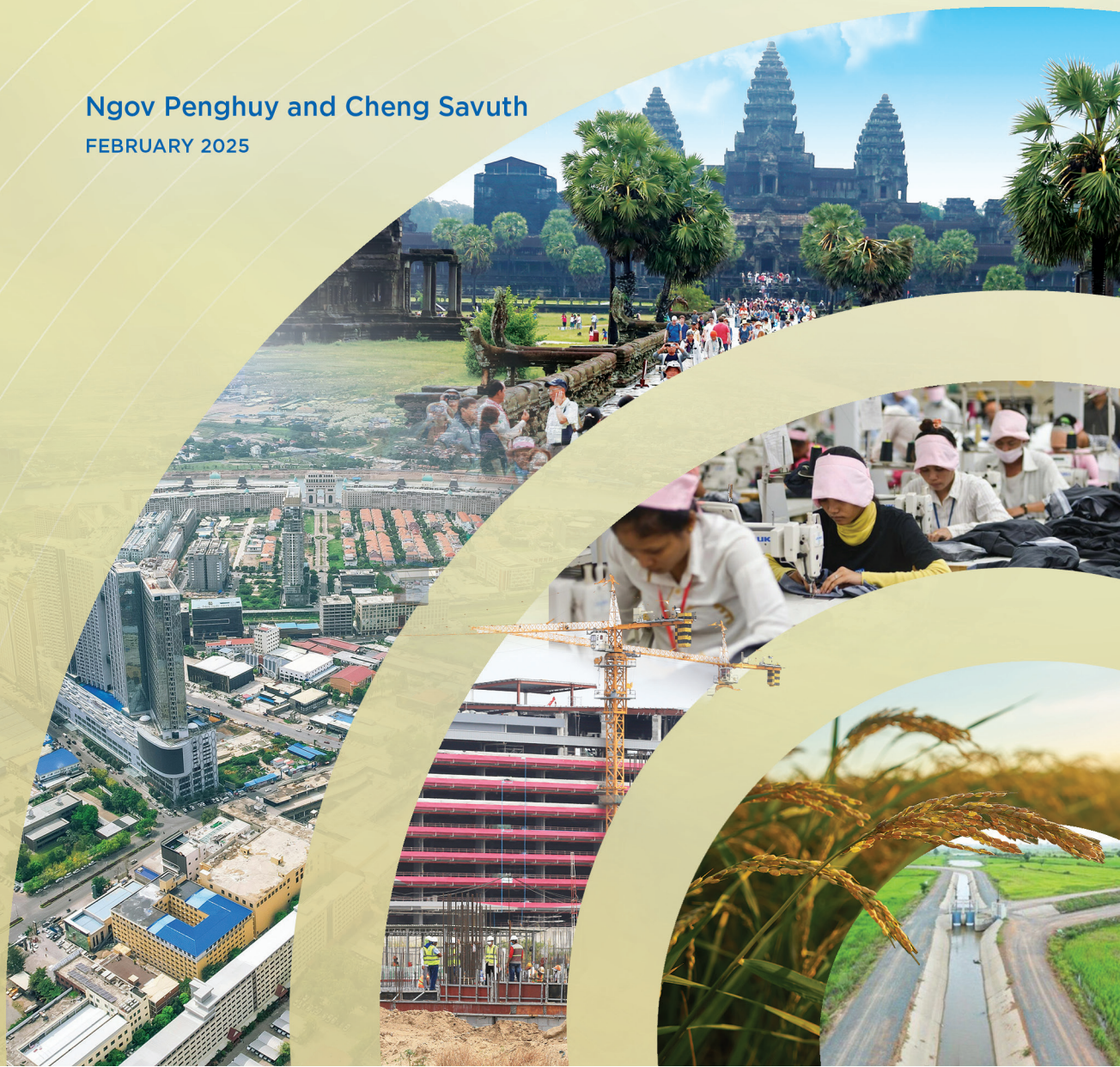


# STRUCTURAL TRANSFORMATION AND ECONOMIC GROWTH IN CAMBODIA

Ngov Penghuy and Cheng Savuth

FEBRUARY 2025





**Cambodia's New Growth Strategy**  
**An Assessment of Medium and Long-term Growth for**  
**Resilient, Inclusive, and Sustainable Development**

**Background Paper 2**

**Structural Transformation**  
**and Economic Growth in Cambodia**

Ngov Penghuy and Cheng Savuth



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## List of acronyms and abbreviations

CISIC	Cambodia Standard Industrial Classification
CSDGs	Cambodia Sustainable Development Goals
CSES	Cambodia Socio-Economic Survey
EBA	Everything but Arms
ETD	Economic Transformation Database
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GGDC	Groningen Growth and Development Centre
GSP	General System of Preferences
HS	Harmonized System
ICT	Information and Communication Technology
IDP	Industrial Policy
ILO	International Labour Organization
ISIC Rev.4	International Standard Industrial Classification Revision 4
LDC	Least Developed Country
LFS	Labour Force Survey
MEF	Ministry of Economy and Finance
NA	National Income Account
NIS	National Institute of Statistics
PPP	Purchasing Power Parity
UNCTAD	United Nations Conference on Trade and Development
US	United States
USD	United States Dollar
WITS	World Integrated Trade Solution



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# ឯកសារសារការទី២

## បរិក្ខណៈប្រទេសកម្ពុជា និងកំណើនសេដ្ឋកិច្ចនៅប្រទេសកម្ពុជា

ផ្លូវ ប៉េងហុយ និង ចេង សារុដ

### សេចក្តីសង្ខេប

ការសិក្សានេះអង្កេតលើកំណើនសេដ្ឋកិច្ចរបស់កម្ពុជា ដោយប្រើវិធីសាស្ត្រពណ៌នា និងធ្វើបំណែកថ្នាក់ទៅលើផលិតភាពនៃទិន្នផល និងទិន្នន័យការងាររបស់ឧស្សាហកម្មចំនួន១២ ចាប់ពីឆ្នាំ២០០០ ដល់ឆ្នាំ២០២២។

- សេដ្ឋកិច្ចរបស់ប្រទេសកម្ពុជា កំពុងដំណើរការបរិក្ខណៈប្រទេសកម្ពុជា ហើយកត្តាជំរុញកំណើនបាននិងកំពុងផ្លាស់ប្តូរពីវិស័យកសិកម្មទៅវិស័យកម្មន្តសាល និងសេវាកម្ម។
- វិស័យសម្លៀកបំពាក់ និងរាយនភណ្ឌ នៅតែគ្របដណ្តប់ក្នុងវិស័យកម្មន្តសាល ។ ទោះជាយ៉ាងណាក៏ដោយ ការនាំចេញគ្រឿងអេឡិចត្រូនិក និងគ្រឿងម៉ាស៊ីន កសិឧស្សាហកម្ម និងផលិតផលធាតុស្រទាប់បានកើនឡើង ដែលបង្ហាញពីសញ្ញានៃការធ្វើពិពិធកម្ម។
- ទិន្នផលសេវាកម្មដែលអាចធ្វើពាណិជ្ជកម្មបាន (ដូចជាព័ត៌មាន និងទំនាក់ទំនង ការដឹកជញ្ជូន សកម្មភាពសេវាកម្មធុរកិច្ច និងហិរញ្ញវត្ថុ) បានបង្ហាញពីកំណើនជាប់លាប់។
- អត្រាកំណើនផលិតភាពសរុប គឺមានការប្រែប្រួលមិនទៀងទាត់។ ជាមធ្យម វាមានកម្រិតទាប បើប្រៀបធៀបនឹងប្រទេសផ្សេងទៀតក្នុងកម្រិតចំណូលដូចគ្នា។
- កំណើនផលិតភាពសរុបក្នុងឧស្សាហកម្មក្រោយនេះ ត្រូវបានជំរុញកាន់តែច្រើនដោយអន្តរវិស័យ និងតិចជាងមុនដោយការបែងចែកកម្លាំងពលកម្មតាមវិស័យនីមួយៗ។

- ការបែងចែកកម្លាំងពលកម្មអន្តរវិស័យឡើងវិញ ពីវិស័យដែលមានផលិតភាពទាប ដូចជាវិស័យកសិកម្ម ទៅវិស័យផលិតភាពខ្ពស់ ដូចជាវិស័យកម្មន្តសាល និងសេវាកម្ម បានរួមចំណែកធំបំផុតក្នុងការបង្កើនកំណើនផលិតភាពសរុបក្នុងផ្នែកសេដ្ឋកិច្ច។ ទោះជាយ៉ាងណាក៏ដោយ ឥទ្ធិពលនេះមានកម្រិតមធ្យម ដោយសារតែឧបសគ្គក្នុងការចល័តកម្លាំងពលកម្ម។
- កំណើនផលិតភាពក្នុងវិស័យ ក៏បានរួមចំណែកដល់កំណើនផលិតភាពសរុប ដែលបង្ហាញថា វិស័យភាគច្រើនមានកំណើនផលិតភាព ជាជាងមានការធ្លាក់ចុះ។ ទោះជាយ៉ាងណាក៏ដោយ កំណើនផលិតភាពតាមវិស័យនៅមានតិចតួច ដែលធ្វើឱ្យឥទ្ធិពលនេះនៅមានកម្រិត។
- ការបែងចែកពលកម្មឡើងវិញទៅវិស័យកំណើនផលិតភាពខ្ពស់ បានកាត់បន្ថយកំណើនផលិតភាពសរុបមកត្រឹមកម្រិតមួយដែលមានកំណត់។ ការចូលរួមចំណែកពីវិស័យនេះ មានចំនួនតិចតួច ដោយសារចំណែកការងារនៃវិស័យកំណើនផលិតភាពខ្ពស់ ហាក់ដូចជាមានការថយចុះ ខណៈដែលវិស័យកំណើនផលិតភាពទាប ជួបប្រទះនឹងការកើនឡើងចំណែកការងារ។

### ឥទ្ធិពល និងអនុសាសន៍គោលនយោបាយ

- ដើម្បីបង្កើនកំណើនផលិតភាពសរុប ប្រទេសកម្ពុជាត្រូវ៖
  - បង្កើនការងារក្នុងវិស័យដែលមានផលិតភាពខ្ពស់ និងវិស័យកំណើន។
  - លើកកម្ពស់កំណើនផលិតភាពតាមវិស័យនីមួយៗ។
  - កាត់បន្ថយឧបសគ្គចំពោះការចល័តកម្លាំងពលកម្មនៅគ្រប់វិស័យ ដោយផ្តល់នូវការត្រៀមលក្ខណៈជំនាញរួចជាស្រេច។
  - ជំរុញការវិនិយោគបន្ថែមលើវិស័យដែលមានផលិតភាពខ្ពស់ និងវិស័យកំណើន ដើម្បីបង្កើតការងារបន្ថែមទៀត។

# Structural Transformation and Economic Growth in Cambodia

## Executive summary

This study investigates Cambodia's economic growth using descriptive and productivity decomposition methods on output and employment data of 12 industries from 2000 to 2022.

- Cambodia's economy is undergoing a structural transformation, and the growth driver has been shifting from agriculture to manufacturing and services.
- Manufacturing is still dominated by garments and textiles. However, the export of electronics and machinery, agro-industry, and plastic products increased, indicating a sign of diversification.
- Output in tradable services (such as information and communication, transportation, business service activities, and finance) has shown consistent growth.
- The aggregate productivity growth rate is volatile; on average, it is still moderately low compared to other countries at the same income level.
- Aggregate productivity growth in the last decades was driven **more by inter-sectoral and less by intra-sectoral labour reallocation**.
  - **Inter-sectoral labour reallocation** from low-productivity sectors such as agriculture to high-productivity sectors such as manufacturing and services contributed the largest to increasing the overall aggregate

productivity growth of the economy. However, this effect was moderate due to labour mobility barriers.

- **Intra-sector productivity growth** also contributed to increased aggregate productivity growth, suggesting that most sectors have productivity growth rather than decline. However, the sectoral productivity growth was relatively small, which limited this effect.
- **Labour reallocation to the high-productivity growth sector** reduced aggregate productivity growth to a limited extent. The contribution from this item is small because high-productivity growth sectors tended to experience falling employment share while low-productivity growth sectors experienced rising employment share.

### Policy Implication and Recommendations:

- To increase aggregate productivity growth, Cambodia has to:
  - Increase employment in high-productivity and growth sectors
  - Enhance intra-sectoral productivity growth.
  - Reduce barriers to labour mobility across sectors by equipping the workforce with skill readiness
  - Promote more investment in high-productivity and growth sectors to create more jobs.

## 1. Introduction

Cambodia has enjoyed steady and rapid economic growth, with an annual average growth rate of around 7 percent in the past two decades (MEF 2023). The robust growth trajectory enabled Cambodia to achieve lower-middle-income economy status in 2015. As the country develops, the structure of the economy must also change. Economic structural transformation has been observed in countries from low-income to middle-income and high-income status, including South Korea, Taiwan, Singapore, and China. In these countries, the pattern and process of moving from reliance on low-productivity economic sectors, such as traditional agriculture, to high-productivity economic sectors, such as manufacturing and services, plays a crucial role in fostering further economic growth and development.

Unlike the classic growth model where economic sectors are aggregated to explain growth, such as in the Solow Model, changes of economic sectors and sub-sectors can provide deeper insight into how to foster growth through the changes in a country's structure of output and employment. Therefore, in this study, we will investigate the pattern of structural transformation by considering changes in output and employment across economic sectors and sub-sectors to identify key trends and the strengths that drove the development of the Cambodian economy over the past two decades. In addition, we will compare the pattern of Cambodia's

structural transformation with that of other developed countries.

The study on the structural transformation and growth trend, especially the analysis at the sectoral level, has significant policy implications for Cambodia's future sustainable growth trajectory. A combination of industrial policy, law, and regulations has been adopted. However, key economic sectors or industries supporting long-term economic growth must be evaluated appropriately to ensure growth. Policies such as the Industrial Development Policy (IDP) 2015-2025, New Cambodia Law on Investment 2021, Cambodia Science, Technology and Innovation Roadmap, Digital Economy and Society Policy Framework 2021-2035 and Cambodia Sustainable Development Goals Framework (CSDG) 2016-2030 require sectoral analysis to be effectively implemented. Therefore, identifying key sectors and conditions supporting economic growth is paramount and is the focus of this investigation on structural transformation.

This study has the following objectives: (1) to investigate patterns and trends of sectoral output and employment, (2) to describe the role of manufacturing and service as the engine of economic growth, (3) to examine structural transformation within manufacturing and service, (4) to determine the relationship between structural transformation and productivity

growth (i.e., labour productivity) and (5) to identify patterns within Cambodia's structural transformation and compare

it to that of other countries and to ensure Cambodia can have a productivity growth convergence.

