

Key Messages:

- The Cambodia–Republic of Korea Free Trade Agreement (CKFTA) is expected to increase trade and investment between the two countries by creating dynamic regional and global value chain activities.
- The overall results highlight the positive impact of the CKFTA on the Cambodian economy in terms of export growth, gross domestic product (GDP) growth, and employment creation. The impact of the CKFTA is lower than that of the Regional Comprehensive Economic Partnership (RCEP), but it still creates a positive impact in addition to the impact of the RCEP.
- Bilateral free trade agreements (e.g. the CKFTA) are expected to complement multilateral regional agreements (e.g. the RCEP) by providing more and deeper trade and investment integration between the Republic of Korea and Cambodia, in addition to the level of integration expected in the RCEP agreement.

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Structural Transformation and the Global Production Value Chain: Potential Impact of the Cambodia–Republic of Korea FTA on Cambodia

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This policy brief examines the structural transformation of the Cambodian economy based on the impact of the CKFTA in terms of trade, output growth, and employment. It summarises the key results of the CKFTA study that examined the impact of the CKFTA on the Cambodian economy – specifically quantitative (structural gravity model estimation and simulation) and qualitative trade policy evaluation in terms of exports, output, and structural transformation of the economy in the global and regional value chains. The policy brief also highlights the key benefits of the CKFTA to the Cambodian economy.

1. Introduction

Cambodia is one of the most progressive Association of Southeast Asian Nations (ASEAN) Member States in terms of its market access to regional and global economies. It signed the Regional Comprehensive Economic Partnership (RCEP), which is the world's largest free trade agreement (FTA), in 2020. The RCEP came into force in January 2022, comprising the 10 Member States of ASEAN (Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic (Lao PDR), Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam) plus five countries in the region with which ASEAN has existing FTAs – Australia, China, Japan, the Republic of Korea (henceforth, Korea), and New Zealand. Cambodia also concluded the Cambodia–China FTA (CCFTA) in 2020.

In line with the open regionalism and progressive liberalisation of the domestic economy to regional trade and investment, the government started negotiations for the Cambodia–Korea FTA (CKFTA) in 2020. The negotiations were concluded in February 2021, and the CKFTA was signed in October 2021. The key component of the CKFTA is both countries' ambition to conclude a bilateral FTA that will have strong welfare impacts for the two countries as well as the business communities. The structure of the CKFTA is intended to improve and build on the existing ASEAN–Korea FTA (AKFTA) and to take into account the concluded the RCEP agreement.

Korea is one of Cambodia's trade and investment partners. From 1997 to 2019, bilateral trade between Cambodia and Korea grew at an average of 16% per year. In 2019, total trade between the two countries exceeded \$1 billion, up from \$292 million in 2009. The CKFTA is expected to open the trade market between the countries by creating dynamic regional and global value chain activities.

The CKFTA consists of the following elements: (i) trade in goods, (ii) technical regulations, (iii) standards and conformity assessment procedures, (iv) sanitary and phytosanitary measures, (v) rules of origin (ROOs), (vi) customs procedures and trade facilitation, (vii) economic cooperation, (viii) trade remedies, (ix) dispute settlement, (x) exceptions, (xi) institutional arrangements, and (xii) final provisions. Services and investment commitments will be discussed in the next phase of CKFTA negotiations.

The overall results highlight the positive impact of the CKFTA on the Cambodian economy in terms of export growth, gross domestic product (GDP) growth, and employment creation. The impact of the CKFTA is lower than that of the RCEP, but it still creates a positive impact in addition to the impact of the RCEP. Bilateral FTAs such as the CKFTA are expected to complement multilateral regional trade agreements such as the RCEP by providing more and deeper trade and investment integration between Korea and Cambodia, in addition to the level of integration expected in the RCEP agreement. Bilateral FTAs could provide differential impacts from multilateral agreements, ensure deeper trade and investment in specific areas at the sectoral level, and address behind-the-border issues beyond the multilateral agreements.

The CKFTA is particularly important for the post-pandemic recovery and structural transformation of the Cambodian economy. This policy brief provides key policy recommendations to optimise the benefits of the CKFTA for Cambodia, specifically for inclusive and sustainable growth.

2. Regionalism and the Importance of Multilateral and Bilateral FTAs in the Post-Pandemic Recovery

The coronavirus disease (COVID-19) pandemic shock in early 2020 disrupted key economic activities within and amongst countries, as well as regional and global trade and investment. The key dimension of the COVID-19 pandemic shock was the diversion

from open economic policies to more inward-looking policies (Kimura et al., 2020).

