



## Policy Gaps with Bangladesh Compared to a Few Asian Economies along the Linear Stages Growth Path

M. Aminul Islam Akanda\*

Department of Economics, Comilla University, Bangladesh. Email: [akanda\\_ai@hotmail.com](mailto:akanda_ai@hotmail.com)

Received: 10 May 2022

Accepted: 16 August 2022

DOI: <https://doi.org/10.32479/ijefi.13194>

### ABSTRACT

This study evaluated growth experiences and identified policy gaps with Bangladesh compared to a few advanced Asian countries. It used secondary data over 120 years in retrospect along with projection to some extent. Whether would Bangladesh be able to enter into subsequent stages along linear stages growth model was a major research question. Bangladesh entered into the third of five stages in the early 1990s. On the other hand, Malaysia reached at the fourth and South Korea at the fifth stage. Bangladesh was too envisioned to reach at peak within 20 years with creative industries and demographic dividend. Some industrial conglomerates and new industries were expanded here in the 2000s. This economy would soon enter into fourth stage satisfying stage-specific indicators like two other economies. It had some policy gaps identified through comparison of stage-specific policies and strategies with others. However, its government, in the second perspective plan (2021-2041), emphasized on ICT based product-innovation and job creation in industry 4.0. Major challenges to moving forward in here was to reducing gaps between planned and actual development.

**Keywords:** Growth Models, Rostow's Stages, Development Policy, Vision 2041 Bangladesh, South Korea, Malaysia

**JEL Classifications:** N0, O1, O5

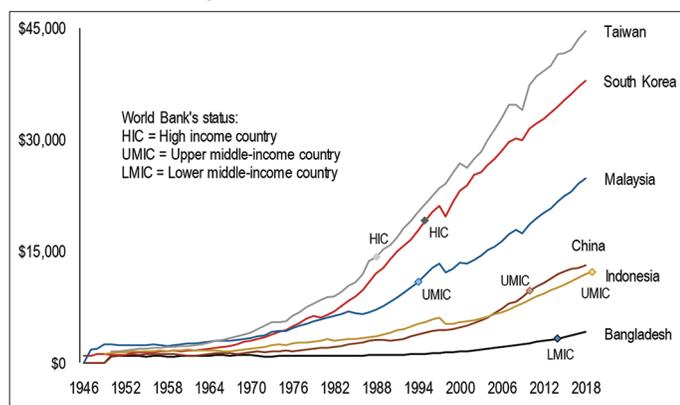
### 1. INTRODUCTION

Bangladesh, from its ancient times, was a high densely populated area suitable for agrarian production. It had long history of invasions, colonialization and deprivation prior to the independence in 1971 (Akanda, 2015). This newborn country was included into the least developed countries (LDCs) in 1975, which already met the LDC graduation criteria in 2018 (UN-DPAD, 2020). Bangladesh economy experienced high growth rate over 8% at the end of 2010s with macroeconomic stability and medium human development (MOF, 2020). Meanwhile, the government took vision-based development initiatives in 2009 and already digitalized the system (BPC, 2020). Question remains on whether would this (lower) middle-income country be able to transform into a high-income one as of the set vision 2041.

There were some East Asian economies experienced rapid growth, which were categorized into Asian four tigers (Hong

Kong, South Korea, Singapore and Taiwan), newly industrialized economies (Indonesia, Malaysia and Thailand) and rapid growing China (WB, 1993). Bangladesh was compared with a few economies in terms of per capita income and economic status in retrospect, which is shown in Figure 1. With almost identical per capita GDP (gross domestic product) in the 1950s, a few countries advanced into UMIC and HIC status. Notably, LIC, LMIC, UMIC and HIC are acronyms of the World Bank's categories of the low, lower middle, upper middle and high-income countries (WB, 2021). However, foreign investment, human capital and export growth fueled for rapid industrial maturity of advanced countries (Baldwin et al., 2001). Though Bangladesh lagged in industrialization at large, its high economic growth enabled to self-investing in some giant infrastructure projects (MOF, 2020). It came ahead of the LDCs in global indices and many indicators of the MDGs (Akanda, 2015). The policy changes in Bangladesh on the way to its progress could, however, be compared with a few advanced economies in Asia.

**Figure 1:** Per capita real GDP at 2011\$ and the latest status of Bangladesh and a few Asian countries



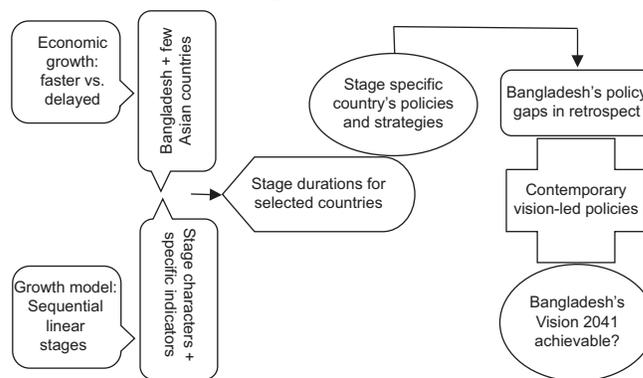
Sources: Bolt and Zanden (2020); WB (2021)

Some researches on Bangladesh economy explored long-term growth factors (Asadullah et al., 2014; Akanda, 2015; Quibria, 2019). Some others studied on its total factor productivity (TFP) growth (Mujeri, 2004; Baier et al., 2006; Ahmed and Chowdhury, 2017). However, empirical models with time series data could not establish linear relations with policy changes. Mujeri (2004) divided so far progress of Bangladesh into four phases as the reconstruction amidst political turbulence (1971-1982), slow economic growth with growing macroeconomic instability (1983-1990), crisis driven economic reforms and formulation of initial condition state (1991-1996) and higher economic growth and faster social development (1997-2007). The contemporary phase might be recognized as the growth acceleration with vision-based big push in public structures. Such a phasing out was not, however, farmed into the growth path of eminent theories in economic development.

However, growth models were applied in growth accounting in many studies, among which Rao and Hassan (2011) measured TFP growth rate of Bangladesh and its determinants with Solow's exogenous growth model and its subsequent extensions. Earlier, growth scenario in here was explained with the Lewis model and Lewis turning point (Bairagi and Kamal, 2019). Moreover, recent research brought all development theories from classical to modern school together (Barai, 2020). It was not exclusive to applications with empirical evidences for Bangladesh economy. However, it was not possible to make a cross-country comparison in single study. A few growth models showed growth path into successive stages in the way of turning into the HIC and developed country (Glawe and Wagner, 2016). In a growth accounting for some Asian economies, Pakrashi and Frijters (2017) used the take-off concept, which was dissimilar to sequential stages of the Walt Whitman Rostow's model. In this regard, a comparative study along identical stages of a simple and common model, as shown in Figure 2, would be a better conceptual framework.

The countries over the world used to have differential growth pattern with unequal durations in the stages along growth path. Here, some stage-specific indicators would make such cross-country comparison visible. The growth path of Bangladesh could be compared in retrospect with a few Asian fast-growing

**Figure 2:** Conceptual framework of the study



countries. Subsequently, policy gaps would be determined in comparison with stage-specific development policies and strategies of selected countries. Bangladesh's journey towards the vision 2041 might be smoother with internalization of policy gaps into contemporary efforts. In this regard, there was enough scope to relate all achievements and prosperities with its policy direction. Here, perspective progress of Bangladesh economy was assumed smooth for its ninth strongest position among 66 emerging economies in the wake of Covid-19 pandemic as of a report in the Economist (ICLDS, 2021).

This research aimed to identify development phases of Bangladesh economy in retrospect and prospect compared to a few other countries crossed earlier. The specific objectives of this study were (i) to identify growth stages of Bangladesh and a few selected countries in retrospect, (ii) to identify the prospects and policy gaps with Bangladesh compared to respective policies of other countries (iii) to evaluate whether Bangladesh be able to complete subsequent stages heading with imminent challenges.

