *Harvard International Review* **37**(2): 12–13.

Vu, T.H. and T.L.P. Nguyen (2019) 'Changes in Vietnam-China Trade in the Context of China's Economic Slowdown: Some Analysis and Implications'. *VNU Journal of Science: Economics and Business* **35**(2).

World Bank (2015) *Global Economic Prospects: Having Fiscal Space and Using It*. Washington, DC: World Bank.

Wozniak, P. and M. Galar (2018) Understanding the Weakness in Global Trade'. Economic Brief 033. Brussels: European Commission.

WTO (World Trade Organization) (2018) 'Report on G20 Trade Measures'. Geneva: WTO.

WTO (2019) 'Chapter II: Highlights of World Trade', in *World Trade Statistical Review 2018*. Geneva: WTO.