COVID-19 may have long-term impacts on regional growth, as we observed a persistence of the pandemic shock. Furthermore, the shock is expected to induce structural transformation in the region through (i) adopting more digital technology, (ii) intensifying technology adoption and streamlining the supply process in the global value chain (GVC) to mitigate and make the GVC more resilient to economic shocks, (iii) enhancing human capital and skills transformation by restructuring to more a technology-intensive and skills-based GVC, (iv) increasing the fragmentation of the production process across the countries participating in the GVC, (v) adopting and investing in communication technology to increase the agglomeration of manufacturing and services activities in the region, and (vi) increasing investment in digital and communication infrastructure in the region. These structural transformations will have a significant impact on the GVC in the region as well as a direct impact on the production structures of ASEAN and its least developed countries.

The CKFTA provides a framework to maintain market access and allows Cambodia to develop strong global production value chain activities with Korea. In addition, the CKFTA is a critical framework for global trade and regionalism and complements the RCEP framework, given the current context of uncertainty and inward-looking policies since the outbreak of the COVID-19 pandemic and the United States–China trade war.

3. Potential Impact of the CKFTA on Cambodia: Empirical and Policy Simulations

We examined the economic impact of the CKFTA on trade, output, and employment. We adopted the structured gravity model, which enables us to undertake counterfactual simulations and policy scenarios (Pfaferamy, 2020; Anderson and Yotov, 2015). In our empirical model, we use export data from 2005 to 2015 obtained from the Organisation for Economic Co-operation and Development (OECD) Trade in Value Added (TiVA) database, which consists of bilateral trade with 64 countries by 36 sectors. The results of the gravity model for Cambodia are reported in the Appendix. The results indicate a

positive impact of the CKFTA on Cambodia's exports.¹

The positive impact (positive and statistically significant coefficients) of the CKFTA on bilateral trade indicates that the bilateral FTA will have a positive impact on Cambodian export activities, and will strengthen trade between Cambodia and Korea. The impact is smaller than that of a multilateral FTA such as the RCEP, which has a deeper and broader impact on trade and investment in the region across the 15 RCEP member countries. The positive impact of the CKFTA is reflected in an annual increase in exports of 3%–4% on the Cambodian economy in our sample. The positive impact is expected, in addition to the impact of the RCEP agreement on Cambodia, since the CKFTA was negotiated with deeper market access compared with the AKFTA and the RCEP (see the differential tariff access under the CKFTA compared with the AKFTA and the RCEP in the section below).²

3.1. Impact of the CKFTA on GDP and Employment in Cambodia

The second stage of our analysis is to translate the export changes from the CKFTA to GDP and employment. The results obtained from the structured gravity model are incorporated into the Input–Output Table simulations of the Cambodian economy computed by the authors.

The results indicate that the CKFTA will have a positive

¹ There are a few empirical issues in the estimation of the above gravity model. Firstly, it is important to introduce the multilateral resistance terms in the gravity model estimation (Anderson and van Wincoop, 2003). As suggested in Feenstra (2002), since those elements differ by country, we control for these by introducing exporter-year and importer-year fixed effects. Secondly, there is the issue of zero-value trade as trade values could be systematically zero and eliminating them in the sample will potentially remove useful information and develop sample selection bias (Melitz, 2003). We adopted the Pseudo-Poisson Maximum Likelihood (PPML) technique to overcome this issue (Santos Silva and Tenreyro, 2006). Finally, there is the endogeneity issue on the Regional Trade Agreement (RTA) dummy variable as it could be influenced by trade activities. A recent study by Baier and Bergstrand (2007) highlighted that the most plausible estimates of RTA effects on international trade are obtained from the gravity estimation using panel data with time-invariant country-pair fixed effects. We introduced the country-pair fixed effects to control for the endogeneity of the RTA variable in our estimation.

² Previous analysis of the RCEP revealed a positive impact of exports (9.4%–18.0%) on the Cambodian economy (Thangavelu et al., 2022).

impact: a 3%–4% increase in exports from Cambodia to Korea. The lower threshold of a 3% export increase reflects trade effects that generate annual GDP growth of 0.63% with an employment effect of 0.52% (45,300 jobs from the 2017 baseline). A higher impact of the CKFTA from trade facilitation and the enhancement of human capital increases exports to 4%, leading to annual GDP growth of 0.85% and an employment effect of 0.7% (60,401 jobs from the 2017 baseline). We also observed a positive impact on the overall tax revenue from export and output activities, increasing 0.64%–0.90% from the 2017 baseline.