This paper was organized into five sections following the introduction. Section 2 described methodology. The results and discussion were presented into two sections. The growth stages of selected countries along a growth model were sketched in section 3. Section 4 narrated the prospect, policy gaps and challenges with Bangladesh economy heading to at the HIC status as of the vision 2041. Last of all, conclusion along with a few directions for future research was stated in section 5.

## 2. METHODOLOGY

This study compared the progress of Bangladesh economy with a few advanced Asian economies assimilating into an identical path as of a growth model. Subsequently, policy gaps with Bangladesh were identified comparing retrospective policies and strategies of selected countries.

### 2.1. Selection of Countries

South Korea and Malaysia were selected as advanced Asian countries for some reasons presented in Table 1. These countries seem unequal in economic, institutional and governance structures at present. However, they had comparable episode with colonial rule and agrarian economy. Moreover, they had almost similar

level of per capita income in 1961, which was remained below the LIC ceiling set in 1978. However, each economy had a unique development pattern from almost identical shapes even in the 1950s. South Korea lately turned into HIC among four Asian tigers and Malaysia was early advanced among four ASEAN advanced countries (WB, 1993; 2020).

## 2.2. Selection of Development Model

Development theories, either with static or dynamic notion, were grouped into classical development views, neoclassical theories and contemporary theories (Barai, 2020). Of them, Rostow's growth model explained growth path into successive five linear stages both with qualitative and quantitative measures (Rostow, 1959). There are two other five-stage models namely Kenichi Ohno's stages of catching-up industrialization and Masahiko Aoki's phases of economic development, which lacked a deeper theoretical or mathematical foundation (Glawe and Wagner, 2016). Moreover, economies of the world were phased out into five stages in the global competitiveness report 2001-2002,

which was obsoleted in 2018 (WEF, 2002; 2018). In this regard, this study was bounded within Rostow's growth model, which was the linear stages classical model well accepted for several decades. Though it was imperfect somehow as too mechanic, stage-specific indicators here could sketch differential progresses of selected countries into similar path. Moreover, policies and strategies during their respective stages could ascertain policy gaps with Bangladesh.

## 2.3. Defining Indicators for Rostow's Growth Stages

This section defined characteristics and indicators for five sequential stages of Rostow's model, which are presented in Table 2. The growth stages in here were (i) traditional society, (ii) preconditions for take-off, (iii) take-off, (iv) drive to maturity and (v) age of high mass consumption. Here, traditional society was defined as an agrarian labor-intensive subsistence economy. It was understood that agricultural production first would take-off as a precondition for industrial take-off and industries would take-off with one leading industry, which would subsequently

**Table 1: Reasons behind selection of countries to compare progress of Bangladesh**

Countries	Reasons behind selection			
	Share of agriculture	Per capita income	Colonial legacy	Development status
	(% of GDP; in 1961)	(In US\$; in 1961)	(period)	(WB country status)
South Korea	38.68	94	1910-1945	HIC, since 1993
Malaysia	45.38	226	1867-1945	UMIC, since 1992
Bangladesh	57.99	98	1757-1947	LMIC, since 2015
Similarity?	Agro-based economy in early 1960s	< LIC ceiling set in 1978	Colonial rule until the 1940s	Unique shapes from almost identical ones

Sources: WB (1978, 1993, 2021)

**Table 2: Stages, characteristics and indicators of the stages in Rostow's model**

Stages	Characteristics	Indicators	Notation
Traditional society	a. Limited production function	Use of chemical fertilizer	Ya/Y
	b. Agrarian labor intensive subsistence economy	Share of agriculture in GDP	Ea/E
	c. Society ruled by wealthy elites	Share of farm employment	
Preconditions for take-off	a. External encouragement towards high productive farming	Feudalism over landownership	Gs.a
	b. Low level expansion of industries	Number of extension worker	Qc.hyv
	c. Building social overhead capital	Rice yield	Yi/Y
		Share of industries in GDP	Go
Take-off	a. Net investment >10% of GNI	Public spending on transports and communication	
	b. Rapid industrialization emerging with lead industry	Number of rail engines and coaches	I/Y
		Rate of net investment	Yi/Y
	c. Develop modern political and economic institutions	Share of industries in GDP	Yi.j/Yi
		Share of leading industry	
Drive to maturity	a. Industrial diversification with new leading industries	Pragmatic national mindset	
		Financial system reform	Yi.j/Yi
	b. Skilled and professional workers in all sectors	Sectoral share of industries	Qm&t/Mfg
		Production of durables (machinery and transport)	* HCI
	c. Improved consumption with higher per capita income	Human capital index	Ea/E
		Share of farm employment	Y/N
Age of high mass consumption	a. More public spending for social welfare and security	Per capita income	C/Y
	b. Intensify production of durable consumer goods	Share of final consumption	Gw/G
		Share of public social spending	* Cd/C
		Retail sales index of durables	*
	c. Develop new products as competitive to world market	World Bank's HIC status	Gr/G
	Share of spending on RandD	*Xht/X	
	Export of high-tech products		

Sources: Rostow (1959); Kim (2016) and author's view from characteristics of the stages. Note 1: (\*) was used with notation for each indicator of present day. Note 2: Capital letter notations; Y = Gross domestic product, C = final consumption, E = employment, N = Population, G = government spending, I = investment, Q = output produced and Mfg = manufacturing output. Note 3: Small letter notations; a = agricultural, c = crops, d = durables, hyv = high yielding varieties, i = industrial, m&t = machinery and transport, o = overhead social, r = research and development, s = subsidies and incentives and w = social welfare.

move towards maturity with taking-off of some new industries. Here, a few quantitative indicators of present day were added over conventional indicators (Rostow, 1959; Kim, 2016) relevant to the notion and characteristics of different stages in the model.

#### 2.4. Data Sources and Analyses

This research used secondary data of South Korea, Malaysia and Bangladesh in retrospect. The data related to the SDGs (sustainable development goals), WDI (world development indicators) and LDC was collected from reports and websites of Bangladesh government, Bangladesh Planning Commission, World Bank and other UN agencies. In addition, historical data was gathered from journal articles, books and institutional websites of three countries. Relevant historical data of indicators and related events were sketched into graphs, with which Rostow's growth stages were separated for selected countries. Moreover, the outlook of Bangladesh to entering next stage was measured as a comparison of retrospective stage-specific indicators of South Korea and Malaysia. Here, a few forecasts on Bangladesh economy were used to recognize its impending status. Moreover, its policy gaps was made visible in a graph of stage-specific policies and strategies of selected countries. Lastly, the challenges with Bangladesh to reach at the HIC status were explored through a review of perspective policies.

### 3. THE SKETCH OF ROSTOW'S GROWTH STAGES FOR SELECTED COUNTRIES

This sub-section sketched growth pattern of South Korea, Malaysia and Bangladesh into Rostow's growth stages, which are presented respectively in Figures 3-5 and is summarized in Figure 6. Subsequent discussion is based on the data as of the sources with figures. Some of the notations like "MT" for metric ton, "ha" for hectare, "E&C" for engines and coaches, "M&L"

for medium and large, "M" for million and "b" for billion were used inside the figures.