## 2. Literature review on structural transformation

Past studies on structural transformation for developed countries have identified a key pattern (UNCTAD 2016; Rodrik 2009; Sen 2019). First, the share of agriculture output to GDP and employment in the agricultural sector experienced a decline as income per capita grew. Second, the manufacturing sector had an 'inverted U' pattern as income per capita grew. In other words, the share of value-added and employment in manufacturing sector increased until it reached a maximum threshold after which it started to decline. Third, the share of value-added and employment in the service sector grew continuously as income per capita increased.

Some scholars have proposed the manufacturing sector peaking signified that the service sector was replacing it as the engine of growth (Rodrik 2009). This pattern suggests that the economy shifted from agriculture to manufacturing and services as countries developed. Such structural transformation allowed many countries, such as South Korea, Singapore, and Taiwan, to transform from low-income to high-income status (UNCTAD 2016).

Many empirical studies have shown that manufacturing has been the engine of economic growth. For instance, Rodrik's (2009) study indicated manufacturing's share of GDP and its employment share

were dually associated with higher economic growth. As a result, others have argued that manufacturing does not only promote but also sustains economic growth (Szirmai and Verspagen 2015). However, some economists have also found that the service industry plays an important role in structural transformation since service output is more income elastic and absorbs more labour (Sen 2019).

Recent findings challenged the manufacturing-led growth model. In fact, the findings highlighted that developing countries who undergo economic growth more recently have experienced rapidly declines in manufacturing, a phenomenon called **"de-industrialisation."** De-industrialisation often occurred at an earlier stage than in developed countries and could potentially trap developing countries in middle-income status (Herrendorf, Rogerson and Valentinyi 2013). Several studies found that the peak of employment in manufacturing in developing countries was only 30 percent which is significantly lower than developed countries that reached a peak of 40 percent employment in manufacturing in the past (Rodrik 2016; Felipe, Abdon and Kumar 2012).

Many factors are considered to influence the outcome of structural transformation, including (1) factor endowments and (2) government policies. Factor

endowments refer to resources, such as labour, capital natural resources, or technology, that can shape the comparative advantages of countries and diversification capability. However, they often also result in the country producing of a limited range of products (Hausmann et al. 2013). Some studies found that given limited human capital and skilled labour, many developing countries cannot increase the production of highly sophisticated products, such as from producing electronic equipment to producing automobile or from producing

low value-added products to high value-added products (UNCTAD 2016; Hausmann et al. 2013). Government policies have been found to be crucial in influencing the process of structural change in an economy (Kruse et al. 2023). Sen (2018) argued that productive structural transformation depends on the demand for labour in high-productivity sectors and the supply of labour from low-productivity sectors. The barrier preventing labour mobility across sectors could hinder structural transformation.

### 3. Data and methodology

#### 3.1. Data

To analyse the economic structural transformation, this study uses the annual changes of output, value-added and employment across all economic sectors. Data on sectoral output was obtained from the national income accounts (NA) compiled by the National Institute of Statistics (NIS). Data on sectoral employment was obtained from the Cambodia Socio-economic Survey (CSES), Labour Force Survey (LFS), population census, and International Labour Organization (ILO). All data used in this analysis was from between 2000 and 2022.

The sector classification used in this study is based on the latest version of the International Standard Industrial Classification, ISIC Rev 4 (UN 2008). ISIC Rev 4 classified sectors into 21 ranging from A to U. For this study, we grouped the 21 economic sectors in the ISIC Rev 4

into 12 sectors according to the Economic Transformation Database (ETD) of the Groningen Growth and Development Center (GGDC) to simplify our analysis. In ETD format, sector D which refers to electricity was combined with E which represents water, sewage, and waste management. Similarly, sector G was combined with I. Sector J was combined with M and N. Sector O was combined with P and Q. Finally, sector R was combined with S, T, and U. The 12 sectors of ETD are “A. Agriculture”, “B. Mining”, “C. Manufacturing”, “D+E. Utilities”, “F. Construction”, “G+I. Trade Services”, “H. Transport Services”, “J+M+N. Business Services”, “K. Financial Services”, “L. Real Estate”, “O+P+Q. Government Services”, “R+S+T+U. Other services”. Details on ISIC Rev 4’s classification and ETD classification of economic activities are presented in Appendix 2.

Note that the word **“industries”** and **“sectors”** are interchangeable. To avoid

confusion, we use the singular word **“industry”** to mean an aggregate sector consisting of the manufacturing sector and non-manufacturing sector. In contrast, we use the plural **“industries”** to refer to the sectors or sub-sectors within agriculture, industry, and service sectors. In this sense, the economy is divided into three main sectors: the agriculture sector, the industry sector (manufacturing sector and non-manufacturing sector), and the service sector. Within each sector, we have sub-sectors.

### 3.2. Methodology

This study utilised two key methods to investigate Cambodia’s structural transformation. First, **descriptive statistics** were gathered to examine trends in output and employment between 2000 and 2022 across sectors and sub-sectors with all available data. Utilising descriptive statistics allowed us to identify (1) the growth rate of output and employment, (2) volatility and growth performance, and (3) the diversity and concentration of Cambodia’s economic structure in terms of output and employment. Second, to examine changes in productivity within each sector and sub-sector, we use **the shift-share method** to decompose aggregate productivity into (1) labour reallocation to high productivity

sector effect, (2) labour reallocation to high productivity growth sector effect, and (3) intra-sectoral productivity growth effect, by following McMillan and Rodrik’s (2011). We conducted the productivity decomposition analysis on each of the 12 sectors.

Notably, agriculture and manufacturing were each treated as a single sector. By utilising the shift-share method, we obtained insights into (1) the **inter-sectoral specialisation** effect, which is the movement of labour to higher value products with higher productivity levels rather than higher value-added activities, and (2) the **intra-sectoral productivity change**, which is the movement of labour between manufacturing sub-sectors within the manufacturing sector or between agriculture sub-sectors within the agriculture sector that impact aggregated productivity. Intra-sectoral productivity changes within the manufacturing or agriculture sector can also be driven by the intra-sectoral specialisation effect which is the upgrades towards high-value-added activities within these sectors and sub-sectors that also impact aggregated productivity (Wong 2006; McMillan and Rodrik 2011; UNCTAD 2016). Details of the decomposition method in mathematical expression are described in Appendix 3.

## 4. Results and findings

### 4.1. Trend of output

The output of each sector in Cambodia has changed over time. As shown in Figure 1, the agricultural sector's contribution to GDP declined from 36.1 percent to only 15.5 percent and the industrial sector's (manufacturing plus non-manufacturing) contribution to GDP increased from 21.5 percent to 42 percent during 2000-2022. Meanwhile, the service sector's contribution remained relatively stable at between 36 and 38 percent during the same period. How each sector contributed to Cambodia's GDP suggests the country underwent a structural transformation where it has been gradually shifting its reliance from agriculture to manufacturing.

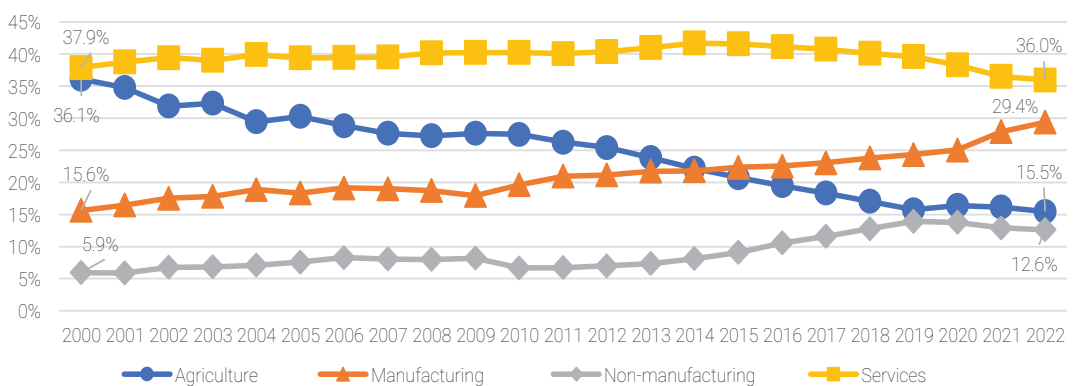
Critical drivers of Cambodia's growth came from the industrial (manufacturing and non-manufacturing) and service sectors. Within the manufacturing sector, its growth

is primarily attributed to the rapid growth of labour-intensive manufacturing, such as garment and footwear, travel goods (e.g., bags), and bicycles. As a Least Developed Country (LDC), Cambodia was able to receive preferential market access to EU<sup>1</sup> and US markets<sup>2</sup> through the 'Everything but Arms, EBA' agreement and the Generalized System of Preferences (GSP), respectively. Coupled with the relatively low cost of labour, Cambodia was able to maintain its export competitiveness in the last decades. However, rising labour costs due

1 In February 2020, the EU suspended part of the tariff preferential treatment to Cambodia, approximately 20 percent, extracted from [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_229](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_229).

2 Cambodia has received GSP status since 1997 until 2021 when US GSP expired, along with other 26 countries Cambodia is sent a petition to request US for restore the GSP, extracted from <https://cambodianess.com/article/cambodia-calls-on-the-us-to-renew-gsp-access-as-competitiveness-stalls>

Figure 1: Sectoral share of value-added to GDP (Percent)



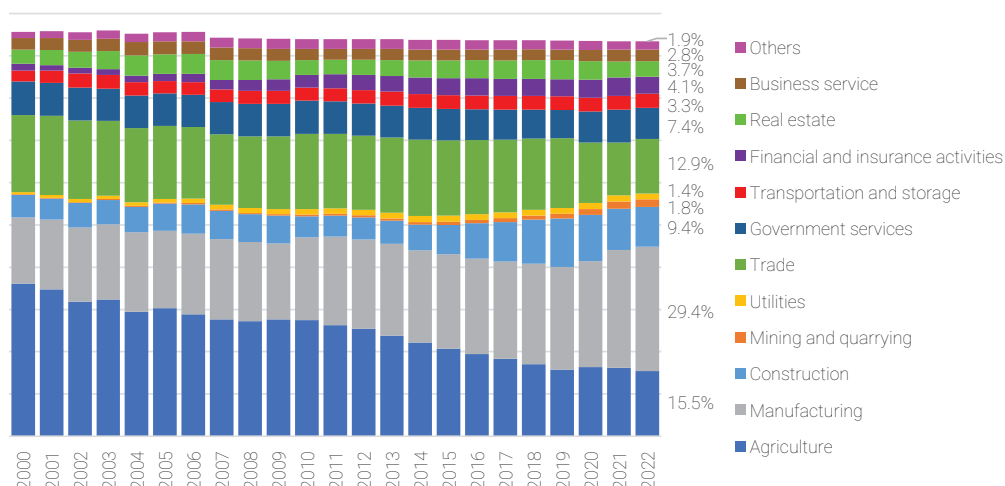
Source: Author's calculation based on MEF rebased data 2023 (Constant price 2014)

Notes: 1) Non-manufacturing included construction, energy and mining sectors;

2) The share is a ratio to GDP, excluding taxes and subsidies



Figure 2: Sub-sectoral share of value-added to GDP (Percent)



Source: Author's calculation based on MEF rebased data 2023 (Constant price 2014)

Notes: The share is the ratio to GDP, excluding taxes and subsidies

to minimum-wage law<sup>3</sup> require Cambodia to lower its business and production costs to maintain its competitiveness.

The annual growth of value-added in manufacturing has been higher than that of agriculture in the last two decades. Since 2012, non-manufacturing, especially the construction sector, has achieved the highest growth rate, but it was later negatively impacted by the COVID-19 pandemic which it is still recovering from today. Yet, the COVID-19 pandemic's impact on Cambodia's manufacturing sector was limited compared to its impact on the service sector. The service sector's growth rate has been strong, averaging around 7.1 percent over the last two decades. However, like many other countries, the service sector was hit hard during the COVID-19 pandemic, and in 2020 and 2021, it experienced a decline of -6.7 percent and

-1.8 percent, respectively (Figure 23 in the appendix).

The agriculture, industry, and service sectors contain sub-sectors with variations in labour, capital, skill, and technology intensity. Therefore, it is helpful to analyse how each sub-sector contributes to each sector's growth. Figure 2 differentiates the industry and service sectors into their sub-sectors wherein industry is comprised of manufacturing and non-manufacturing sectors and manufacturing consists of labour-intensive garments and footwear, travel goods, bicycles and automobiles, and electronics components. Figure 2 also contains non-manufacturing sub-sectors of industry, including energy, mining and construction. In 2022, construction's contribution to GDP increased to 9.4 percent while energy and mining remained stable at 3.2 percent. While the construction sector was vital in pushing the economy forward in past growth periods, it also faces various risks because of its heavy reliance on foreign capital.

<sup>3</sup> Minimum wage has risen to USD204 in 2024 compared to USD200 in 2023 based on Ministry of Labour and Vocational Training.

Within the service sector, services trade, which included wholesale and retail sales, foods, beverages, and accommodation, accounted for the largest share at roughly 12.9 percent followed by government sub-sector (e.g., public administration, defence, education, healthcare and social work) which contributed 7.4 percent. The remaining 15.8 percent of the service sector's contribution to GDP mainly included tradable services, such as transportation, storage, finance, real estate, and business services (i.e., information and communication, professional, scientific and technical activities, and administrative support services, such as business support services, tour and travel services, among others).

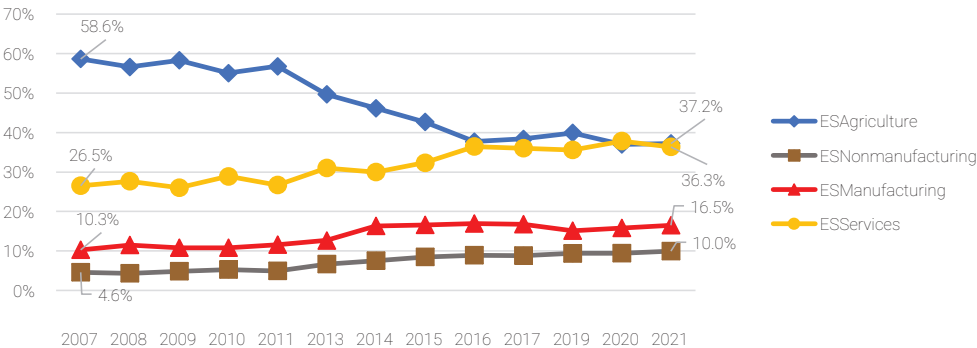
In summary, Cambodia is undergoing a structural transformation with manufacturing and service sector-led growth patterns. Despite being the key driver of growth, we found that manufacturing still concentrated heavily on narrow-based labour-intensive production, such as garments and textiles, and, therefore, should pursue further diversification. Within the service sector, growth is chiefly driven by domestic-oriented whole and retail sales, food, beverage, and accommodation

with a limited domestic market size. However, there are indications for the potential growth of tradable services, such as information and communication, business services, transportation, and finance, which could also serve the export market.