In our analysis, we examined the impact of the CKFTA on exports and undertook policy simulations of the CKFTA, allowing for improvements in both trade facilitation and human capital development in Cambodia (captured by the additional interactive terms with mean years of schooling in Cambodia). We observed positive coefficients with the interaction of mean years of schooling and trade facilitation with the CKFTA, respectively.

The higher positive impact of the CKFTA on the Cambodian economy compared to the baseline result reflects the impact of improvements in both trade facilitation and average human capital (mean years of schooling in Cambodia). The positive impact of trade facilitation and improvements in human capital reflects the importance of domestic reforms in fully absorbing the liberalisation effects of multilateral and bilateral FTAs on the domestic economy. In our case, we expect that the improvement in trade facilitation and human capital development will have a positive impact on higher value-added activities in the GVC, particularly in transport equipment, parts and components, electrical and electronic activities, and basic metals and rubber products.

We also examined the impact of FTAs on the exports of key manufacturing sectors. The coefficients are robust and statistically significant for exports of electronic and electrical equipment, machinery equipment, and transport equipment. The results clearly indicate that bilateral FTAs such as the CKFTA tend to complement multilateral FTAs such as the RCEP in terms of increasing the competitiveness of key sectors in the GVC. The CKFTA is expected to deepen the China, Japan, and Korea (CJK) effects from the RCEP in terms of increasing market access for greater GVC activities in the transport equipment, electrical and electronics, and basic metals sectors.

Table 1: Simulations of Export Growth on the Cambodian Economy

Item	CKFTA Impact of Annual Export Changes	
	Export: 3% (manufacturing and services)	Export: 4% (manufacturing and services)
GDP growth	0.63%	0.85%**
Employment growth	0.52% (45,300)	0.70% (60,401)
Tax revenue*	0.64%	0.90%

CKFTA = Cambodia–Republic of Korea Free Trade Agreement, GDP = gross domestic product.

*Tax revenue includes direct and indirect tax. The tax revenue reflects the gross revenue and does not include the tariff elimination effects on tax revenue.

**The higher threshold reflects full liberalisation of the Cambodian economy, including movement of skills, behind-the-border issues, trade facilitation, investment facilitation, and institutional and labour market reforms.

Note: Parentheses reflect the number of jobs.

Source: Authors' calculation based on Cambodia's 2017 Input–Output Table.

The complementary effects of the CKFTA and the RCEP through CJK effects indicate that bilateral and multilateral FTAs have beneficial effects on Cambodia. FTAs and multilateral agreements such as the RCEP spur structural transformation and export diversification. The results of our paper, in terms of structural transformation and moving to higher value-added activities in the GVC, were supported by a recent study by Obashi (2021) on computers, electronic and electrical products, and transport equipment for Cambodia in GVC activities.

We also observed a positive impact of the CKFTA on the textile and garment sector. It is important to note that this sector is very liberalised in Cambodia, with few trade barriers, and most of the export products of Cambodian textiles and garments already have very low or zero tariff rates.

4. GVC Impacts of the CKFTA on Manufacturing Exports

We observed greater market access to the Korean economy through the CKFTA. Currently, Cambodia enjoys nearly 89.98% of market access (11,294 tariff lines) to the Korean market by using the Harmonized Tariff Schedule of Korea (HSK) 2017 under the AKFTA, and 90.63% of market access (11,096 tariff lines) by using HSK 2012 under the RCEP negotiations (pending internal ratification by the relevant parties). Under the CKFTA negotiations, Korea liberalised its market to 95.03% in the final offer on market access for Cambodia's exports. This means that under the CKFTA, Korea has improved market access for Cambodia by at least 5.05% compared with the

AKFTA or by 4.40% compared with the RCEP.

Upon the entry into force of the agreement, Cambodia will receive 92.37% of Korea's total market access for its exports. Once the tariff lines are fully eliminated in 20 years, as scheduled, the total market access that Cambodia obtains will rise to 95.03% of Korea's market access.