#### 3.1. Rostow's Growth Stages for South Korea

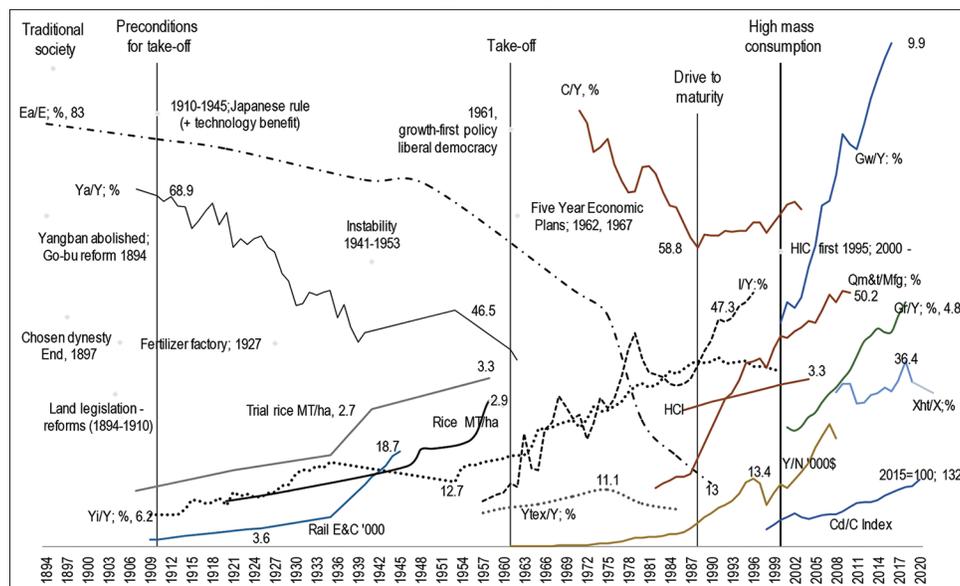
##### 3.1.1. South Korea: Traditional society (until 1909)

South Korea was an agrarian economy with over 80% of workforce in agriculture in the nineteenth century. An agrarian reform in 1894 led to abolishing the Yangban, a feudal capitalist ruler group, and the feudalistic control over land ownership was ended. Moreover, other reforms measures with land legislation were continued over the early 1900s. Agriculture sector employed about 80% of workforce with its 69% share to the GDP in 1909. This economy had a turning point towards advancement with technological benefit after Japanese occupancy in 1910. In this regard, South Korean economy until 1909 could be recognized as the traditional society.

##### 3.1.2. South Korea: Preconditions for take-off (1910-1960)

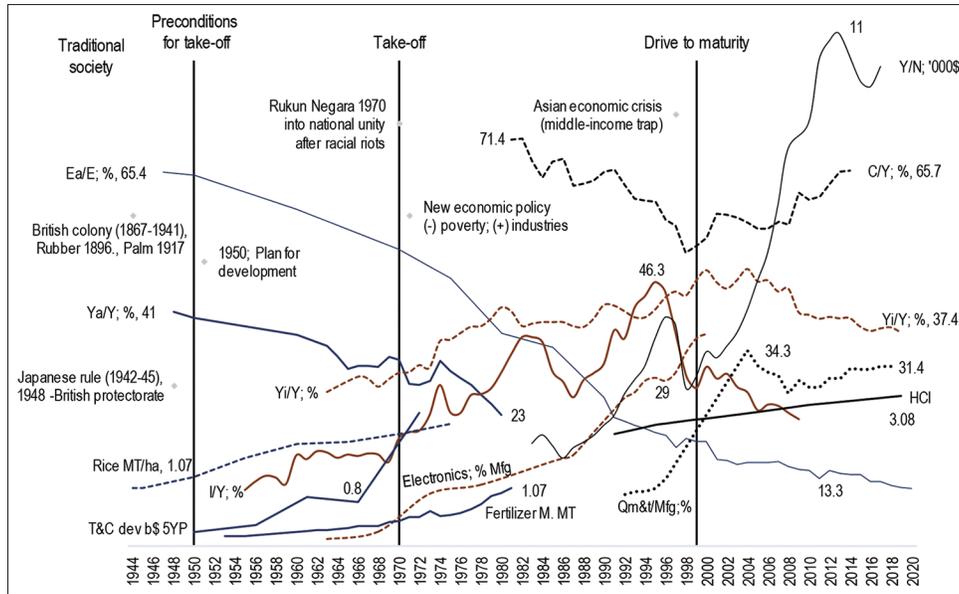
South Korean government encouraged high productive rice farming with HYV and irrigation in the 1910s. It was demonstrated in farmers' field with a per hectare yield of 1.5 MT in 1921, 2.7 MT in 1941 and 3.3 MT in 1958. Here, a fertilizer factory was first established in 1927. Notably, rice yield was increased from 0.9 MT/ha to 2.9 MT/ha during 1920-1958. Moreover, public spending on transports and communication was also increased, which was reflected in increasing the number of rail engines and coaches from 1,304 to 18,690 during 1909-1945. Meanwhile, industrial share to the GDP had a large increase from 6.2 to 21.1% during 1910-1937, which subsequently came down to 12.7% in 1953 due to political instability and war during 1941-1953. However, agricultural production increased much along with a slow economic recovery until the late 1950s. South Korea could fulfill the preconditions for take-off during 1910-1960.

Figure 3: Rostow's growth stages for South Korea



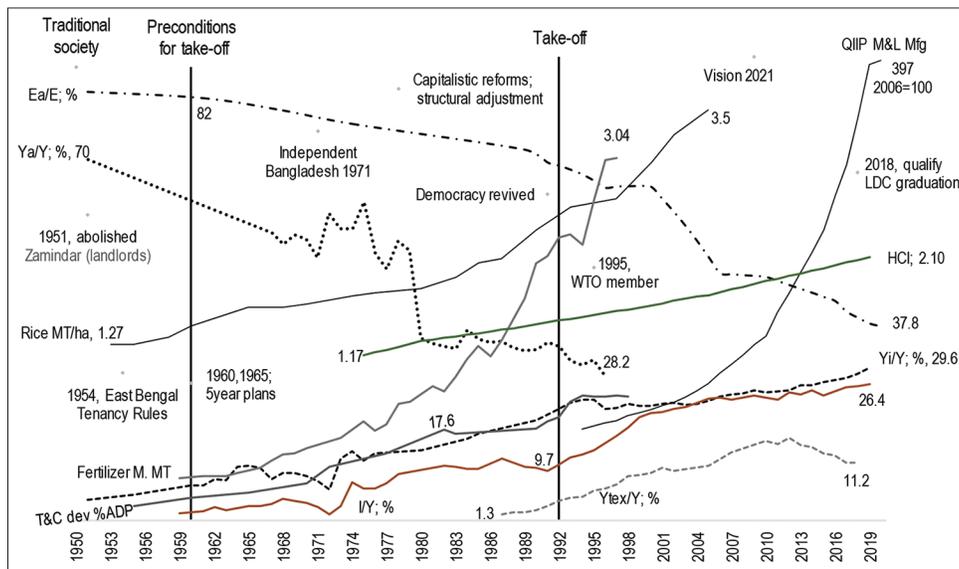
Sources: Booth and Deng (2017); Cha (2008); Feenstra et al. (2015); Kim (2012); Kim et al. (2012); KOSIS (2021); Mizoguchi (1979); WB (2021)

**Figure 4: Rostow's growth stages for Malaysia**



Sources: Barker, et al. (1985); EPU (2021); Feenstra et al. (2015); Lim (1987); Rasiah (2015); Rudner (1972); Timmer (2020); WB (2021)

**Figure 5: Rostow's growth stages for Bangladesh**



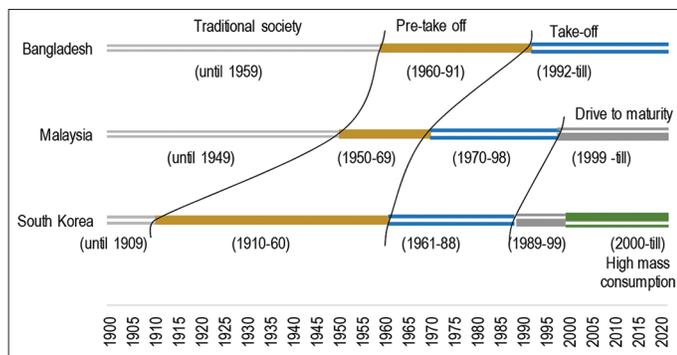
Sources: Ahmad (1972); BBS (1990); Chowdury and Zulfikar (2001); Falcon and Gotsch (1966); IFASTAT (2021); MOF (1999, 2006, 2013, 2020); Feenstra et al. (2015); WB (2021)

**3.1.3. South Korea: Take-off (1961-1987)**

South Korea came near to the take-off in the 1940s, which was worn-out after ending of Japanese occupancy. It was progressed later under a new leadership of pragmatic mindset into development in 1961. The government implemented first (1962-1966) and second (1967-1971) five year plans with growth-first and export-driven strategies. Industries accounted for 17.9% to the GDP in 1961 of which textile and clothing, as a lead manufacturing, alone had 7.5%. Its share to the GDP increased to 11.1%, in which manufacturing had 23% contribution in 1975. Moreover, electronics and machineries turned into emerging industries in the 1970s. Net investment was enlarged from around 10% of the GDP in 1960 to over 35% in 1988 with investment securities growing in here. The planned initiatives enabled South Korea to take-off during 1961-1987.