### 4.2. Trend of employment

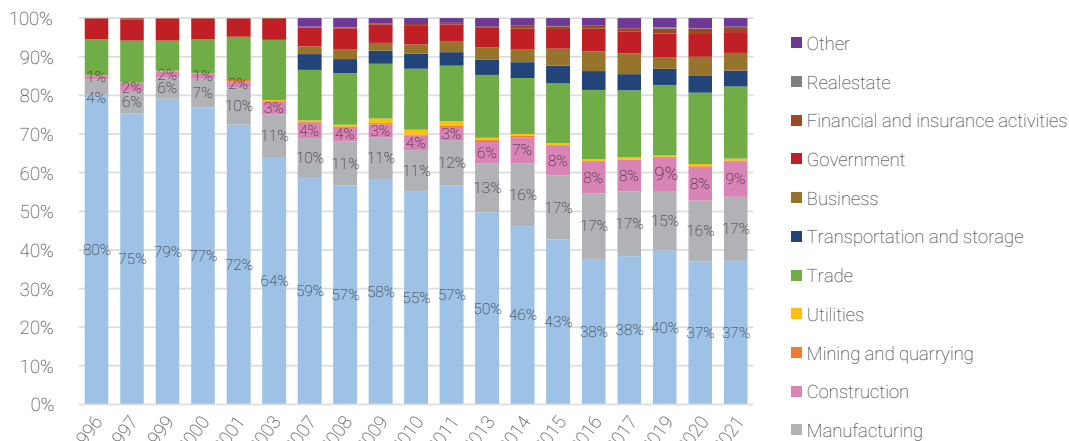
To obtain a clearer picture of the structural transformation described in the preceding section, it is equally important to examine changes in the patterns of employment across sectors as well. UNCTAD (2016) analysed structural transformation focussing exclusively on labour reallocation across and within sectors. The study noted that during structural transformation, the share of people employed by agriculture decreased while manufacturing and service employment increased. This trend has been observed in many countries as countries transform from low-income to middle-income and high-income status. The increasing employment share in manufacturing and service suggested that manufacturing and service played increasingly essential roles in job creation and income generation for workers.

Figure 3: Employment share by sector (Percentage of total employment)



Source: NIS and ILO (2024)

Figure 4: Employment share by sub-sectors (Percentage of total employment)



Source: NIS and ILO (2024)

Considering employment by sector, we found a decrease in agricultural employment and an increase in industry and service employment in Cambodia. As shown in Figure 3, the percentage of people employed in agriculture dropped from 58.6 percent in 2007 to 37.2 percent in 2021. Meanwhile the percentage of people employed in manufacturing increased from 10.3 percent to 16.5 percent and in service from 26.5 percent to 36.3 percent during the same period. Employment in the non-manufacturing sub-sector, including construction, energy, and mining, was relatively stable at under 10 percent.

Figure 4 shows the percentage of employment across sub-sectors and how it has changed between 1996 and 2021. Despite a general decline in employment within the sector, agriculture remained the largest source of employment in 2021 employing 37 percent of Cambodians. Employment in industry—both manufacturing and non-manufacturing—slowly increased reaching 26.5 percent in 2021. Employment in the service sector

also slightly increased over the years and caught up with agriculture. Within services sectors, trade (wholesale and retail sale, foods, beverage and accommodation) and government sector (public sector, education, health care and social work) employed the largest percentage of Cambodians and transportation and logistics, finance, real estate and business sectors employed the next largest percentage. Remarkably, the boom in construction over the last few years was evidenced in the sub-sector's employment growth in 2021 (9 percent).

By looking at changes in each sector's contribution to GDP and its employment rate, **Cambodia is in the middle of a structural transformation process.** That process entails a shift from the low-productivity agricultural sector to the relatively higher-productivity industry sector. This process mirrors structural transformations witnessed in many developing countries. However, other studies have also shown that while some countries could sustainably and inclusively achieve their development, others got

trapped in upper-middle-income status (Herrendorf, Rogerson and Valentinyi 2013). Therefore, Cambodia must learn from these experiences and build a conducive environment for its economy to thrive and grow sustainably in the long run.

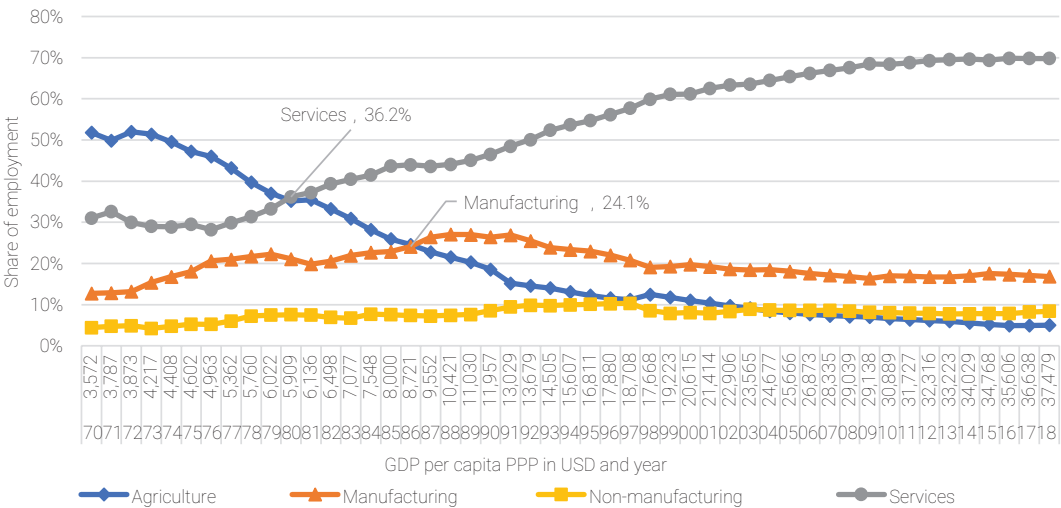
### 4.3. Cambodia’s structural transformation: A cross-country comparison

As a country develops, the structure of its economy also changes. To understand Cambodia’s pattern of structural transformation, we compared it with other countries that underwent a similar transition from low-income to high-income and countries that were currently undergoing structural transformation. We selected South Korea, China, Vietnam, and Thailand to provide this comparison.

Figure 5 shows South Korea’s structural transformation between 1970 and 2018, and Figure 6 shows Cambodia’s ongoing

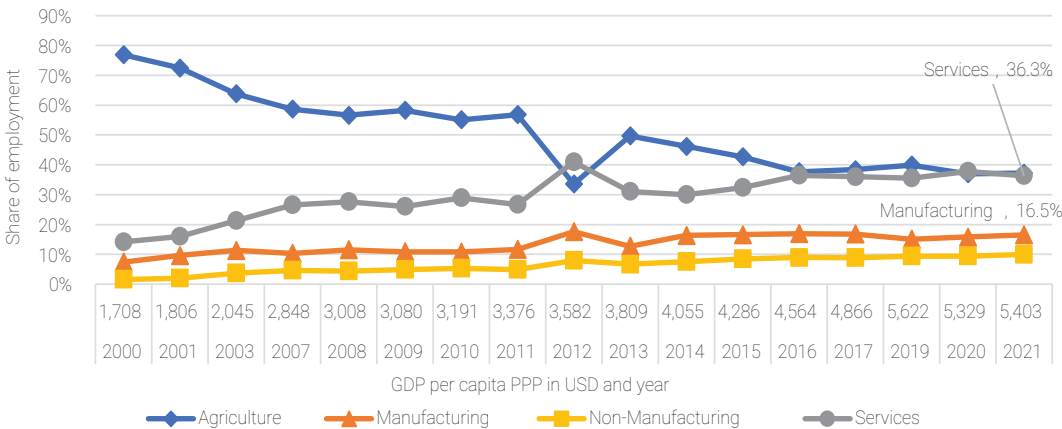
structural transformation. South Korea’s experience indicated that the employment in the service sector exceeded that of agriculture (37.2 percent) when GDP per capita (in purchasing power parity, PPP) was about USD6,000. Following that, employment in manufacturing was higher than that of agriculture (24.1 percent) when GDP per capita was USD8,720. For Cambodia, the most recent GDP per capita was around USD6,000 with the employment rate in service equal to that of agriculture (35.6 percent). Thus, Cambodia’s 2021 sectoral employment was similar to South Korea’s in that employment in service exceeded that of agriculture when the countries had a GDP per capita of around USD 6,000. Interestingly, Cambodia’s employment rate in manufacturing in 2021 was 16.5 percent, which was well below that of South Korea at 24.1 percent when South Korea’s GDP per capita was around USD 6,000.

Figure 5: Structural transformation and GDP per capita PPP of South Korea (Percent)



Source: Author’s Calculation from ETD Data (2024)

Figure 6: Structural transformation and GDP per capita PPP of Cambodia (Percent)



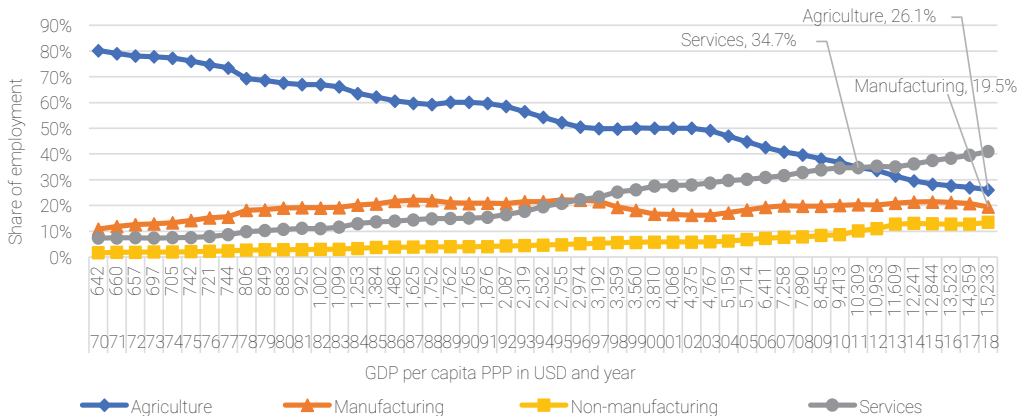
Source: Author's Calculation from Cambodia's Rebased Data using ETD format (2024)

Assuming Cambodia follows a pattern similar to South Korea's, Cambodia would need to increase its manufacturing employment rate from its current level by about 7.6 percentage points—from 16.5 percent to 24.1 percent.

Figure 7 provides a window into China's structural transformation. When China had a GDP per capital of USD10,309, employment in service was higher than

that of agriculture (34.7 percent). These figures suggest it took longer for the service sector to grow in China than in South Korea. Considering China's manufacturing sector, its employment rate was just 19.5 percent when the country's GDP per capita reached USD15,233. Importantly, employment in manufacturing is also decreasing over time. This trend suggests that China might reach its industrialised peak at a much lower GDP

Figure 7: Structural transformation and GDP per capita PPP of China (Percent)



Source: Author's Calculation from ETD (2024)

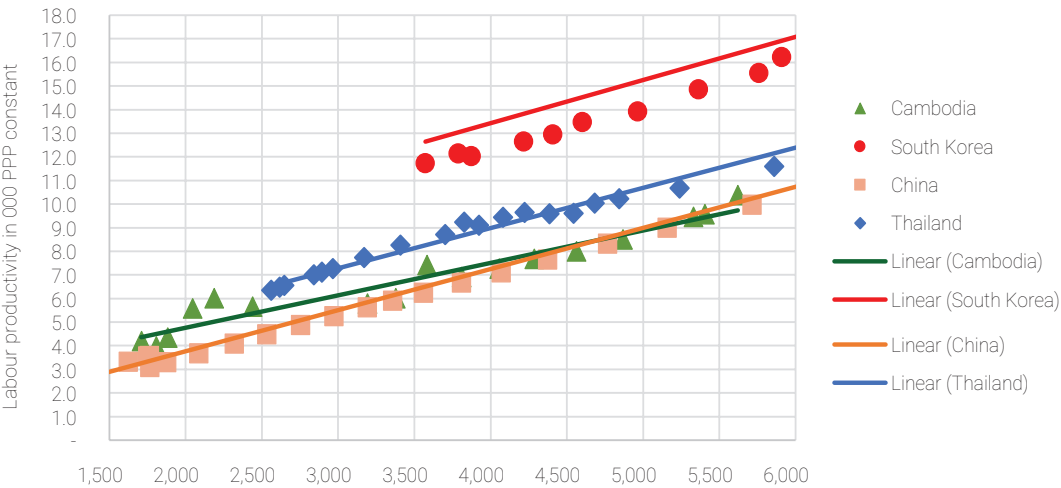
per capita than South Korea, which is a phenomenon commonly called “premature de-industrialisation”.

Premature de-industrialisation can pose challenges to growth. If Cambodia is to follow China’s pattern, the employment rate in manufacturing would not increase as much; up to 19.1 percent from its current level of 16.5 percent. In other words, according to China’s model, employment in manufacturing in Cambodia has almost

reached its peak. Yet, such a change could present a challenge for Cambodia since the GDP per capita has been considerably lower than that of China even though the employment rate in manufacturing was very close to that of China.

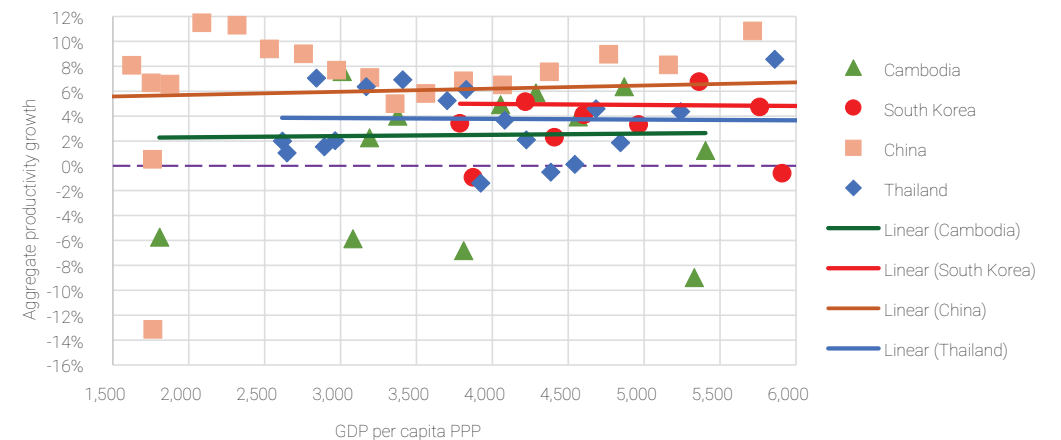
Figure 8 showed a comparison of the aggregate labour productivity between Cambodia and South Korea, China, and Thailand when these countries were at the same level of GDP per capita. As shown

Figure 8: Cross-countries aggregate labour productivity (Percent)



Source: Author’s Calculation from ETD and Cambodia’s Rebased Data (2024)

Figure 9: Cross-countries aggregate productivity growth rate (Percent)



Source: Author’s Calculation from ETD and Cambodia’s Rebased Data (2024)

in Figure 8, Cambodia's aggregate labour productivity was at a similar level to that of China but well below Thailand and South Korea, on average. However, Cambodia's estimated line for average productivity was flatter than that of other countries suggesting its aggregate productivity growth was at a lower rate than other countries' even though they were all at the same level of GDP per capita.