Under the CKFTA, we expect greater bilateral trade between Cambodia and Korea, which could complement and accelerate the CJK effects of the RCEP in GVC activities. For example, Korea has already enjoyed market access of up to 81.17% (8,777 tariff lines) in Cambodia by using Harmonized System (HS) 2017 under the AKFTA and is obtaining 87.07% of market access (8,322 tariff lines) by using HS 2012 under the RCEP negotiations (pending internal ratification by the relevant parties). Under the CKFTA negotiations, in the final offer on market access, Cambodia liberalised its market to 89.09% of market access for Korea's exports. Hence, under the CKFTA, Cambodia improved market access for Korea by at least 7.92% compared with the AKFTA or by 2.02% compared with the RCEP.

5. Impact of the CKFTA on Economic Cooperation and Structural Transformation in the Pandemic Recovery

The CKFTA provides deeper economic cooperation between Cambodia and Korea, allowing for greater alignment of domestic industries for higher GVC activities and key support for structural transformation in the pandemic recovery.

One of the key elements of the CKFTA is the Economic Cooperation chapter, which allows for maximising the mutual benefits of economic cooperation by narrowing the development gap between the two countries. The two parties can use the existing economic partnership and mechanisms to address specific needs and requirements by implementing economic and technical assistance, as well as other activities including capacity building, by putting in place a work program that helps enhance economic, trade, and investment cooperation.

The economic cooperation elements are stronger in the RCEP compared with the CKFTA, which focuses exclusively on trade in goods. However, the CKFTA provides a complementary framework to the RCEP that could maximise economic cooperation by targeting specific sectors and issues, in addition to benefits provided by the RCEP.

Economic cooperation under the CKFTA could focus on a bilateral framework with Korea in a wide range of activities, such as (i) trade and investment promotion; (ii) agriculture, forestry, and fisheries; (iii) e-commerce; (iv) technical regulations, standards, and conformity assessment procedures; (v) sanitary and phytosanitary measures; (vi) legal framework related to trade and investment; (vii) infrastructure development; (viii) industrial development; (ix) information and communication technology; and (x) other sectors as agreed between the parties.

6. Policy Recommendations

Firstly, the progressive market-based reforms in Cambodia in both manufacturing and services have been successful in bringing Cambodia closer to the next stage of growth. Cambodia must maintain these reforms for deeper regional integration with the framework provided by the RCEP and the CKFTA.

Bilateral FTAs such as the CKFTA provide a complementary framework for multilateral FTAs such as the RCEP for the Cambodian economy. The benefits are clear in terms of the alignment of bilateral and multilateral FTAs with domestic reforms and structural adjustments. The policy simulation of the CKFTA using the structured gravity model indicates that there are greater gains from the alignment of bilateral and multilateral FTAs such as the RCEP with domestic reforms in terms of trade facilitation and human capital development.

The analysis also suggests that the CKFTA will complement the CJK impact of the RCEP. This

will be particularly important for ASEAN least developed countries such as Cambodia, which are at the threshold of shifting to a higher growth path in GVC activities in the region. The RCEP is the first FTA to include CJK. The CJK effect through the RCEP agreement, e.g. the single platform for ROOs, will allow greater movement of goods and market access for CJK, as well as other member countries in the RCEP. The analysis shows that the CKFTA will deepen Cambodia's participation in the GVC activities of CKJ under the RCEP, particularly in transport equipment and electrical and electronic activities in the GVC.

The CKFTA and the RCEP provide the opportunity to undertake key structural reforms in domestic industries for higher value-added activities. Specifically, the reforms to the ROOs in the CKFTA and the RCEP will accelerate GVC activities in the region. The empirical analysis in the paper and the recent evidence from Obashi (2020) indicate rising export competitiveness in (i) computer, electronics, and electrical products; (ii) machinery parts and components; and (iii) transport equipment. However, the upward shift of these industries in the GVC was only moderate, so the competitiveness of these industries needs to be accelerated. More GVC and multinational activities in these industries need to be attracted to Cambodia. For example, the competitiveness and linkages of special economic zones to GVC activities must be increased to attract multinational activities in these industries.

Higher value-added GVC activities are driven by strong human capital and a semi-skilled and skilled labour force. Cambodia needs to improve the technical and vocational skills of its workers, which will complement and increase the adoption of new technologies in higher value-added industries. This is critical for Cambodia at this stage of development.