**3.1.4. South Korea: Drive to maturity (1988 – 1999)**

Industrial share to the GDP was peaked at 36.6% in 1988 and was not likely increased thereafter. However, machineries and transports were emerged as new leading durable industries. There was an upward trend in final consumption from 58.8 to 63.7% of the GDP during 1988-1999, which was earlier dropped from 83.2% in 1972. The production of machineries and transports was boomed during 1987-1999 rising its share from 14.3 to 38.9% in all manufacturing. Meanwhile, farm employment came down to 12.5% of total employment in 1989. Moreover, human capital index (HCI) was high enough, with a rise from 2.80 to 3.16 during 1989-1999, to offer skilled and professional workers in all sectors. Moreover, per capita income, at 2011 price, was increased to \$13,403 in 1996, which enabled people to consume durables even

**Figure 6:** Rostow's growth stages for South Korea, Malaysia and Bangladesh

Sources: Previous figures of this section

after a depression until 1999. Accordingly, South Korea admitted its drive to maturity during 1989-1999.

### 3.1.5. South Korea: Age of high mass consumption (2000-till)

South Korea remarkably raised her social welfare spending in the 2000s, which crossed 10% of the GDP in 2017 from 4.4% in 2000. An increase in the retail sales index of durables from 53 to 132 indicated upswing consumption during 2000-2020. It was obvious that consumers here could easily afford mass of durable items. Moreover, efforts for developing new products were evidenced from an increased spending on research and development from 2.2 to 4.8% of the GDP during 2001-2018. The export consisted of 32.2% of high-tech products in 2007 and remained high thereafter. In this regard, South Korea, with its high competitiveness in the world market, entered into an age of high mass consumption in 2000.

## 3.2. Rostow's Growth Stages for Malaysia

### 3.2.1. Malaysia: Traditional society (until 1949)

Malaysia was a British colony during 1867-1941, which was later occupied by Japan for 3 years. The British introduced a few commercial crops like rubber and palm in this agrarian economy during 1896-1917. It had a very low agrarian output reflected from rice yield as low as 1.07 MT/ha in 1944. The agriculture contributed 41% to the GDP and employed 65% of workforces in the late 1940s. However, people were motivated towards development with indigenous efforts belonging to British protectorate since 1948. This economy until 1949 was recognized as the traditional society.

### 3.2.2. Malaysia: Preconditions for take-off (1950-1969)

Federal government of Malaysia introduced five-year plan in 1950. The draft development plan (1950-55) aimed to build-up economic and social infrastructures in order to expand public sector services. This planned initiative was continued thereafter, too. The development of transport and commutation was prioritized with increased allocation from 0.11 to 0.88 b\$ in three development plans during 1950-1965. Meanwhile, rice yield was increased to 2.2 MT/ha might be for using fertilizer that was raised from 0.01 million MT in 1955 to 0.31 million MT in 1969. Malayan net investment accounted for 9.8% of the GDP in

1955 before this protectorate to become an independent nation. However, development consensus was not built among mixed-nationals earlier than an inter-racial riot in 1969. In this regard, Malaysian economy remained in the preconditions for take-off stage during 1950-1969.

### 3.2.3. Malaysia: Take-off (1970-1998)

A national unity was brought after racial riots through a national declaration named *Rukun Negara* in 1970. Subsequently, poverty reduction and industrial development were highlighted in the new economic policy of Malaysia. Its industrial share to the GDP gradually increased thereafter and reached to 44.6% in 1997. Electrical and electronics industry was expanded in the early 1970s, which became a lead industry contributing more than one-third to manufacturing in the late 1990s. The net investment as share of the GDP was peaked at 46.3% in 1995 from 14.7% in 1969. This investment ratio was dramatically dropped to 29.9% of the GDP in 1998 during the Asian economic crisis. Malaysia thus experienced the take-off during 1970-1998 and subsequently moved ahead with new industries.

### 3.2.4. Malaysia: Drive to maturity (1999-till)

Industrial stake in Malaysia was peaked in 2004 with 48.5% share in the GDP that subsequently dropped for a few years. The machineries and transports, as new leading industries, contributed for 34.3% in manufacturing sector in 2004. Final consumption as a share of the GDP came down to 51.3% in 1998 from 71.4% in 1982, which was reversed again to 65.7% in 2016. Meanwhile, share of agriculture employment came down to 18.4% in 1999. Moreover, human capital index (HCI) was increased from 2.57 to 3.08 during 1999-2020. Per capita income gradually increased to \$4,799 in 1996 at 2011 price, which had a slowdown until 2003 and raised thereafter to \$10,970 in 2013. Malaysia, with industrial diversification, could keep sufficient income for improved consumption and remained in the drive to maturity stage since 1999.

## 3.3. Rostow's Growth Stages for Bangladesh

### 3.3.1. Bangladesh: Traditional society (until 1959)

Agrarian economy of the East Bengal was under British regime (1757-1947), where farmers used to cultivate land as tenants under the Landlord system. Land ownership was gradually transferred to farmers after issuing the East Bengal tenancy rules in 1954. Agriculture sector contributed for 70% to the GDP and employed more than 80% of workforce in 1951. The yield of rice, a staple food, was as low as 1.27 MT/ha in 1953, which remained low in the 1950s for not using fertilizer. Bangladesh economy, of then East Pakistan, until 1959 could be recognized as the traditional society.

### 3.3.2. Bangladesh: Preconditions for take-off (1960-1991)

The Pakistan government adopted and implemented two 5-year plans for the East Pakistan in the 1960s. However, Bangladesh, after its independence, had to run first with post-war reconstruction policy. Subsequent political turmoil ruined its initiatives of planned development. Fertilizers consumption was increased from 0.01 to 2.04 million MT during 1960-1990 while rice yield was increased from 1.45 to 2.36 MT/ha. Transport and commutation sector was allocated

2.8% of development spending in 1955, which was increased to 7.2% of annual development program (ADP) in 1970 and to 19.2% in 1991. However, development consensus was not achieved during military-led administration during 1975-1990. Bangladesh was in the stage of preconditions for take-off during 1960-1991.

### 3.3.3. Bangladesh: Take-off (1992-till)

Bangladesh experienced a democratic revival in 1991. Subsequently, an initial condition state was shaped in the mid of 1990s. Net investment was increased to 26.4% of the GDP in 2019 from it was 9.74% in 1991. Industrial contribution to the GDP increased from 21.7 to 29.6% during 1992-2019. The ready-made garments (RMG) emerged as a lead industry in the 1980s, which contributed for 2.8% to the GDP in 1991. Its contribution to the GDP was peaked with a share of 16.1% in 2012, which became relatively less contributive thereafter. However, the quantum index for industrial production (QIIP) for medium and large-scale industries was increased to 397 in 2020 from 47 in 1994 indicating an expansion of other industries. Bangladesh started the take-off stage in 1992 that was yet to end.