The difference in productivity growth rate was shown in Figure 9. By comparison, the aggregate productivity growth was between 6.0 percent and 8.0 percent in China, 4.0 percent and 6.0 percent in South Korea, 4.0 percent and 5.0 percent in Thailand and 2.0 percent and 3.0 percent in Cambodia. It is noteworthy that Cambodia's aggregate productivity growth rate was volatile compared to other countries, such as South Korea and China that maintained their positive growth rate over multiple consecutive years. A possible explanation for Cambodia's growth rate volatility was that it has experienced constraints in export basket and market diversification. Figures 30, 31, 32 and 33 in the Appendix compare sectoral productivity growth. The results indicate

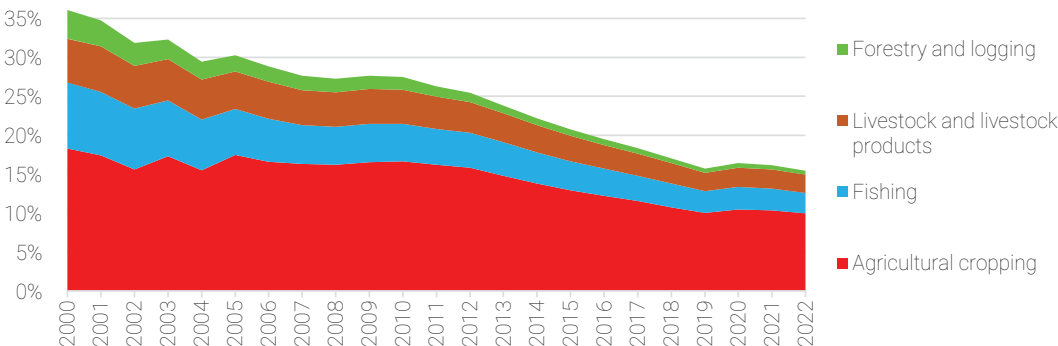
that while agriculture, manufacturing, and non-manufacturing show a convergence with other countries, the service sector's productivity growth was lower and even stagnated compared to the sector's productivity growth in other countries. The lower aggregate productivity growth rate and volatility imply that Cambodia could take longer to reach its desired growth goals

## 4.4. Sub-sector analysis

### 4.4.1. Agricultural sub-sectors

Over the last two decades, the contribution of the agricultural sector to Cambodia's economy (through GDP) has declined from around 37.5 percent in 2000 to only 15.5 percent in 2021. Labour movement from agriculture to other sectors, especially the fast-growing manufacturing and construction sector, has played an essential role in this decline. Another contributing factor has been the shift to more modern and mechanised agricultural practices. The growth of mechanised agriculture in Cambodia has led to lower workforce demands in the sector and freeing people previously employed in this sector to find other sources of employment. Two key sub-sectors that contributed

**Figure 10: Share of agriculture sub-sectors to GDP (Percent)**



Source: Author's calculation based on MEF rebased data 2023 (Constant price 2014)

most to agriculture’s output were agricultural cropping and fishing, which accounted for about 10.0 percent and 2.6 percent, respectively (Figure 10).

Further examining Cambodia’s agricultural exports revealed that it has a strong, persistent growing export of a few agricultural products, including rice (HS10), edible fruit and nuts including banana and cashew nuts (HS08), product, mill, industrial; malt; starches, inulin; wheat, cassava and potatoes (HS11) as shown in Figure 28 in the Appendix. Although the agricultural sector faces declining employment and contributions to GDP, it still employs a greater proportion of the population than other sectors. Therefore, agriculture remains a vital sector for reducing poverty and encouraging rural development. Moreover, environmentally friendly agricultural production is essential for sustainable growth. Many studies show the importance of the agriculture sector on rural development. For instance, Menon and Roth (2022) analysed the opportunities and challenges for Cambodia’s agricultural exports to China, which is one of the

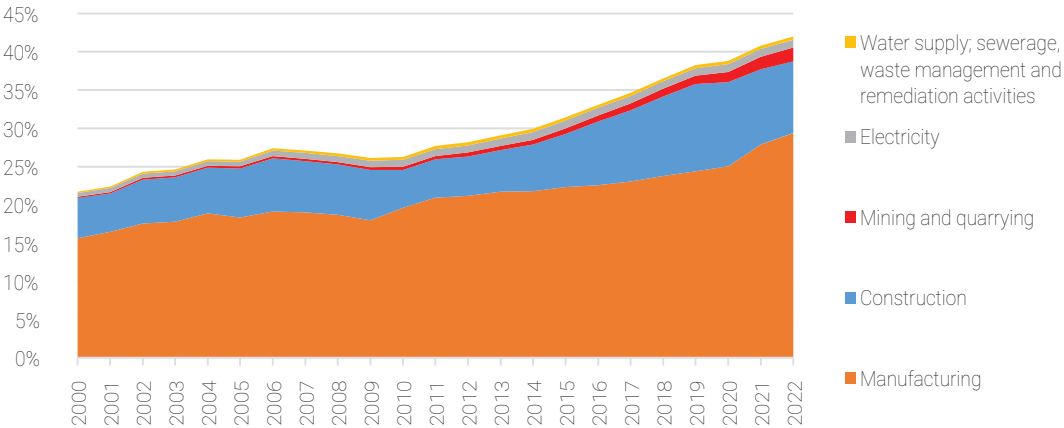
largest markets for Cambodia’s agricultural products and is a significant value chain of potential agricultural exports, such as cassava and sugarcane.

As shown in the Appendix, Figure 34 illustrates how the annual growth rate of the agriculture sector has decreased, particularly after 2006. In 2022, the agriculture sector’s growth rate was just 1.1 percent. Most of the sub-sectors within agriculture converged to a **steady and small growth rate of around 5 percent**. For instance, the growth rate of crop production was volatile, ranging between 0.3 percent and 8.4 percent after 2006. Livestock has had an average growth rate of about 3.1 percent, while fishing has had a 1.7 percent growth rate per year. Moreover, the dominant sector, agricultural cropping, also has a marginal growth rate and did not increase during the last decade. Thus, agriculture has had a steady and small growth rate.

#### 4.4.2. Industry sub-sectors

Figure 11 illustrates the share of sub-sectors in the industry sector, and shows

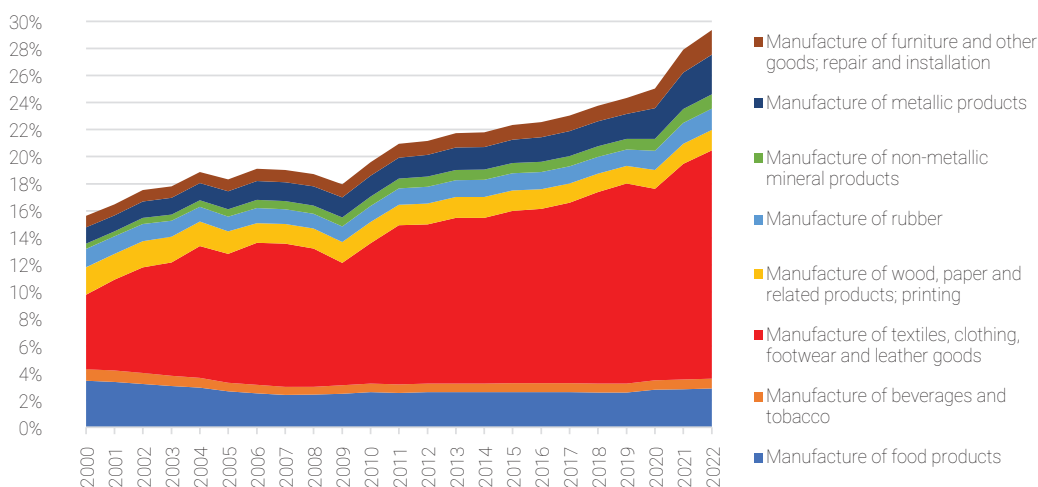
Figure 11: Industry sub-sector share to GDP (Percent)



Source: Author’s calculation based on MEF rebased data 2023 (Constant price 2014)



Figure 12: Share of value-added within the manufacturing sector (Percent)



Source: Author's calculation based on MEF rebased data 2023 (Constant price 2014)

that manufacturing and construction make up the largest proportion of this sector. The other sub-sectors were resource-based, such as mining and quarrying, electricity and water, sewage and waste management, which accounted for only small share (approximately 3.2 percent) of the total GDP. For instance, in 2022, the share of manufacturing value-added to GDP was 29.4 percent while that of construction was 9.4 percent.

Figure 12 further breaks down the performance of each sub-sector within manufacturing. We found that **textiles, clothing, footwear, and leather goods contributed the largest share** (approximately 16.9 percent) to GDP in 2022 and have recently acted as the engine of economic growth. We also found an emerging pattern of diversification since 2018 to include manufacturing food products, metallic products, rubber plastic, and other goods. However, their shares remained minimal. Further analysis revealed Cambodia's export composition

of manufacturing goods, such as electric and machinery, transport bicycles, and plastic products, is growing strongly. Among them, the growth rate of electronics and automobile parts production maintained a positive and persistent growth rate since 2018 (Figure 29 in the Appendix).

In addition to GDP contributions, we also considered the speed of output growth within the manufacturing itself since this is also beneficial. Figure 35 in the Appendix illustrates the annual growth rate of value-added within manufacturing sector which was positive and the rate was approximately equal across sub-sectors exhibiting a steady average growth rate of around 10.4 percent between 2001 and 2022. Among them, textiles, clothing, footwear, and leather goods had the highest annual average growth rate of 13.2 percent, which was followed by non-metallic and metallic products at 12.3 percent and 11.7 percent, respectively, during the same period. It should also be noted that the textile and garment sectors experienced negative

growth rates during the global financial crisis (GFC) in 2009 and the COVID-19 pandemic in 2020 due to their heavy dependence on the export market.

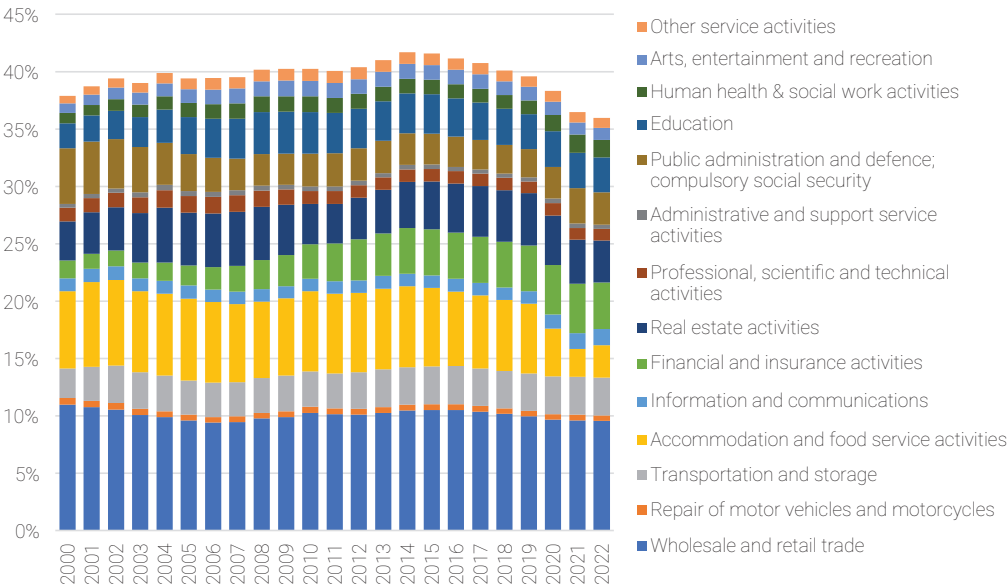
Unlike manufacturing, which maintained stable growth, non-manufacturing was primarily driven by the construction sub-sector. Despite its substantial growth performance, this sub-sector has had high volatility. During 2001-2022, this sub-sector had an average annual growth rate of 10.8 percent but quickly experienced negative growth of -20.9 percent in 2010 and -7.6 percent and -8.0 percent in the aftermath of the GFC in 2009 and during the COVID-19 pandemic in 2020 and 2021, respectively (Figure 36 in the Appendix). While construction has played an important role in promoting growth in developing countries, it can easily lead to a bubble crisis caused by speculation. Other sectors, such as energy and mining, have maintained steady and positive growth in the last two decades.

In summary, manufacturing textile, clothing, footwear, and leather goods remained the biggest contributors to manufacturing output despite their declining growth rate. Moreover, the growth of nascent sectors signals manufacturing diversification. The rising share of manufactured food, metalics, and other products demonstrates how Cambodia’s industry sector is diversifying. However, the trend is still inchoate. Cambodia’s growth in the past two decades has also been driven by growth in the construction sector, albeit with a small share compared to manufacturing. Yet, the growth of construction quickly caused the economy to be vulnerable to external shocks and crises. For instance, most construction in Cambodia depended on Chinese foreign direct investment (FDI), and when China experienced an economic slowdown, the effect spilt over to Cambodia.

### 4.4.3. Service sub-sectors

Figure 13 shows the breakdown of the service sub-sector between 2000 and

Figure 13: Share of value-added within service (Percent)



Source: Author’s calculation based on MEF rebased data 2023 (Constant price 2014)

2022. Among them, two leading sub-sectors emerged: (1) wholesale and retail sales, food accommodation, which accounted for 12.8 percent of GDP in 2022; and (2) finance, insurance, and real estate, which accounted for 7.8 percent of GDP in 2022 and was the highest contributing sub-sector.