The CKFTA and the RCEP agreement provide an opportunity for Cambodia to induce structural transformation in its economy and to diversify from more concentrated textile and garment exports in the post-pandemic recovery. The labour-intensive production is expected to undergo significant structural changes in the post-pandemic recovery due to restrictions on the movement of people. This provides an opportunity to induce structural changes in the textile and garment industries in Cambodia.

The CKFTA and the RCEP will provide an important framework for the pandemic recovery, and this could be driven through the economic cooperation

framework established at the regional and bilateral levels. The economic cooperation framework could be used to address key issues in structural reforms such as the liberalisation of services, digital trade, investment in key technologies and technology transfers through multinational activities, and investment in human capital in Cambodia in terms of vocational training and investment in higher educational services by Korea.

The next phase of negotiations on services and investment commitments under the CKFTA will be critical to develop a key emphasis on services sector liberalisation in both modern services and traditional services such as tourism and logistics. The services activities of urban centres in Cambodia also need to be improved.

There is a need to reform traditional trade in services, including tourism, logistics, aviation, finance, and medical tourism. These services trade heavily rely on the movement of people (mode 4) to remain competitive in the region, and the transformation to a 'new normal' in the post-pandemic era will reduce activities in traditional services trade. The CKFTA and the RCEP could provide a regional cooperation framework to increase the competitiveness of the traditional services sector by focusing on (i) digitalising some of the traditional services trade, (ii) increasing the technical capacity of the labour force in traditional services, and (iii) creating a new 'pandemic' protocol for the movement of people at the regional level.

Cambodia needs to undertake crucial reforms to transform key cities to higher innovation and technology-driven urban centres. These urban centres will be focal points for digital services and trade in terms of their connection to other major cities in the region driving key service activities and trade in digital platforms. The efficiency of urban centres such as Phnom Penh, Siem Reap, and Sihanoukville will be important to drive key economic growth in the Cambodian economy in the next phase of growth. City linkages will provide service linkages for managing the movement of both people and goods across the cities.

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Appendix A

Results of the Structured Gravity Model Estimation

In our empirical model, we use export data from 2005 to 2015, obtained from the Organisation for Economic Co-operation and Development (OECD) Trade in Value Added (TiVA) database, which consists of bilateral trade with 64 countries by 36 sectors. The results of the gravity model for Cambodia are reported in the table. Results for the average effect of all free trade agreements (FTAs) combined are given in column 1. The coefficients are positive and statistically significant, indicating that FTAs have a positive impact on Cambodia's export activities. To assess the impact of the Cambodia–Republic of Korea Free Trade Agreement (CKFTA), we introduce a CKFTA dummy in our model and separate the CKFTA effect from the rest of the FTAs whose impacts are captured by country-pair effects. The results are given in column 2. Apart from the overall positive FTA effects, the CKFTA would increase Cambodia's exports by 3%–4%.

We also examined the impact of the CKFTA on global value chain (GVC) activities, which is proxied by trade in electronic and electrical equipment, machinery equipment, and transport equipment. The results clearly indicate that the CKFTA will have a greater impact on those emerging competitive industries than other manufacturing sectors. This evidence signifies that the CKFTA would accelerate the GVC transformation of Cambodian production and exports. The intensity and integration of Cambodia in the regional GVC will be further accelerated by the Regional Comprehensive Economic Partnership (RCEP) framework, which brings together China, Japan, and Korea (CJK) into broader and rules-based trade and investment liberalisation that allows for freer movement of parts and components across the region. The CJK impact will be significant for Cambodia as CJK are an important connector for regional and global value chain activities in the Association of Southeast Asian Nations (ASEAN) and East Asian region.

Table A1: Results of Structured Gravity Model for Cambodia from 2005–2015

Variable	(1) All FTAs PPML	(2) CKFTA PPML	(3) Electronic and electrical equipment PPML
FTA	0.269*** (1.25e-08)		
CKFTA		0.0287*** (6.20e-10)	0.531*** (6.93e-08)
Constant	-7.172*** (4.60e-08)	-3.816*** (5.82e-08)	-5.211*** (4.79e-08)
Observations	7,227	7,227	726
R-squared	0.306	0.306	0.692
Exporter-time FE	Yes	Yes	Yes
Importer-time FE	Yes	Yes	Yes
Country-pair FE	Yes	Yes	Yes

CKFTA = Cambodia–Republic of Korea Free Trade Agreement, FE = fixed effect, FTA = free trade agreement, PPML = Poisson Pseudo Maximum Likelihood.

Notes: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Authors' calculation.

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