### 3.4. Summary of the Growth Stages for Selected Countries

Bangladesh embarked on the take-off after three decades of that was in South Korea. It was shown in Figure 6 that South Korea completed both take-off and drive to maturity stages in three decades. Malaysian take-off, on the other hand, endured around three decades against theoretic range of 20-30 years. However, Bangladesh remained in the take-off stage for more than three decades, which had over three decades lag off from South Korea. However, Bangladesh made remarkable socio-economic progress over the last two decades, continuation of which might shorten the length for subsequent stages. However, the interval for vision 2041 was short enough for this journey from late take-off to mass consumption society.

## 4. THE PROSPECT, POLICY GAPS AND CHALLENGES WITH BANGLADESH ECONOMY

How far Bangladesh to complete the take-off and following stages was a critical question. Present status of Bangladesh was compared

with key indicators of South Korea and Malaysia at their ending of take-off and entering into the maturity stages. Moreover, its road to achieving perspective goals was highlighted in here. In addition, non-appearance and ineffectiveness of mostly the take-off policies of South Korea and Malaysia were considered as the policy gaps with Bangladesh. An appraisal was also made over perspective plan and policies of Bangladesh for the challenges ahead.

### 4.1. Outlook of Bangladesh to Reach into Next Stages

The take-off was exposed as the most vital stage in which Bangladesh was lately belonged. Tentative length for take-off completion was identified comparing key indicators for South Korea and Malaysia at their ending of take-off. Similar comparison was made on the eve of their entering into the drive to maturity stage. Table 3 furnishes the present status of Bangladesh comparable to the level of ending the take-off and entering into the maturity stages for South Korean and Malaysia.

Bangladesh, in 2020, was near to the take-off level of South Korea in terms of net investment and industrial percentages to the GDP. It was near to initial level of Malaysian maturity stage in terms of human capital and per capita income. Meanwhile, Bangladesh raised consumption of durables from imports with inadequate domestic production of machinery and transport equipment. It was far-off reaching at the least level of consumption to enter into the maturity stage, which would be rising after continuous falling in take-off years. In this regard, Bangladesh was expected to enter into the maturity stage no later than the UMIC status to be attained in 2030. However, Bangladesh, with creative industries and demographic dividend was planned to reach at mass consumption status within 20 years. How the demographic dividend was linked to growth stages of other countries is presented in Figure 7. Here, this dividend period was calculated as 1985-2010 for South Korea, 2005-2035 for Malaysia and 2015-2045 for Bangladesh using data of the UN population division.

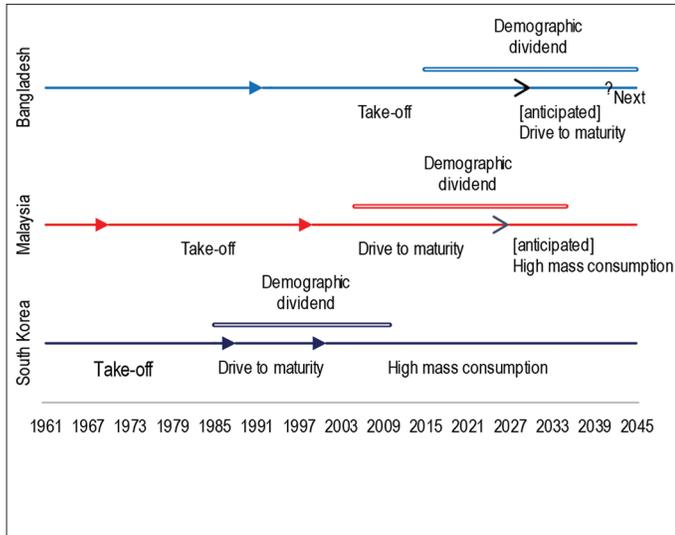
South Korea was found to avail this demographic dividend for the last three years of take-off that continued over the maturity stage and a few years in the age of mass consumption. Malaysia started to avail this benefit after five years of entering into the maturity stage. Malaysia was expected to cross its maturity stage in 2026, which was estimated from similar comparison like in Table 3

**Table 3: Current scenario of Bangladesh compared to south Korea and Malaysia at the ending of take-off and entering into next stage**

Stage	Indicators	Unit	South Korea	Malaysia	Bangladesh	Bangladesh
			(Ending take-off; Entering maturity stage)	(Ending take-off; Entering maturity stage)	(Year 2020)	(How far to reach at least data level)
Take-off	Net investment	% of GDP	32.9	46.2	26.4	Near
	Share of industries	% of GDP	35.9	43.9	29.9	Near
	Key industry share	% of GDP	6.5	9.8	11.2	Near
Drive to maturity	Durables industries (machinery and transport)	% of GDP	15.3	11.8	-	NA
	Farm employment	% of total	16	18.4	37.8	Near
	Human capital index	PWT data	2.8	2.6	2.1	Near
	Per capita income	Current \$	4,748	3,492	1,969	Near
	Final consumption (first fall, then rise)	% of GDP	58.8 Rising	52.6 Rising	74.8 Falling	Far

Sources: Feenstra et al. (2015); MOF (2020); Rasiah (2015); WB (2021)

**Figure 7:** Demographic dividend over growth stages of selected countries



Sources: Previous charts and author's calculation

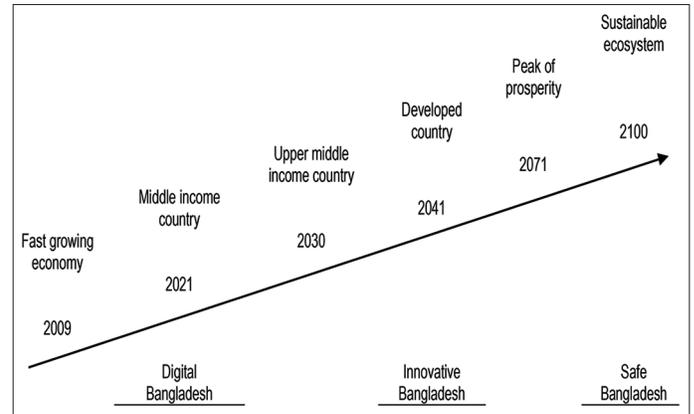
using its current data and end time data of Korean maturity. This dividend period would continue for the first few years in its mass consumption age. However, Bangladesh would spend around half of its dividend in the take-off stage, which was dissimilar to two other countries. However, it would be similar to advanced countries that already enjoyed or anticipated enjoying this dividend in the maturity stage. Question arises on whether would Bangladesh's drive to maturity stage be ended within dividend period. This emerging economy would be the world's 24<sup>th</sup> largest economy in 2033 as forecasted by a British consultancy firm. Moreover, the government of Bangladesh already set vision-led targets to achieve the HIC status by 2041 (ICLDS, 2021). So far progress along with long-term plans of Bangladesh is furnished in Figure 8.

Bangladesh, the fast growing economy since 2009, was capable of digitalization before 2021. It would turn into a UMIC with a growth trend similar to that of last decade after successful implementation of the SGDs. Meanwhile, Bangladesh government adopted second perspective plan for 2021-2041 to ensure a fast growth path to make her vision 2041 into a reality (BPC, 2020). Was this perspective plan prepared in light of the policies equitable to complete its maturity stage? Would it be successful in making skilled and professional human resources to ensure subsequent innovation-led growth? The road to its HIC status might be hampered in case of falling into an upper-middle income trap. Moreover, Bangladesh was envisioned to reach at the peak of prosperity in centenary year 2071 and to a safe delta in 2100 (ICLDS, 2021).