Using UNCTAD ISIC Rev 4 classification, we found that the **tradable services** (including transport and storage, finance and insurance, real estate, information and communication, professional scientific and professional and administrative support services activities) accounted for about 13.9 percent in 2022. **Non-tradable service**, on the other hand, (including wholesale, retail sale, food and accommodation) accounted for 12.8 percent of GDP, and **non-market service** (including public administrative and defence, education, health, art and entertainment and others) contributed approximately 9.2 percent of GDP. Figure 37 in the Appendix shows the annual average growth rate of each service sub-sectors between 2000 and 2022. It revealed that government services, including public defence, health, education and other services, had an average growth rate of between 4.7 percent to 10.1 percent. Tradable services had a growth rate of between 6.6 percent and 12.3 percent. Among them, the highest growth rate was in the finance and insurance sector that had an average growth rate of 12.3 percent. The non-tradable services had the lowest average growth rate between 4.3 percent and 6.6 percent.

Thus, our study shows that the Cambodian service sector is dominated by tradable services, which also have a high average growth rate. The tradable services are

potential sources for navigating long-term growth rates in structural transformation because these services have a larger market due to their exportable characteristic. Moreover, tradable services such as information and communication technology (ICT) or the digital sector also require high-skilled labour which could provide high-paid employment and learning opportunities (UNCTAD 2016).

## 4.5. Sectoral productivity trends

While generating employment and income is necessary for economic growth, high productivity is essential for sustaining long-term development. Therefore, an increase in employment, especially in the high-productivity or growth sector, is critical for long-term economic development. This can be done by facilitating the movement of people from a low-skill to a higher-skill sector by upgrading their skills through training and the introduction of technology.

Figure 14 shows the level of sectoral labour productivity from 2007 to 2021 and Figure 15 shows the annual productivity growth rate by sector. The average productivity growth rate was 3.2 percent as shown in Figure 15. However, there were expected drops in productivity in 2009 due to the GFC, in 2013 due to the disruption in the manufacturing sector during the general election<sup>4</sup>, and in 2020 due to the COVID-19 pandemic. The industry sector had the highest productivity wherein its sub-sectors of manufacturing and non-manufacturing both outperformed the service sector. The agriculture sector

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4 Refer to the Cambodia National Election Committee (NEC) and its website here. <https://www.nec.gov.kh/english/>

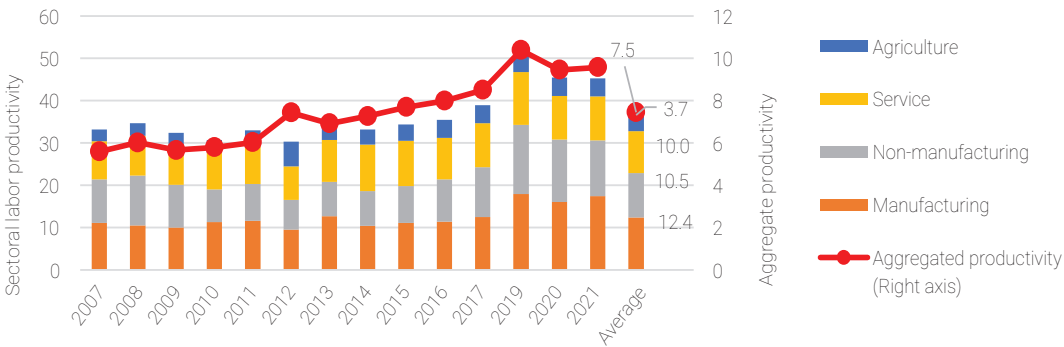
has the lowest productivity. As shown in Figure 15, the average labour productivity growth rate was 3.2 percent between 2008 and 2021. During that time, manufacturing had an average annual productivity growth rate of 2.0 percent, and non-manufacturing and service both had an average of zero productivity growth. As shown in Figure 12 above, garment and textile contributed the largest share to manufacturing sector. Thus, the growth of the manufacturing's labour productivity is probably due to the low-skill, labour-intensive garment and footwear, travel goods and bicycle industries, which comprise the largest employment for the manufacturing sector. In the service

sector, a large chunk of employment has been in non-tradable services and its labour productivity growth rate was volatile and average to almost zero growth rate. Additionally, the agriculture sector has had an average annual labour productivity growth of 7.6 percent, resulting from either agriculture productivity or technology enhancement within the agriculture sector.<sup>5</sup>

According to our data, productivity growth in Cambodia remains small, especially in the

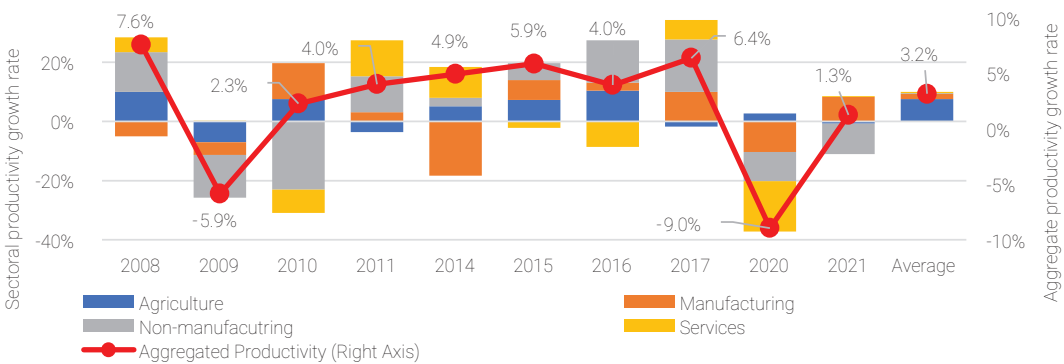
5 Sectoral labour productivity (VA/L) is calculated as sectoral value-added (VA) divided by sectoral employment (L). Labour productivity would increase if growth rate of VA is larger than growth rate of L.

Figure 14: Sector labour productivity (Valued-added per worker in KHR 1,000, constant)



Source: Author's calculation based on MEF rebased data 2023 and NIS-ILO Employment Data (2024)

Figure 15: Annual sectoral productivity growth rate (Percent)



Source: Author's calculation based on MEF rebased data 2023 and NIS-ILO Employment Data 2024 (Constant price 2014)

manufacturing sector, despite the fact that this sector contributes the most to GDP and has the highest productivity level. The service sector has also experienced stagnant productivity growth, and the agriculture sector shows positive productivity growth despite declining employment.

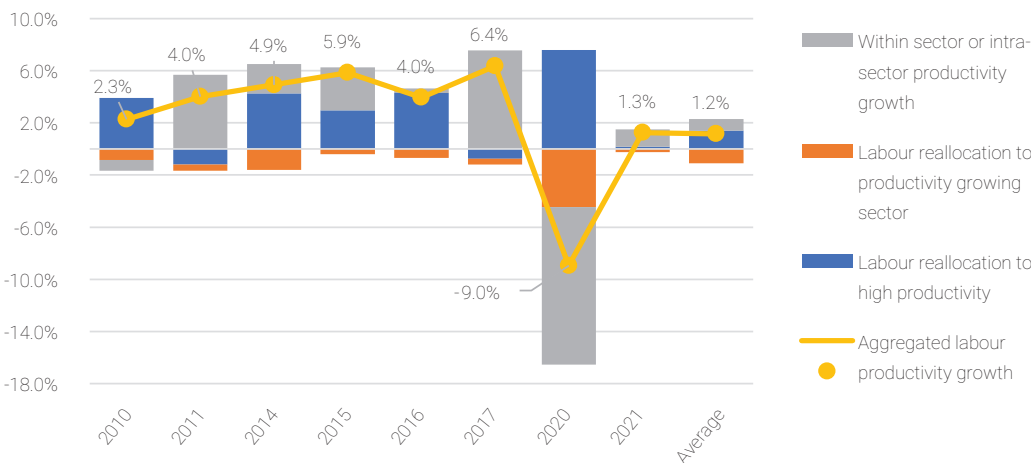
#### 4.6. Decomposition of sectoral productivity: Shift share approach

In this section, we investigate the drivers behind aggregate productivity growth in Cambodia. Applying McMillan and Rodrik (2011) and Wong (2016), we obtained the results shown in Figure 16. The results indicate that from 2010 to 2021, the aggregate productivity growth rate was driven mainly by labour reallocation from low-productivity to high-productivity sectors as well as intra-sectoral productivity growth. Interestingly, the labour reallocation to the high productivity-growth sector was negative suggesting that labour declined in high productivity-growth sectors more than labour increased in low productivity-growth sectors.

The decomposition analysis results showed that Cambodia's average annual productivity growth was about 2.5 percent. The country's growth was driven mainly by **labour reallocation from the low-productivity sector to the high-productivity sector**, which contributed approximately 2.7 percent employment on average. The labour reallocation was mostly due to decreasing employment rates in low-productivity agriculture and increasing employment rates in higher-productivity sectors as (shown in Figures 24 and 25 in the Appendix).

Second, **intra-sectoral productivity growth** occurred in most sectors including the sectors with high employment such as agriculture, but sectoral productivity's growth rate was moderate. Intra-sectoral productivity growth contributed approximately 1.0 percent on average per year to increase aggregate productivity growth. We found that agriculture employed a large share of workers but had a moderate rate of productivity growth, manufacturing had moderate employment and rate of productivity growth, and service

Figure 16: Structural transformation and productivity growth (Percent)



Source: Author's calculation based on MEF rebased data 2023 and NIS-ILO Employment Data (2024)

and non-manufacturing did not have productivity growth (Figures 24, 26 and 27 in the Appendix).

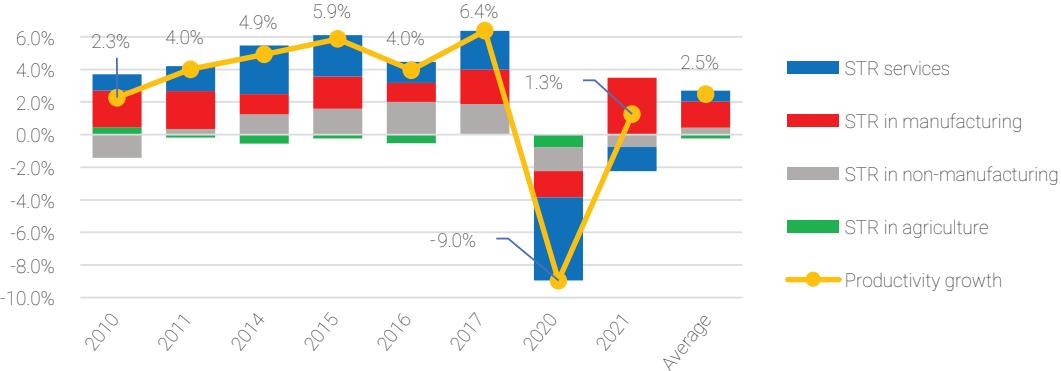
Finally, **labour reallocation to high productivity-growth sectors** was negative (about -1.1 percent) because the intra-sectoral productivity growth rate and the net change in employment share across sectors were small and negative on average (Figures 24, 25 and 26 in the Appendix).

In summary, structural transformation in Cambodia contributed little to improving the annual aggregate productivity growth because of the low sectoral-productivity growth rate and high employment concentration in the low-productivity sectors. Moreover, some barriers prevented labour mobility from low-productivity sectors to higher-productivity sectors. These barriers could be caused by a lack of skill readiness for labour mobility or by small-scale investment in high-productivity and high-productivity-growth sectors that limit the sectors from absorbing enough of the workforce. To increase aggregate productivity growth, Cambodia should facilitate labour mobility to high-productivity and high-productivity-growth sectors and

increase intra-sectoral productivity growth. The intra-sectoral productivity growth can be achieved by smoothing the labour reallocation within the manufacturing or service sector. For instance, labour reallocation from low-skill industries such as garments and footwear to high-skill industries such as electronics and machinery or labour reallocation within the service sector such as from low-end services to high-end services serve this purpose. At the same time, intra-sectoral productivity growth can also be enhanced by increasing production technology, product upgrading, and product complexity and by supporting industrial research and development.

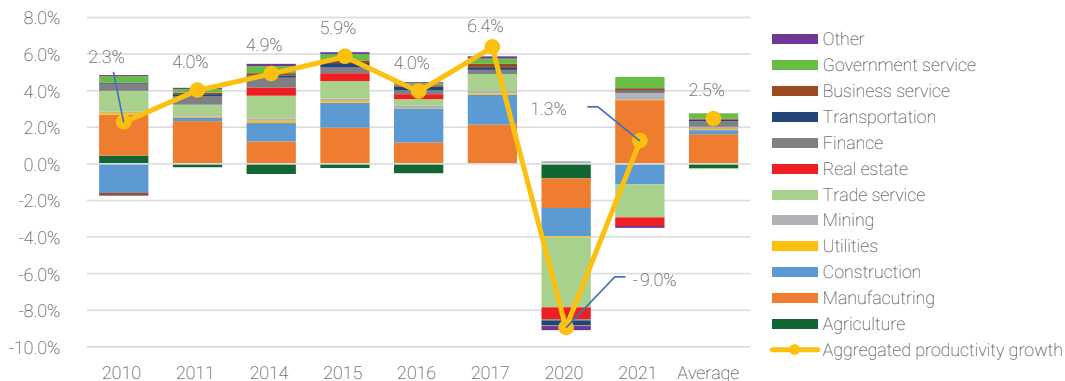
Figure 17 shows the total structural changes by sector (agriculture, manufacturing, non-manufacturing and service) driving aggregate productivity growth. We found that between 2010 and 2021 manufacturing sector was the main driver of growth with increased annual productivity growth of 1.6 percent on average closely followed by the service sector (0.6 percent). However, structural change in agriculture sector reduced aggregate productivity growth by

Figure 17: Total structural transformation in key sectors (Percent)



Source: Author's calculation based on MEF rebased data (2023) and NIS-ILO Employment Data (2024)

**Figure 18: Productivity growth by sub-sectors (Percent)**



Source: Author's calculation based on MEF rebased data (2023) and NIS-ILO Employment Data (2024)

-0.4 percent on average. The structural shift in non-manufacturing sector was more neutral and increased aggregate productivity by 0.4 percent per year.

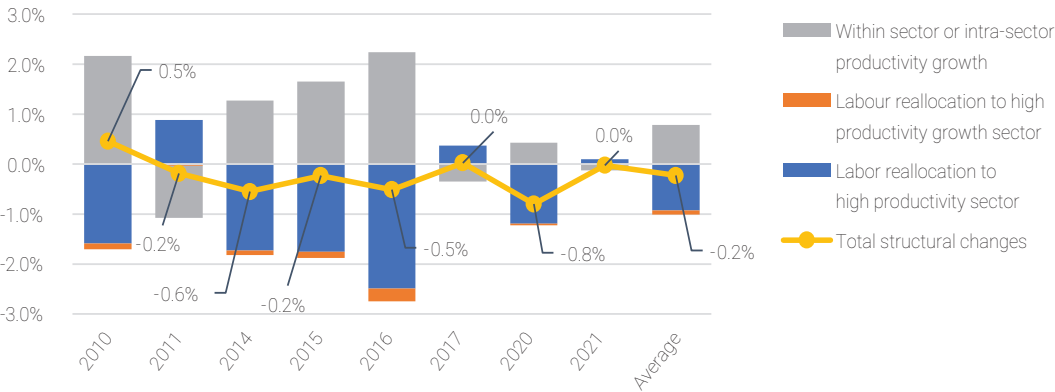
Figure 18 further differentiates the agriculture, manufacturing, non-manufacturing sub-sectors and service sub-sectors. We found that aggregate productivity growth was largely produced by manufacturing. However, the construction sector also strongly influenced the structural changes we observed and increased the aggregate productivity growth on average by about 0.2 percent per year. Within the service sector, non-tradable services increased aggregate productivity by 0.17 percent per year, and trade services increased the aggregate productivity growth minimally.

Figure 19 shows that total structural change in agriculture negatively impacted the aggregate productivity growth rate. The total structural change reduced aggregate productivity growth slightly (-0.2 percent on average per year) because agriculture experienced losses in employment that offset intra-sectoral productivity growth. From 2010 to 2021, labour

reallocation to high-productivity sectors decreased aggregate productivity growth on average by -0.9 percent, labour reallocation to high-productivity-growth sectors decreased the aggregate productivity growth by -0.1 percent. Intra-sectoral productivity growth increased the aggregate productivity growth by 0.8 percent to offset this.

Figure 20 shows the total structural change in the manufacturing sector, which increased aggregate annual productivity growth by an average of 1.6 percent during 2010-2021. Labour reallocation to the high-productivity sector contributed the most to the rise in aggregate productivity growth. In fact, aggregate productivity growth was about 1.4 percent per year because manufacturing absorbed labour from lower-productivity sectors. Manufacturing also had intra-sectoral productivity growth but at a marginal rate of 0.4 percent during this period. The labour reallocation to the high-productivity-growth sector was almost zero, demonstrating that changes in labour employment and intra-sectoral productivity growth were small on average during the last two decades.

Figure 19: Structural change in agriculture (Percent)

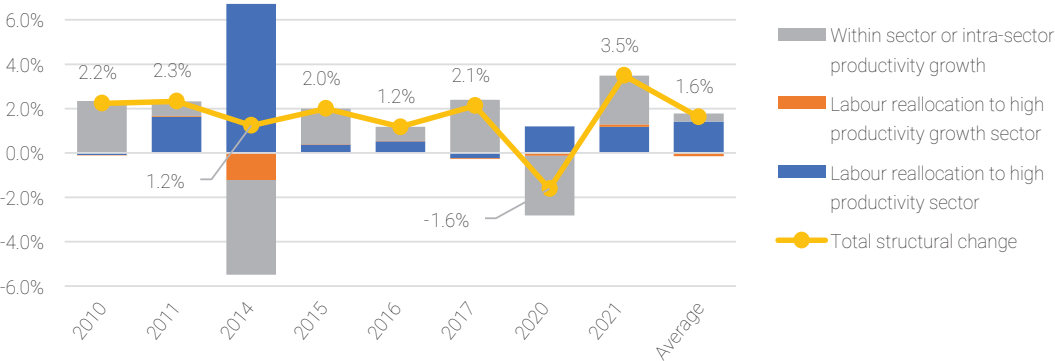


Source: Author’s calculation based on MEF rebased data (2023) and NIS-ILO Employment Data (2024)

Figure 21 shows the total structural change in non-manufacturing which contributed little to the increase in aggregate productivity growth and was 0.4 percent on average per year. The construction, mining, and energy sectors mostly drove the structural change. Figure 21 showed that in terms of labour reallocation to high-productivity sectors, non-manufacturing absorbed only a small portion of employment from other sectors (average of 1.0 percent). Its intra-sectoral productivity growth was almost zero on average. Additionally, we found that labour reallocation to the high productivity-

growth sectors (non-manufacturing) was negative on average (-0.6 percent per year). Two possible reasons for the negative labour reallocation in construction, mining, and energy sectors are (1) when non-manufacturing sector experienced productivity growth, they also experienced labour flow-out than labour flow-in which reduced benefit from productivity growth or (2) when non-manufacturing sector experienced productivity decline, they also experienced labour flow-out than labour flow-in which exacerbated the negative effect of productivity decline.

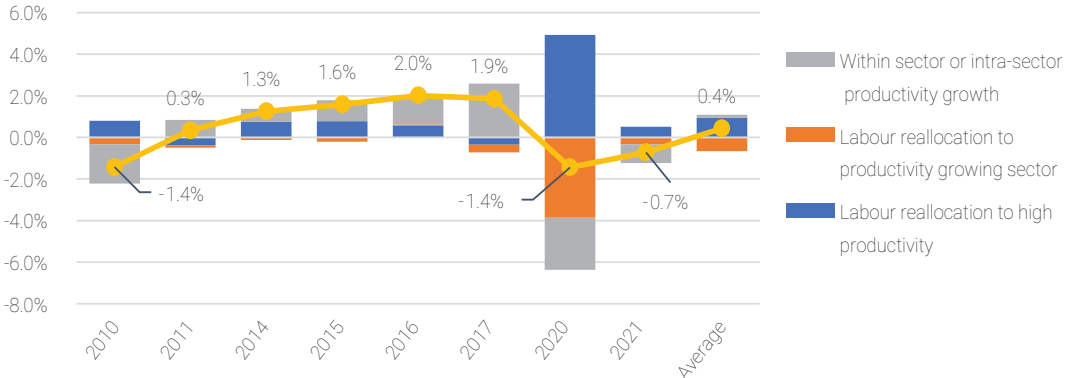
Figure 20: Structural change of manufacturing (Percent)



Source: Author’s calculation based on MEF rebased data (2023) and NIS-ILO Employment Data (2024)



Figure 21: Structural change of non-manufacturing (Percent)

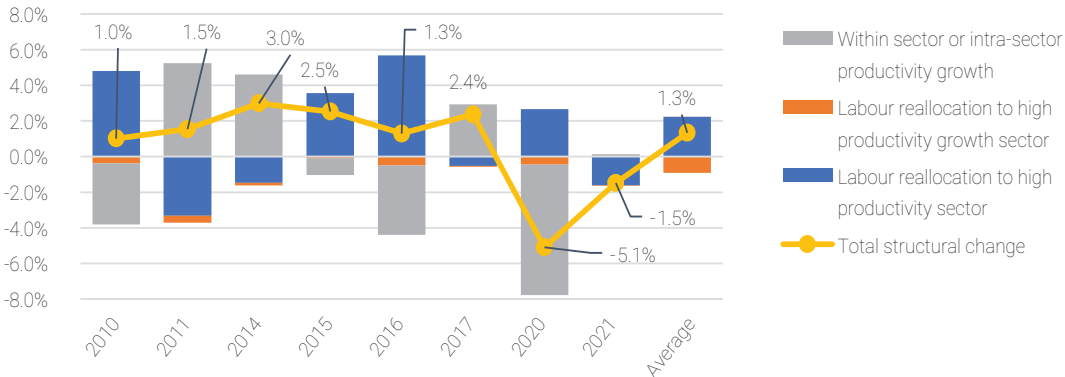


Source: Author's calculation based on MEF rebased data (2023) and NIS-ILO Employment Data (2024)

Figure 22 shows the total structural change in the service sector that increased aggregate productivity growth on average by 1.3 percent. Labour reallocation contributed to an increase in the aggregate annual productivity growth rate by 2.2 percent on average between 2010 and 2021. The service sector's intra-sectoral productivity fluctuated resulting in a zero average over this period. Therefore, intra-sectoral productivity growth did not contribute to aggregate productivity growth. The labour reallocation to high-productivity-growth sectors reduced the

aggregate productivity growth by about -0.9 percent on average per year, indicating that either (1) when service sub-sectors experienced productivity growth, they also experienced labour flow-out than labour flow-in which reduced benefit from productivity growth or (2) when service sub-sector experienced productivity declined, they also experienced labour flow-out than labour flow-in which exacerbated the negative effect of productivity decline.

Figure 22: Structural change of services (Percent)



Source: Author's calculation based on MEF rebased data (2023) and NIS-ILO Employment Data (2024)

## 5. Conclusion and policy implications

The Cambodian economy achieved robust and rapid growth in the past two decades. It became a lower-middle-income country in 2015, and the RGC set ambitious growth goals for the future. Our study found that structural transformation has occurred, and Cambodia's workforce has begun to move from the low-skill agriculture sector to the higher-skill industry and services sectors. However, various challenges continue to slow Cambodia's pace of economic development.

This paper explored the structural change of Cambodia's economy using descriptive statistics, decomposition analysis of productivity on 12 economic sectors from 2000 to 2021, and a cross-country comparison to describe its structural transformation and its relation with aggregate productivity growth.

There are several key takeaways from this study. First, Cambodia's economic growth in the last two decades has been driven by the industry and service sectors, which is clearly demonstrated in the rising output and employment in the manufacturing sector and service sector, and accompanying decreases in output and employment in the agriculture sector. Our data showed that Cambodia was in the middle of industrialisation when labour was released from agriculture to manufacturing and service.

Second, Cambodia's manufacturing in the last two decades experienced negligible diversification, which needs further exploration. The key industries that had a high

share of value-added to GDP are the manufacturing of textiles, clothing, footwear and leather (13.6 percent of GDP). As the dominant sub-sector within the manufacturing sector, garments and textiles have had a slow-productivity growth rate and need to be upgraded or diversified to a higher-productivity growth manufacturing sector to support long-term growth.

Third, Cambodia's service sector is still dominated by low-productivity, non-tradable services, mainly wholesale and retail sales. However, tradeable services, including financial and insurance, information and communication technology, and real estate, appear to have the potential to contribute to GDP. The service sector presents new drivers of growth, but market constraints of non-tradable and low productivity of tradable services present challenges to this new growth engine. The advancement of digital transformation could enhance cross-border trade and enlarge the market for service sectors.

Our analysis of decomposition of productivity growth showed that aggregate productivity growth in Cambodia was small over the past two decades. Moreover, it was constrained by both limited labour reallocation to high-productivity and high-productivity-growth sectors and limited intra-sectoral productivity growth. The analysis demonstrates the importance of structural change within and between the 12 sectors and the inter-sectoral factor movements (labour flow) on aggregated productivity growth. It should be noted that within each sector the intra-sectoral factor

movement (labour, capital, technology) could also increase the aggregated productivity of that sector. For example, within the manufacturing sector, labour reallocation from the low-productivity garment sector to the high-productivity electronic or machinery sector, as well as the upgrade toward high-value-added activities within garment, electronic or machinery sector can increase aggregate productivity. Additionally, from the experiences of countries such as South Korea, the inter-sectoral effect is important at an earlier stage of structural transformation while the intra-sectoral effect becomes more critical and requires governmental policy intervention at later stages of development.

Based on our data, Cambodia must facilitate labour reallocation to high-productivity and high-productivity-growth sectors by removing barriers and increasing labour skills. Both domestic investment and FDI should be directed toward high-productivity and productivity-growing sectors so that these sectors can absorb larger amounts of labour from low-productivity sectors. We recommend that technology and skill upgrading within sectors should be enhanced to increase overall productivity growth.

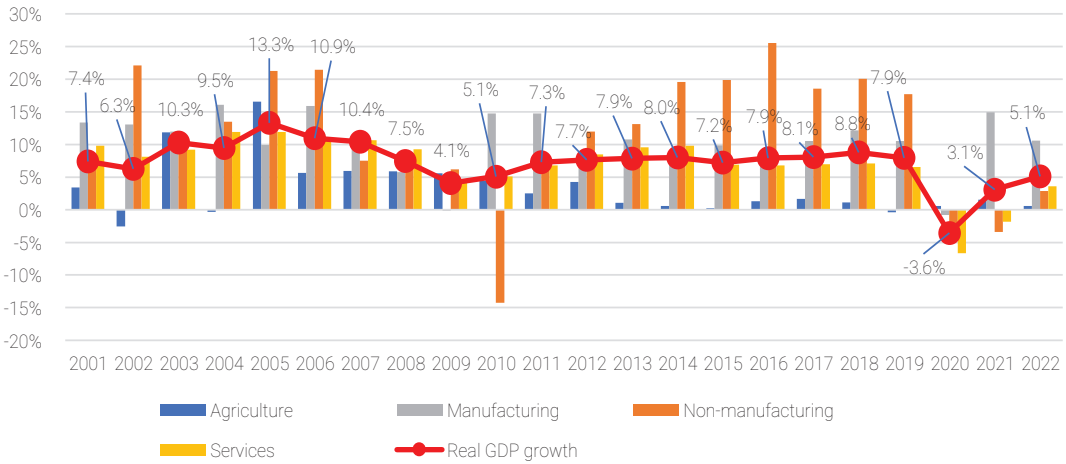
## References

- ETD (Economic Transformation Database). 2024. <https://www.wider.unu.edu/database/etd-economic-transformation-database>
- Felipe Jesus, Mehta Aashish, and Rhee Changyong. 2014. "Manufacturing matters...but it's the jobs that count." *Asian Development Bank Economic Working Paper Series No. 420*.
- Felipe, Jesus, Arnelyn Abdon, and Utsav Kumar. 2012. "Tracking the middle-income trap: What is it, who is in it, and why?" *Working Paper No. 715*.
- Gomado, Kwamivi. 2022. "Reigniting labour productivity growth in developing countries." *WIDER Working Paper 2022/87*.
- Hausmann, Ricardo, César A. Hidalgo, Sebastián Bustos, Michele Coscia, and Alexander Simoes. 2013. *The Atlas of Economic Complexity: Mapping Paths to Prosperity*. MIT Press.
- Herrendorf, Berthold, Richard Rogerson, and Ákos Valentinyi. 2013. "Growth and structural transformation." *Working Paper 18996* (National Bureau of Economic Research).
- Herrendorf, Berthold, Richard Rogerson, and Ákos Valentinyi. 2002. "New Evidence on Sectoral Labour Productivity: Implication for Industrialization and Development." *Working Paper 29834* (National Bureau of Economic Research).
- Kruse, Hagen, Emmanuel Mensah, Kunal Sen, and Gaaitzen de Vries. 2023. "A Manufacturing (Re)Naissance? Industrialization in the Developing World." *IMF Economic Review* 71: 439–473.
- Lavopa, Alejandro. 2015. "Technology-driven structural change and inclusiveness: The role of manufacturing. Inclusive and Sustainable Development." *Working Paper 14/2015*.
- Lavopa, Alejandro, and Adam Szirmai. 2014. "Structural modernization and development traps: An empirical approach." *UNU-MERIT Working Paper 2014-076*.