#### 4.2. Policy Gaps with Bangladesh and Challenges Ahead

Whether Bangladesh undertook policies similar to the respective stages of two other countries was brought out in here. Figure 9 furnished key policies and strategies of selected countries into their growth stages. It was noted that policy drives to industrialization along with strong development mindset were

**Figure 8:** Targets in the long-term plans of Bangladesh



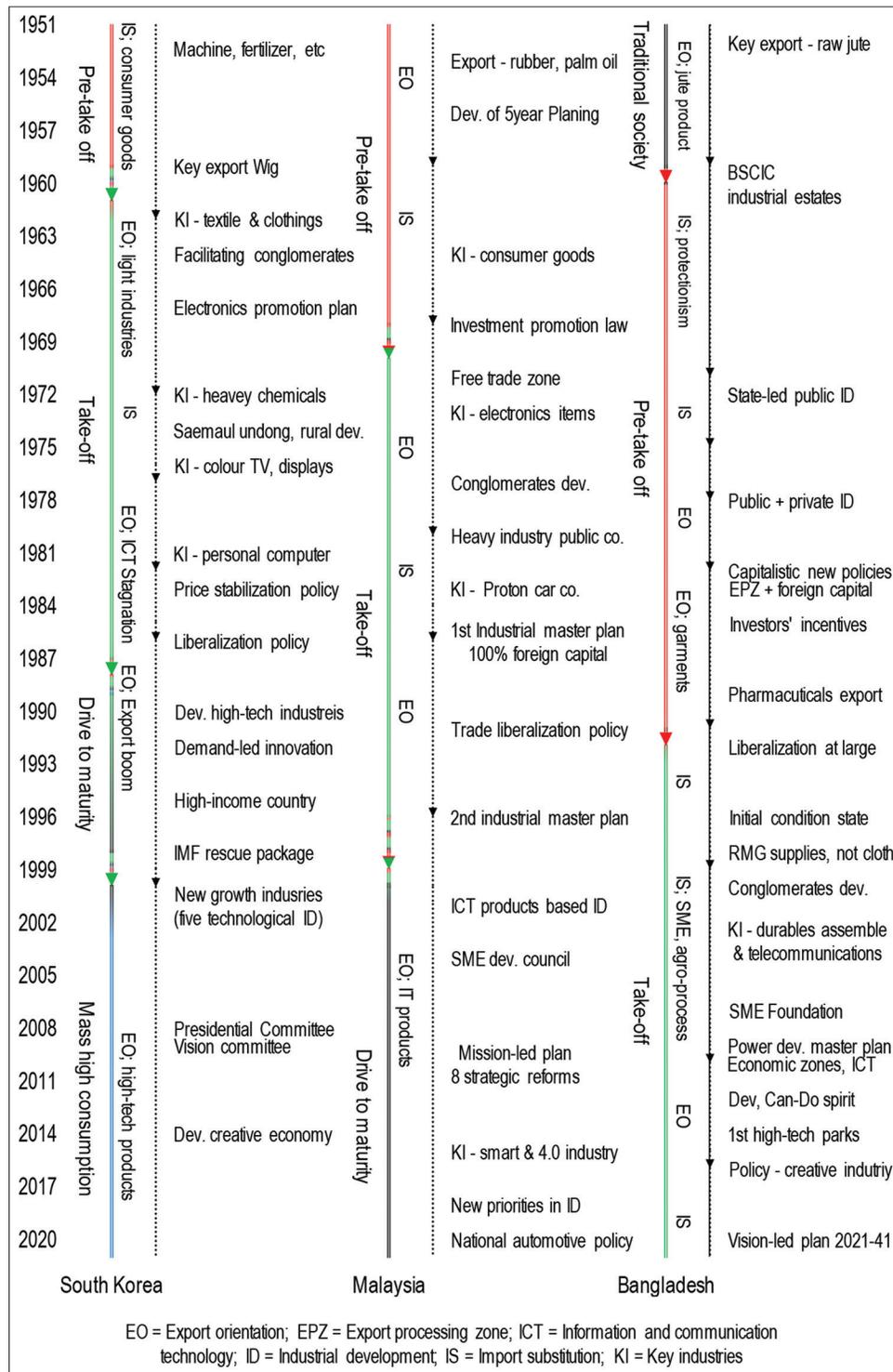
Sources: BPC (2020); ICLDS (2021)

critical elements for its industrial take-off in the 1960s and 1970s (Yoon, 1985). In addition, the “Saemaul Undong” was emerged as a “rural Can-Do” campaign for reducing rural-urban economic discrimination in the early 1970s. This encouraged rural production with expansion of roads, housing, water supply, sewage and irrigation. Several 5 years plans were too implemented since 1961 (WB, 1993; Yean et al., 2016). However, an industrial adjustment was made through external liberalization policies and internal price stabilization over the years in 1980s. Earlier, Korean industries took-off with heavy chemicals and display-based electrics like color television, computers etc. ((Lim, 2016; Park, 2019). Subsequent post take-off policies led to demand-led innovation and high-tech industrial development in the 1990s. Consequently, South Korea attained the HIC status, acquired OCED membership in 1995 and entered into the age of mass consumption in 2000 (Kim, 2016; WB, 2021).

Malaysia, as a British protectorate, started to satisfy its preconditions for take-off since the early 1950s hosting medium term plans (Runder, 1972). The export of rubber, palm oil and tin was even expanded over the take-off years. The industrial production in the 1960s was centered to consumer items. Moreover, electronics industry was expanded since the early 1970s with foreign investment after enacting the investment promotion law (Lim, 1978). Besides, first industrial master plan (1986-1995) contributed a lot to attract foreign capital. Malaysia established public companies of heavy industries and car in the 1980s. It was also tracked into globalization with trade liberalization policies in the early 1990s (Rasiah, 2015). However, implementation of second industrial master plan (1996-2005) and subsequent ICT based industrial development even could not bring it out of middle-income trap in the post take-off period. Over the years in 2010s, mission-led policies emphasized on eight strategic reforms and stressed on development of smart and 4.0 industries (EPU, 2021). Lately, national automation system was adopted for smooth functioning of both national and international transactions.

South Korea even had an industrial revolution during Japanese occupancy (Booth and Deng, 2017). The British even created base for commercial agrarian production with rubber and palm

**Figure 9:** Development policies and strategies along Rostow's stages in South Korea, Malaysia and Bangladesh



Sources: Ahmad (1972); Asadullah, et al. (2014); BPC (2020); EPU (2021); Kim (2016); Lim (1987); Lim (2016); Mujeri (2004); MOF (2020); Park (2019); Quibria (2019); Rasiah (2015); Runder (1972); Salim (2003); WB (1993); Yoon (1985); Yeon, et al. (2016)

oil in Malaysia (Runder, 1972). However, Bangladesh was deindustrialized during colonial regime (1757-1947) visible in falling the index of per capita industrialization, at base year 1900, from 6.0 to 2.0 during 1830-1913 (Baldwin et al., 2001). Tragically, its Pakistani episode (1947-1970) was not different from colonial rule reflected in falling of the real income at (-) 0.3% annual compound rate during 1950-1973 (Bolt and Zaden,

2020). Raw jute was a major export item in this trade-protected area. However, a few jute mills were set up in the 1950s by means of for export orientation with jute products (Falcon and Gotsch, 1966). Subsequent five years plans led to satisfy the preconditions for take-off in the 1960s. Besides, the small and cottage industries corporation (BSCIC in Bangladesh) was founded as industrial estates in 1960 (Ahmed, 1972). In 1971, Bangladesh was emerged

as a new nation with an enthusiasm of coming out of repression and hunger.

The ill fate of war-damaged nation was the murder of the father of the nation, Bangabandhu Sheikh Mujibur Rahman, in 1975. Its state-led industrialization adopted in the post-independent era was not successful because of inefficiencies and corruption (Asadullah et al., 2014). Subsequent military government adopted new capitalistic policies in the late 1970s. However, all incentives and efforts to private sector and privatization were ineffective because of sick industry syndrome (Salim, 2003). The government established export-processing zone (EPZ) first in 1983 to produce for exports and not for domestic market. Similar value addition system was developed into export-oriented RMGs using imported cloths, which was later turned into the key take-off industry (Quibria, 2019). However, labor productivity was enhanced to 1.9% during 1973-1992 from 0.3% during 1950-1973 (Bolt and Zaden, 2020). However, Bangladesh could not even satisfy its initial condition state before initiating take-off in 1992 (Mujeri, 2004).