- Lewis, William Arthur. 1954. "Economic development with unlimited supplies of labour." *The Manchester School*, 22 (2): 139–191.
- McMillan, S. Margaret, and Dani Rodrik. 2011. "Globalization, structural change and productivity growth." In *Making Globalization Socially Sustainable*, by M. Bacchetta and M. Jansen. Geneva: International Labour Organization.
- MEF (Ministry of Economy and Finance). 2023. *Macroeconomic Assessment and Forecast Cambodia Economy 2022*. Accessed 10 2, 2023. <https://mef.gov.kh/macro-economic/macro-economic-2022-2023/>.
- Menon, Jay, and Vathana Roth. 2022. *Agricultural Trade between China and the Greater Mekong Sub-region Countries: A Value Chain Analysis*. ISEAS.
- NIS (National Institute of Statistics). 2012. *Cambodia Standard Industrial Classification (CSIC)*. National Institute of Statistics.
- NIS (National Institute of Statistics). 2024. <https://www.nis.gov.kh/index.php/en/>
- Palma, José Gabriel. 2005. "Four sources of "de-industrialization" and a new concept of the "Dutch-disease"." In *Beyond Reforms, Structural Dynamics and Macroeconomic Vulnerability*, by J.A. Ocampo. Stanford, CA: Stanford University Press. <https://openknowledge.worldbank.org/handle/10986/7378>.
- RGC (Royal Government of Cambodia). 2015. *Industrial Development Policy 2015-2025*. Royal Government of Cambodia.
- RGC (Royal Government of Cambodia). 2023. *Pentagonal Strategy-Phase I*. Royal Government of Cambodia. <https://mfaic.gov.kh/files/uploads/1XK1LW4MCTK9/EN%20PENTAGONAL%20STRATEGY%20-%20PHASE%20I.pdf>.
- Rodrik, Dani. 2009. "Growth after the crisis." *CEPR Discussion Paper 7480*.
- Rodrik, Dani. 2016. "Premature deindustrialization." *Journal of Economic Growth* 21: 1–33.
- Sen, Kunal. 2019. "Structural Transformation around the World: Patterns and Drivers." *Asian Development Review* 36 (2): 1-31. doi:[https://doi.org/10.1162/adev\\_a\\_00130](https://doi.org/10.1162/adev_a_00130).
- Sen, Kunal. 2018. "The Determinants of Structural Transformation in Asia: A Review of the Literature." ADB Economics Working Paper Series No. 478 .
- Szirmai, Adam, and Bart Verspagen. 2015. "Manufacturing and economic growth in developing countries, 1950–2005." *Structural Change and Economic Dynamics* 34 (C): 46–59.
- UN (United Nations). 2008. *International Standard Industrial Classification of All Economic Activities: Revision 4 (ISIC Rev. 4)*. United Nations.
- UNCTAD. 2016. *Structural Transformation and Industrial Policy*. United Nations Conference on Trade and Development .
- Warwick, Ken. 2013. *Beyond industrial policy: Emerging issues and new trends*. OECD Science, Technology and Industry Policy Paper No. 2, Paris: Organization for Economic Cooperation and Development.
- Wong, Wei-Kang. 2006. "OECD Convergence: A Sectoral Decomposition Exercise." *Economics Letters* 2 (93): 210–14.

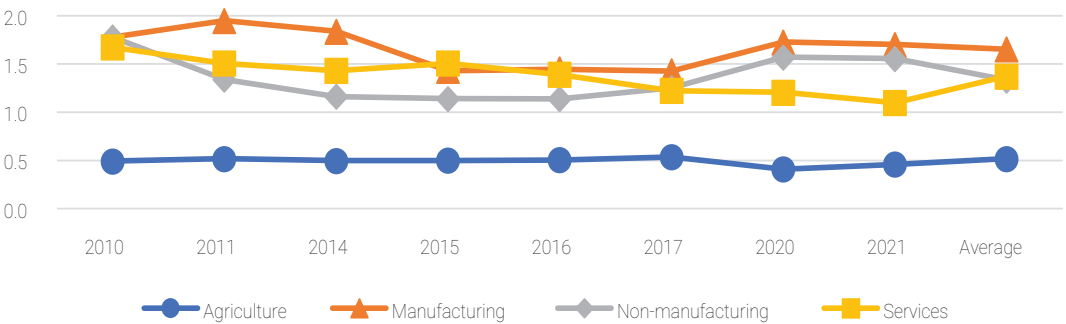
# Appendix 1: Charts used in the study

Figure 23: Annual growth of value-added to GDP by sectors (Percent)



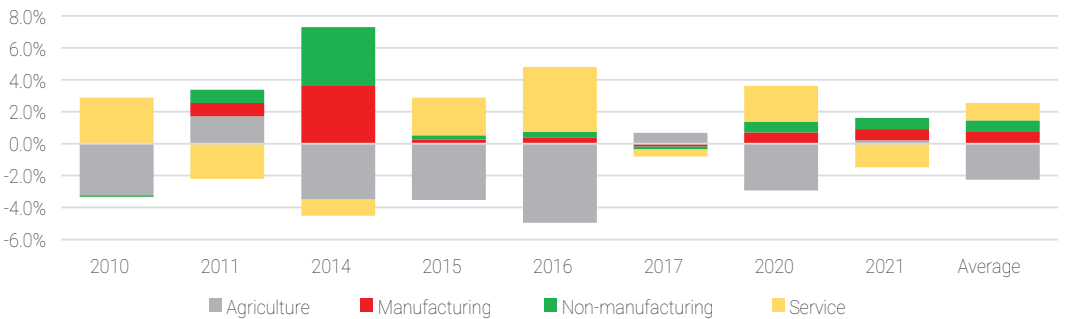
Source: Author's calculation based on MEF rebased data (Constant price 2014)

Figure 24: Relative productivity (Sectoral LP to aggregate LP)



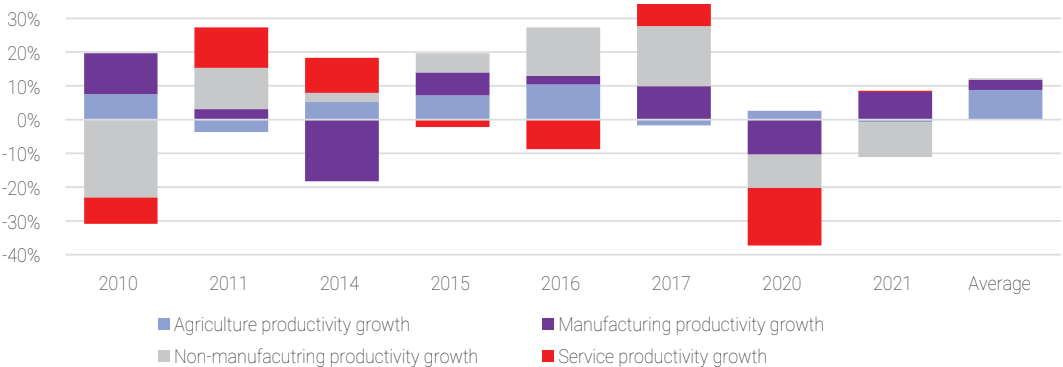
Source: Author's calculation based on MEF rebased data, NIS employment data

Figure 25: Labour reallocation (Percentage point change of employment)



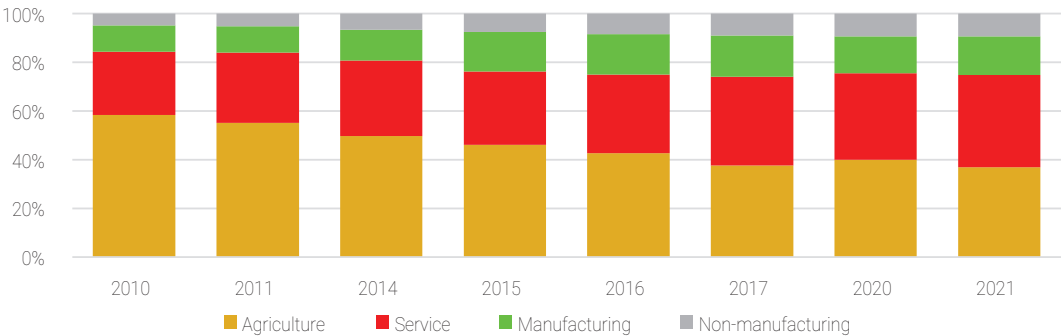
Source: Author's calculation based on MEF rebased data, NIS employment data

Figure 26: Sectoral productivity growth (Percent)



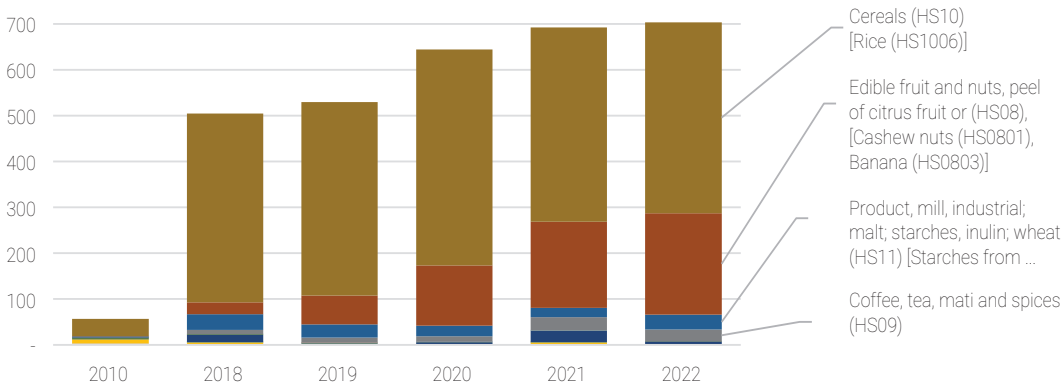
Source: Author's calculation based on MEF rebased data, NIS employment data

Figure 27: Employment share (Percent)



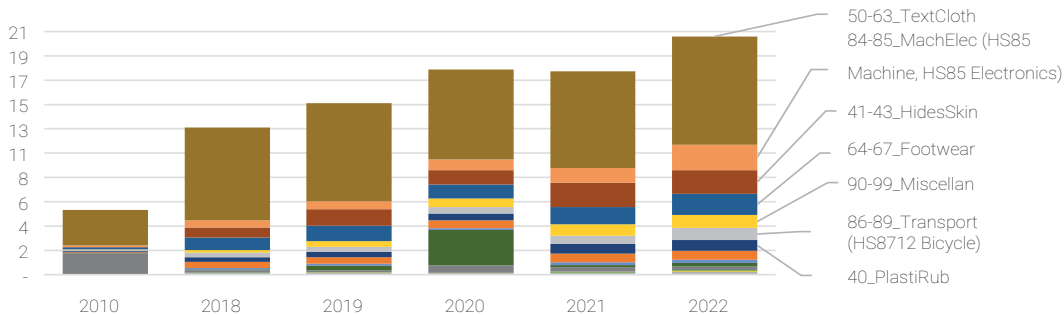
Source: Author's calculation based on MEF rebased data, NIS employment data

Figure 28: Export of agricultural products in million USD



Source: World Bank's WITS-HS1988/9

Figure 29: Cambodia manufacturing export in billion USD



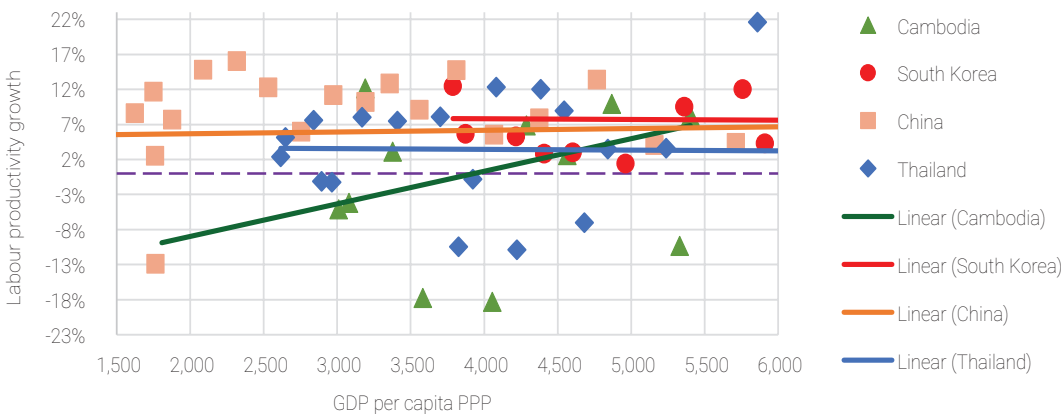
Source: World Bank's WITS-HS1988/92

Figure 30: Cross-countries productivity growth in agriculture (Percent)



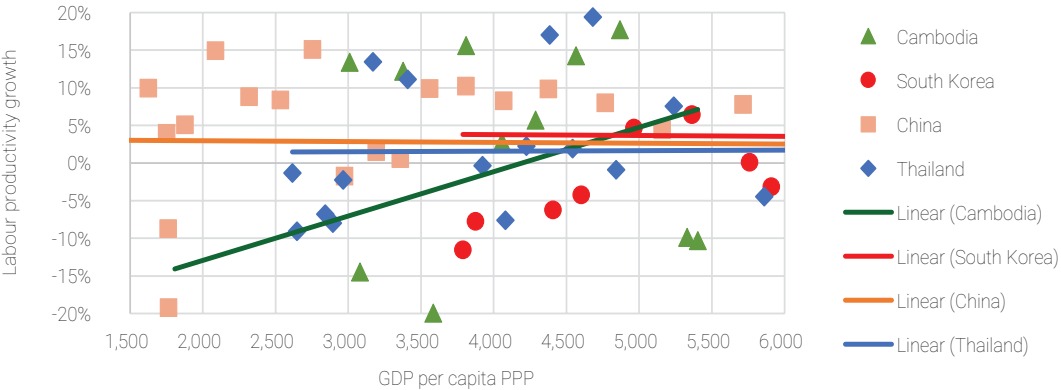
Source: Author's Calculation from ETD and Cambodia's Rebased Data

Figure 31: Cross-countries productivity growth in manufacturing (Percent)