Industrial diversification in here was not possible either import substitution or export orientation with investment incentives and large-scale liberalization until the late 1990s (Salim, 2003). Key features of its take-off industrial structures in the 2000s were the expansion of telecommunications, durables assembling and industrial conglomerates as new industries (Quibria, 2019). Meanwhile, the QIIP for large and medium scale manufacturing was increased much since the mid of 2000s. Subsequently, the government established SME foundation and formulated power sector master plan in the late 2000s (MOF, 2013; 2020). The first perspective plan of Bangladesh was implemented over the years in 2010s. Besides, special economic zones and high-tech parks were incorporated into public policies. New priorities for industrialization were set in the industrial policy 2016 (MOF, 2020). In addition, some strategies for ICT based product innovation and job creation in smart and industry 4.0 were adopted into the second perspective plan (BPC, 2020). This would no more than just an outlook in case of any failure with demand-led human resource development.

Earlier policies had futile outcomes in export diversification, anti-corruption, blue economic development, institutional strengthening, democratization, etc. Bangladesh, either with EPZs or RMGs, was devoted in producing for exports but not for import substitution even. It was observed that ready-made and woven garments alone contributed for about 80% to national exports during 2000-2020 (MOF, 2006; 2013; 2020). This RMGs sector was expanded with backward linkages limited to yarns and buttons but not to cloths. In addition, liberalization policies in the 1980s and 1990s eased creation of an import-centric domestic market (Asadullah, et al, 2014). However, some conglomerates started production of consumer items and durables for import substitution over the last two decades. The conglomerates had export-orientation with heavy chemicals and durable items that was not increased much (MOF, 2020). There was a huge gap in planned and actual private investment earlier, which was desired not to happen for second perspective plan.

Major weakness with smooth production in private sector was the shortage of infrastructures and power supply, which was being reduced in the 2010s (MOF, 2013). The outcome of anti-corruption drive was not effective as reflected in identical rating to corruption perception at 2.5 during 2016-2020 even with “zero tolerance” policy since 2018 (ICLDS, 2021; WB, 2021). Moreover, blue economy was affirmed as a development priority since the mid of 2010s, which remained effortless over the last few years (Zakaria, 2019). On the other hand, index of good governance remained almost unchanged in the 2010s (WEF, 2018). Bangladeshi NGOs, despite their success as rural service providers, were less effective in promoting civic activism (Asadullah et al., 2014). It was noted that earlier development policies in Bangladesh was not implemented much effectively might be for some unintended failures (Quibria, 2019). What would be the fate of upcoming strategies if this futile scenario continues in future? However, the success of perspective plan 2021-2041 was assumed reliant to fourfold institutional basis of good governance, democratization, decentralization and capacity building. It would not be easy to ensure massive institutional reforms and transformation to improving productivity for business competitiveness in the next two decades.

## 5. CONCLUSIONS

This study explored long-term growth path and policy gaps in Bangladesh compared to a few fast growing Asian economies. South Korea and Malaysia were selected as advanced economies here. Moreover, Rostow’s linear stages model was selected to bring the progress of different countries into similar growth path. All achievements in either economy was measured with stage-specific indicators both of conventional and a few others of present day. The policy gaps with Bangladesh were identified through cross-country comparison of stage-specific policies of two other countries. This research used secondary data for more than 120 years in retrospect for selected countries and a few forecasts for Bangladesh. It also evaluated whether Bangladesh be able to pass subsequent stages along the perspective plans.

South Korea, Malaysia and Bangladesh were respectively remained in the fifth, fourth and third of five stages in the Rostow’s model. South Korea needed around five decades to fulfill its preconditions for take-off. It initiated the take-off in 1961, entered into the drive to maturity stage in 1988 and turned into mass consumption level in 2000. On the other hand, Malaysia entered into the maturity stage in 1999 that would continue until 2026. Malaysia needed about three decades to complete the take-off after satisfying its preconditions during 1950-1969. However, Bangladesh initiated the take-off in 1992 that would continue until 2030. It would have only 11 years to end the drive to maturity as of the vision 2041.

Bangladesh, the former East Bengal, had a colonial episode longer than that of Malaysia and South Korea. South Korea even had an industrial revolution during Japanese colonial era. Bangladesh was rather deindustrialized during the long British occupancy. However, it initiated the take-off in 1992 without satisfying the initial condition state. Industrial diversification in the form of

either import substitution or export orientation was not possible in Bangladesh even with investment incentives and large-scale liberalization until the late 1990s. However, some industrial conglomerates were expanded in the 2000s. Subsequently, telecommunications and durables assembling turned into new industries. In addition, special economic zones and high-tech parks came into public policies in the 2010s. Moreover, industrial policy 2016 put emphasis on the development of creative industries.

Bangladesh was anticipated soon to reach at the take-off ending level of South Korea in terms of net investment and industrial share to the GDP. It was near to initial level of Malaysian drive to maturity in terms of human capital and per capita income. However, Bangladesh was lagged in production of durables like machinery and transport equipment. The country, with creative industries and demographic dividend, might reach at a high mass consumption status in 20 years. In this regard, any gap between planned and actual investment like earlier would not be accommodated within expansion of new industries in private sector. Question arised on whether could it smoothly run after using up half of its dividend in the take-off stage. Here, all countries were evidenced to admire with this dividend over the drive to maturity stage.

Meanwhile, Bangladesh government adopted second perspective plan for 2021-2041 to retain a fast growth path. In this regard, any gap between projection and planned development was not desirable in moving ahead. Meanwhile, Bangladesh emphasized on ICT based product-innovation and set new priorities in industrial development. Moreover, current perspective plan incorporated job creation in smart and industry 4.0 to transform into an innovation-driven economy. Question was what would the fate be with upcoming strategies if an unintended failure like earlier occur in future? The success of perspective plan in improving productivity and business competitiveness would depend on fourfold institutional development. However, it would not be easy to undergo with massive reforms and transformations in the next two decades.

This study evaluated the progress of selected countries along the Rostow's growth stages. The findings could be strengthened using Ohno's and Aoki's middle-income trap models with similar five stages path. Moreover, secondary data used in here was not sufficient to cover all historical events. Some data book were not accessible because of their languages in Malaya and Korean. In this regard, contemporary middle-income trap seems to be an interesting topic for another comparative study in future.

## REFERENCES

- Ahmad, I. (1972), Unemployment and underemployment in Pakistan. Retrospective Theses and Dissertations, No. 5201. Iowa State University Digital Repository, Available from: <https://lib.dr.iastate.edu/rtd/5201>
- Ahmed, M., Chowdhury, T.T. (2017), Total factor productivity in Bangladesh: An analysis using data 1981-2014. BIDS Research Alamac 2017. Dhaka: Bangladesh Institute of Development Studies.
- Akanda, M.A.I. (2015), Has Bangladesh really come ahead of the LDCs? Journal of Social and Economic Development, 17(2), 223-240.
- Asadullah, M.N., Savoia, A., Mahmud, W. (2014), Paths to development: Is there a Bangladesh surprise? World Development, 62, 138-154.
- Baier, S.L., Dwyer, G.P., Tamura, R. (2006), How important are capital and total factor productivity for economic growth? Economic Inquiry, 44(1), 23-49.
- Bairagi, S., Kamal, M. (2019), Is Bangladesh's economy approaching the Lewis turning point? South Asia Economic Journal, 20(1), 19-45.
- Baldwin, R.E., Martin, P., Ottaviano, G.I.P. (2001), Global income divergence, trade, and industrialization: The geography of growth take-offs. Journal of Economic Growth, 6(1), 5-37.
- Barai, M.K. (2020), Introduction: Construction of a development model for Bangladesh. In: Barai, M.K., editors. Bangladesh's Economic and Social Progress: From a Basket Case to a Development Model. 1<sup>st</sup> ed. Singapore: Palgrave Macmillan. p3-62.
- Barker, R, Herdt, R.W., Rose, B. (1985), The Rice Economy of Asia. Washington, DC: Resources for the Future, Inc.
- BBS. (1990), Statistical Yearbook of Bangladesh 1989. Dhaka: Bangladesh Bureau of Statistics.
- Bolt, J., Zaden, J.L. (2020), Maddison Style Estimates of the Evolution of the World Economy. A New 2020 Update. Maddison Project Database, Version 2020.
- Booth, A., Deng, K. (2017), Japanese colonialism in comparative perspective. Journal of World History, 28(1), 61-98.
- BPC. (2020), Making Vision 2041 a Reality: Perspective Plan of Bangladesh 2021-2041. Dhaka: Bangladesh Planning Commission.
- Cha, M.S. (2008), In: Whaples, R., editors. The Economic History of Korea. EH Net Encyclopedia. Available from: <http://eh.net/encyclopedia/the-economic-history-of-korea>
- Chowdhury, M.A.T., Zulfikar, H. (2001), An Agricultural Statistical Profile of Bangladesh, 1947-1999. Working Paper 54. Bogor: CGPRT Centre.
- EPU. (2021), Previous Plans of Malaysia, Kualalampur: Economic Planning Unit of Malaysia. Available from: <https://www.epu.gov.my/en/economic-developments/development-plans/rmk/previous-plans>
- Falcon, W.P., Gotsch, C.H. (1966), Agricultural Development in Pakistan: Lessons from the Second Plan Period. Development Advisory Service Report No 6. The Centre for International Affairs. Harvard University.
- Feenstra, R.C., Inklaar, R., Timmer, M.P. (2015), The next generation of the penn world table. American Economic Review, 105(10), 3150-3182.
- Glawe, L., Wagner, H. (2016), The middle-income trap: Definitions, theories and countries concerned a literature survey. Comparative Economic Studies, 58(4), 507-538.
- ICLDS. (2021), Jonmo Shotoborshe Udiyoman Bangladesh (Emerging Bangladesh on the Century of the Birth of Bangabandhu). Dhaka: Institute of Conflict Law and Development Studies.
- IFASTAT. (2021), Fertilizer Consumption Database. Paris: International Fertilizer Association. Available from: <https://www.ifastat.org/databases/plant-nutrition>
- Kim, M. (2016), Aspects of Korean literature according to the stage of economic growth: Focused on the views of America. International Journal of Korean Humanities and Social Sciences, 2, 11-24.
- Kim, M.N. (2012), Historical statistics of Korea: A survey. Korean Social Sciences Review, 2(2), 1-34.
- Kim, S.K., Moon, H.P., Park, D.G. (2012), Green Revolution in Korea: Development and Dissemination of Tongil-type Rice Varieties. Seoul: KDI School of Public Policy and Management.
- KOSIS. (2021), Statistical Database. Seoul: Korean Statistical Information Services. Available from: [https://kosis.kr/eng/statisticsList/statisticslistindex.do?parentid=o.1&menuid=m\\_01\\_01&vwcd=mt\\_etitle&parmtabid=m\\_01\\_01](https://kosis.kr/eng/statisticsList/statisticslistindex.do?parentid=o.1&menuid=m_01_01&vwcd=mt_etitle&parmtabid=m_01_01)

- Lim, C.P. (1987) Changes in the Malaysian economy and trade trends and prospects. In: Bradford, C.I., William, H., Branson, W.H., editors. Trade and Structural Change in Pacific Asia. Chicago: University of Chicago Press. p435-466.
- Lim, W. (2016), The Development of Korea's Electronics Industry during its Formative Years (1966-1979). Knowledge Sharing Program (KSP), Ministry of Strategy and Finance, Republic of Korea.
- Mizoguchi, T. (1979), Economic growth of Korea under the Japanese occupation Background of industrialization of Korea 1911-1940. Hitotsubashi Journal of Economics, 20(1), 1-19.
- MOF. (1999), Bangladesh Economic Review 1998. Dhaka: Ministry of Finance.
- MOF. (2006), Bangladesh Economic Review 2005. Dhaka: Ministry of Finance.
- MOF. (2013), Bangladesh Economic Review 2012. Dhaka: Ministry of Finance.
- MOF. (2020), Bangladesh Economic Review 2019. Dhaka: Ministry of Finance.
- Mujeri, M.K. (2004), Changes in policy framework and total factor productivity growth in Bangladesh. Bangladesh Development Studies, 30(3-4), 1-29.
- Pakrashi, D., Frijters, P. (2017), Takeoffs, Landing, and Economic Growth. ADBI Working Paper, No. 641. Tokyo: Asian Development Bank Institute. Available from: <https://www.adb.org/publications/takeoffs-landing-and-economic-growth>
- Park, J.D. (2019), The essence of the Korean model of development. In: Re-Inventing Africa's Development. Cham: Palgrave Macmillan.
- Quibria, M.G. (2019), Bangladesh's Road to Long-term Economic Prosperity: Risks and Challenges. 1<sup>st</sup> ed. Cham, Switzerland: Palgrave Macmillan.
- Rao, B.B., Hassan, G. (2011), Determinants of the long-run growth rate of Bangladesh. Applied Economic Letters, 18(7), 655-658.
- Rasiah, R. (2015), The Industrial Policy Experience of the Electronics Industry in Malaysia. WIDER Working Paper 2015/123. World Institute for Development Economics Research. Helsinki.
- Rostow, W.W. (1959), The stages of economic growth. The Economic History Review, 12(5), 1-16.
- Rudner, M. (1972), The draft development plan of the Federation of Malaya 1950-55. Journal of Southeast Asian Studies, 3(1), 63-96.
- Salim, R.A. (2003), Economic liberalization and productivity growth: Further evidence from Bangladesh. Oxford Development Studies, 31(1), 85-98.
- Timmer, C.P. (2020), Structural Transformation in Japan, Indonesia and Malaysia 1880-2010, Economic History of Malaysia. Available from: <https://www.ehm.my/updates/articles/the-structural-transformation>
- UN-DESA. (2021), World Population Prospects 2019. New York: United Nations Population Division. Available from: <https://population.un.org/wpp>
- UN-DPAD. (2020), LDC Review Data, Development Policy Analyses Division of the United Nations. Available from: [http://esango.un.org/sp/ldc\\_data/web/StatPlanet.html](http://esango.un.org/sp/ldc_data/web/StatPlanet.html)
- WB. (1978), World Development Report 1978. Washington, DC: The World Bank.
- WB. (1993), The East Asian Miracle: Economic Growth and Public Policy (A World Bank Policy Research Report). New York: Oxford University Press, Inc.
- WB. (2021), Database of the World Development Indicators. Washington, DC: World Bank. Available from: <https://databank.worldbank.org/source/world-development-indicators>
- WEF. (2002), Global Competitiveness Report 2001-2002. New York: Oxford University Press, Inc. for World Economic Forum.
- WEF. (2018), Global Competitiveness Report 2018. Geneva: World Economic Forum.
- Yeon, J.I., Pyka, A., Kim, T.Y. (2016), Structural Shift and Increasing Variety in Korea, 1960-2010: Empirical Evidence of the Economic Development Model by the Creation of New Sectors, Hohenheim Discussion Paper in Business, Economics and Social Sciences, 13-2016, University of Hohenheim.
- Yoon, I.S. (1985), South Korea's Industrial Environment. Report # UMTRI-85-42. Michigan: University of Michigan Transportation Research Institute.
- Zakaria, A.K.M. (2019), Bangladesh's Blue Economy Makes no Waves. Prothom Alo, 11 April 2019. Available from: <https://en.prothomalo.com/opinion/Bangladesh%E2%80%99s-blue-economy-makes-no-waves>