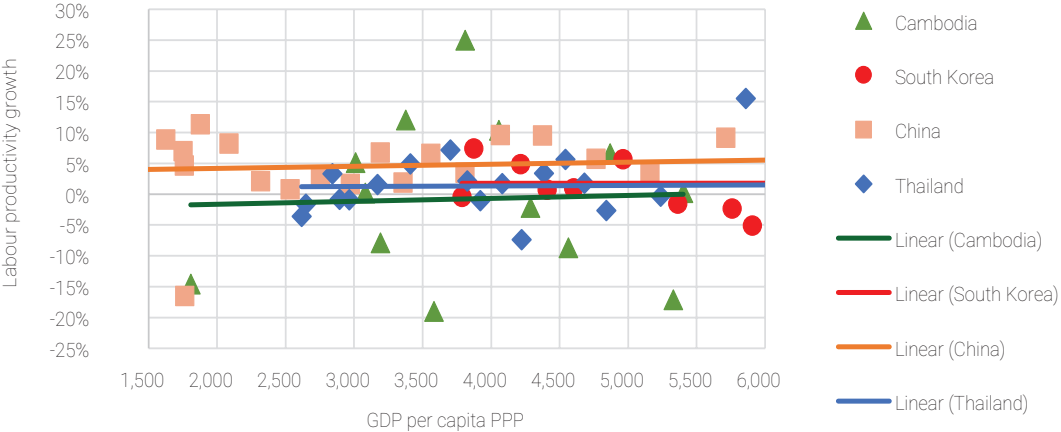
Source: Author's Calculation from ETD and Cambodia's Rebased Data

Figure 32: Cross-countries productivity growth in non-manufacturing (Percent)



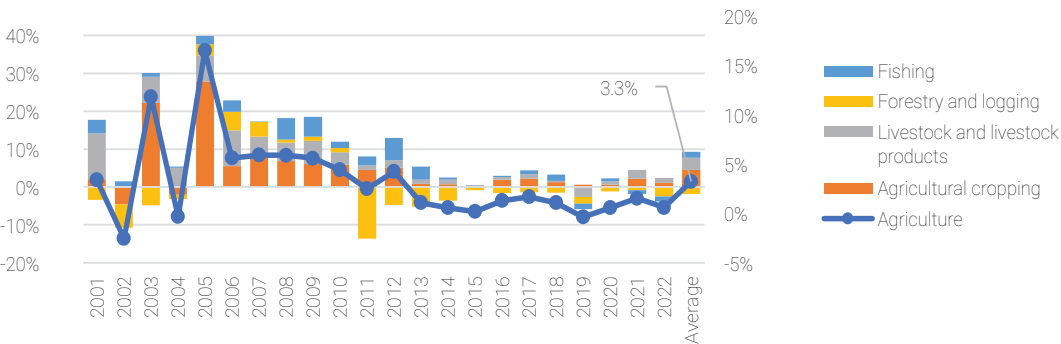
Source: Author's Calculation from ETD and Cambodia's Rebased Data

Figure 33: Cross-countries productivity growth in service (Percent)



Source: Author's Calculation from ETD and Cambodia's Rebased Data

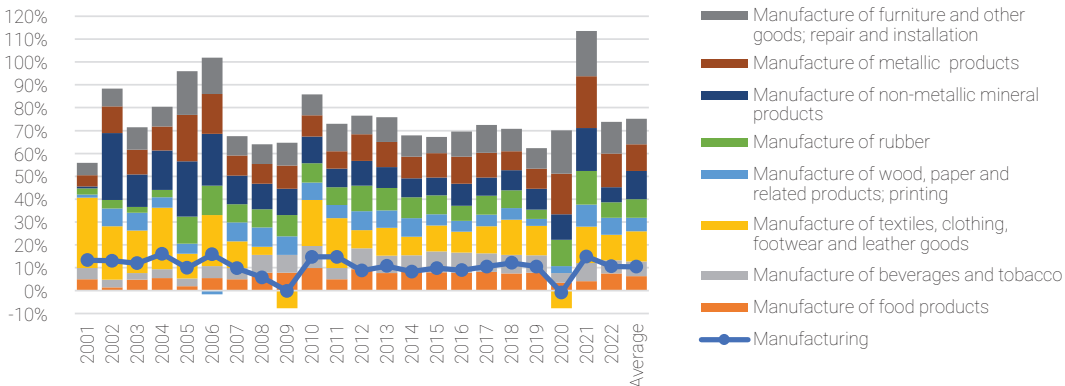
Figure 34: Annual growth rate of agriculture sub-sectors (Percent)



Source: Author's calculation based on MEF rebased data (Constant price 2014)

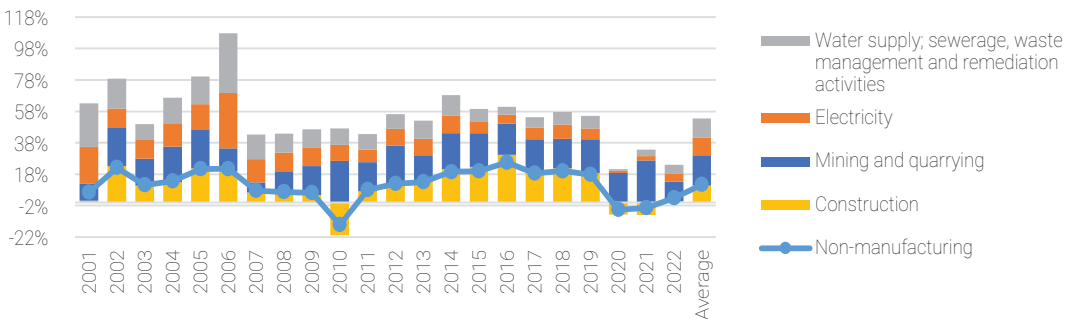


**Figure 35: Annual output growth rate within manufacturing**



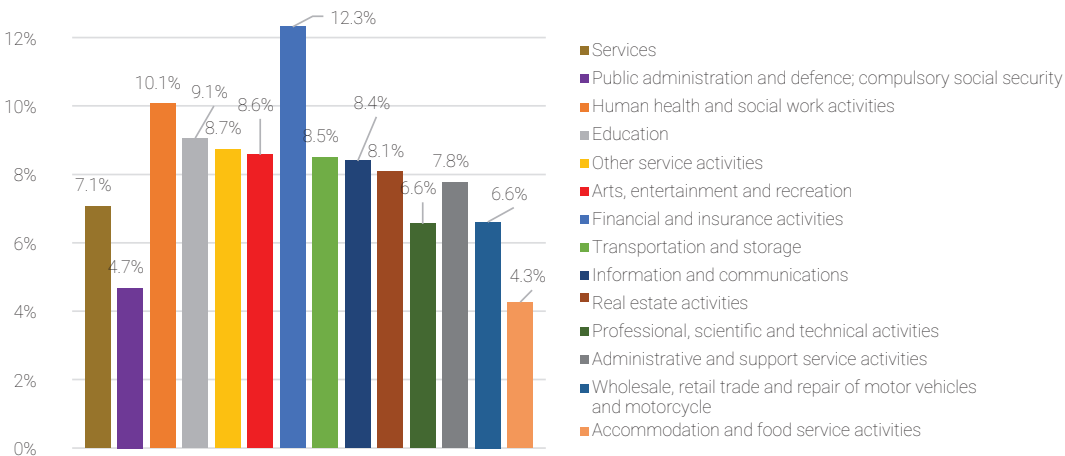
Source: Author's calculation based on MEF rebased data (Constant price 2014)

**Figure 36: Annual growth rate within non-manufacturing**



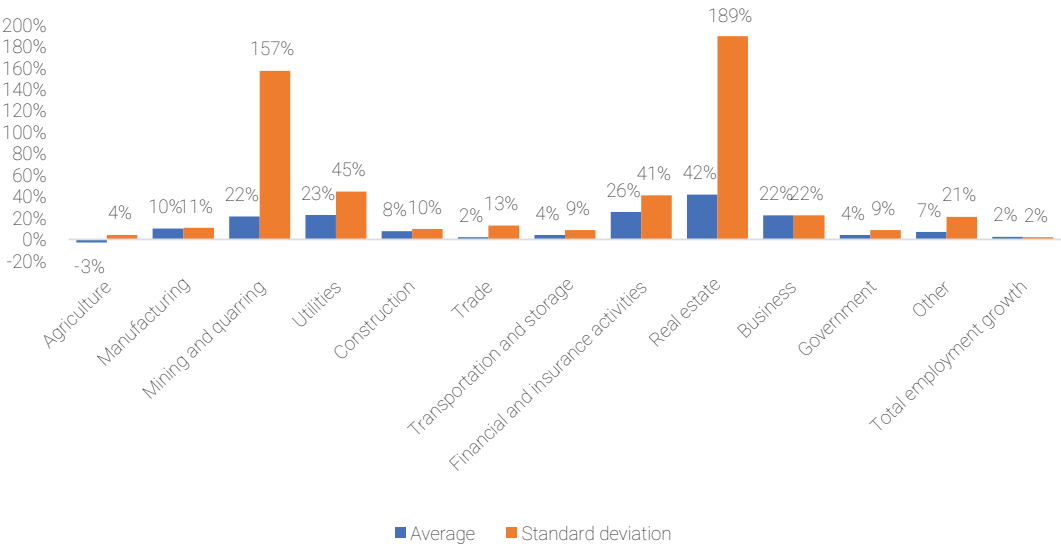
Source: Author's calculation based on MEF rebased data (Constant price 2014)

**Figure 37: Average growth rate of service sub-sector: 2000-2022**



Source: Author's calculation based on MEF rebased data (Constant price 2014)

Figure 38: Average employment growth rate 2008-2021 (Percent)



Source: Author's calculation based on MEF rebased data

## Appendix 2: ISIC Rev 4.0 classification of economic activities

NIS classifies economic activities based on the ISIC. Recently, Cambodia has modified from ISIC Revision 3 to ISIC Revision 4. NIS adapted ISIC Rev 4 into CISIC by classifying economic activities into sections, divisions, groups, classes and items. Recently, most of Cambodia's available statistical reports still followed ISIC 3 since Cambodia is in the process of rebasing its GDP and transforming ISIC Rev 3 to ISIC Rev 4.

In this study, the sectoral output and employment are based on the official statistics of the reported format of NIS on its national account. These sectors include "A. Agriculture", "B. Mining and Quarrying", "C. Manufacturing", "D. Electricity", "E. Water Supply; Sewage, Waste Management and Remediation Activities", "F. Construction", "G. Wholesale and Retail Trade, Repair of Moto Vehicles

and Motorcycles", "H Transportation and Storage", "I. Accommodation and Food Service Activities", "J. Information and Communication", "K. Financial and Insurance Activities", "L. Real Estate Activities", "M. Professional Scientific and Technical Activities", "N. Administrative and Service Support Activities", "O. Public Administration and Defense; Compulsory Social Security", "P. Education", "Q. Human Health and Social Work Activities", "R. Arts, Entertainment and Recreation", "S. Other Activities", "T. Activities of households as employers of domestic personnel", "U. Activities of extraterritorial organizations and bodies" (NIS, 2012). GGDC grouped these 21 sectors into only 12 sectors as follows: "A. Agriculture", "B. Mining", "C. Manufacturing", "D+E. Utilities", "F. Construction", "G+I. Trade Services", "H. Transport Services". "J+M+N. Business Services", "K. Financial Services", "L. Real Estate", "O+P+Q. Government Services", "R+S+T+U. Other services".

### Appendix 3: Productivity growth decomposition method

The structural change also affects labour productivity. The total labour productivity or economy-wide productivity is

$$\frac{VA}{L} = \frac{\sum_{i=1}^n VA_i}{L} = \frac{L_1}{L} \times \frac{VA_1}{L_1} + \frac{L_2}{L} \times \frac{VA_2}{L_2} + \dots + \frac{L_n}{L} \times \frac{VA_n}{L_n}$$

$$y = \frac{\sum_{i=1}^n VA_i}{L} = \theta_1 \times y_1 + \theta_2 \times y_2 + \dots + \theta_n \times y_n \quad (1)$$

Where  $y$  is aggregate labour productivity and  $y_i$  and  $\theta_i$  is sectoral labour productivity and employment share. Subscript  $i$  represents sectors.

By using (1) above, we can rewrite as below:

$$\frac{VA}{L} = \frac{\sum_{i=1}^n VA_i}{L} = \frac{L_1}{L} \times \frac{VA_1}{L_1} + \frac{L_2}{L} \times \frac{VA_2}{L_2} + \dots + \frac{L_n}{L} \times \frac{VA_n}{L_n}$$

$$P = \frac{VA}{L} = \frac{\sum_{i=1}^n VA_i}{L}$$

$$= \sum_{i=1}^n \frac{L_i}{L} \times \frac{VA_i}{L_i} = \sum_{i=1}^n (S_i \times P_i) \quad (2)$$

Where  $P$  is labour productivity and  $S$  is the share of employment. By applying the differentiation for two different time periods (from  $t=0$  to  $t=1$ ) where  $\Delta P = P_1 - P_0$  and  $P_0$  is aggregated productivity in period  $t=0$  and  $P_1$  is aggregated productivity in period  $t=1$ . We obtain the following:

$$\frac{\Delta P}{P_0} = \sum_{i=1}^n \left[ \frac{P_{i0}}{P_0} \Delta S_i + \frac{\Delta P_i \Delta S_i}{P_0} + \frac{S_{i0} \Delta P_i}{P_0} \right]$$

$$= \sum_{i=1}^n \left[ \frac{P_{i0}}{P_0} \Delta S_i + \frac{P_{i0}}{P_0} \frac{\Delta P_i}{P_{i0}} \Delta S_i + \frac{P_{i0}}{P_0} \frac{\Delta P_i}{P_{i0}} S_{i0} \right] \quad (3)$$

Where subscript  $i$  represents sector.  $\frac{P_{i0}}{P_0}$  is the relative productivity ratio of each sector to aggregated productivity in period  $t=0$ . This ratio is greater than 1 if sectoral productivity is higher than that of aggregated productivity and less than 1 suggests the opposite.  $\Delta S_i$  is the change in sectoral employment share between periods  $t=0$  and  $t=1$ , it is positive if the sector experiences increasing employment share and negative if the sector experiences decreasing employment share.  $\frac{\Delta P_i}{P_{i0}}$  represents sectoral productivity growth between periods  $t=0$  to  $t=1$ .  $S_{i0}$  represents sectoral employment in period  $t=0$ .

In equation (3), the first term is the contribution of change in labour reallocation between sectors. If labour employment increases in high-productivity sectors, this term will be positive. The second term is the interaction between change in productivity and change in labour employment. This term is positive if the productivity-growing sector also employs more workers. The third term is productivity growth within each sector or intra-sectoral productivity growth. Wong (2016) grouped items 1 and 2 in equation (3) as inter-sectoral effect, while item 3 is called intra-sectoral effect. Item 1 is named as "static sectoral effect" and item 2 is named as "dynamic sectoral effect".

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