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From Growth to Development in Bangladesh

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I

In a 2008 study, the World Bank declared that "Bangladesh represents a success story among developing countries." To justify this claim, it pointed to the fact that the country's poverty rate had fallen from 57 percent at the beginning of the 1990s to 40 percent in 2005.[1] Subsequently that rate has continued to decline. In a 2010 estimate, the poverty rate stood at 31.5 percent.[2]

The reduction in poverty in Bangladesh has been driven by the country's economic growth. From an annual Gross Domestic Product growth rate of 5.1 percent between 1995/96 and 2002/03, Bangladesh's economic growth rate increased to 6.3 percent in the following eight years (Table 1). What principally drove this growth were Readymade Garment (RMG) and Knitwear exports. These two sectors, which between them annually accounted for three-quarters or more of the country's exports, grew at double digit annual growth rates in every year between 2003/04 and 2010/11 (with the exception of 2009/10), averaging 14.3 percent per year. As a result, their 8.6 percent share of total output in the economy in 1997/98 grew to 16.2 percent in 2010/11. These were the sectors that principally accounted for the country's economic growth.

But even as Bangladesh is credited with successfully growing and reducing poverty, concerns remain. *The Economist*, in a recent and otherwise glowing report dealing with the country's advances in infant and maternal mortality and other public health achievements, nevertheless noted that "with the lowest labour costs in the world…it should be growing faster than China, not more slowly than India."[3] And the World Bank warns that in the future the country will have to diversify the structure of its exports and move to higher value garments than it produces at present. The Bank was sanguine about

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[1] The World Bank, *Poverty Assessment for Bangladesh: Creating Opportunities and Bridging the East-West Divide*, Bangladesh Development Series Paper No. 26 (Dhaka: The World Bank Office, October 2008), p. xiv.
[2] Ministry of Finance, Government of the People's Republic of Bangladesh, *Bangladesh Economic Review 2011* (On-line), Chapter 13 "Poverty Alleviation," p. 192
[3] "The Path Through the Fields," *The Economist*, November 3rd-9th 2012, p. 26

Table 1

The Ready Made Garment Industry and the Growth of the Bangladesh Economy

	Annual Real GDP Growth Rate	Annual Rate of Growth of Value of RMG and Knitwear Exports	RMG and Knitwear as Percent Bangladesh Exports	RMG and Knitwear as Percent Bangladesh GDP
1995/96	4.6	NA	65.6	6.2
1996/97	5.4	17.8	67.8	7.1
1997/98	5.2	26.1	73.1	8.6
1998/99	4.9	6.3	75.5	8.8
1999/00	5.9	8.3	75.7	9.2
2000/01	5.3	11.6	75.1	10.3
2001/02	4.4	-5.7	76.6	9.6
2002/03	5.3	7.2	75.0	9.5
2003/04	6.3	15.8	74.8	10.1
2004/05	6.0	12.9	74.1	10.7
2005/06	6.6	23.1	75.1	12.6
2006/07	6.4	16.4	75.6	15.4
2007/08	6.2	16.2	75.8	13.5
2008/09	5.7	15.4	79.3	13.8
2009/10	6.1	4.1	77.1	12.5
2010/11	6.7	10.5	78.1	16.2

Source: Calculated from Ministry of Finance, Government of the People's Republic of Bangladesh, *Bangladesh Economic Review, 2005*, and *Bangladesh Economic Review 2011,* Appendix Tables 1.1, 2, 3, and 49.

neither, noting among other issues that the "lack of skills is becoming a key constraint to growth in exports and this gap will become more acute as Bangladesh moves into producing higher-value garments."[4] Implicit in these comments is recognition that economic modernization is a discontinuous process. Growth in the past does not ensure development in the future.

II

The RMG industry is Janus-faced. On one hand, its presence can constitute an important step forward in economic modernization. It is an industry for which Bangladesh possesses an obvious comparative advantage. The industry's labor intensive methods of production, creating employment opportunities for large numbers of individuals possessing limited human capital, matches the abundant availability of semi-skilled low cost labor in the country. On the other hand, RMG's production processes and associated low wage structure means that employees in the industry have little prospect of earning an income level much above a poverty threshold. At best therefore, RMG is a starter industry. It is a sector that can pioneer industrialization, but has to be supplanted by more productive sectors if substantial advances are to be achieved in living standards.

Most RMG employees earn very low levels of income. Mohammed Ali Rashid cites data indicating that in both the early 1980s and mid-1990s the Bangladesh RMG industry paid hourly wages far below those of other countries in the region such as India, Pakistan and Sri Lanka.[5] Bangladesh's garment industry's reliance on inexpensive labor persists today. In a 2011 survey carried out by the McKinsey consulting firm, respondents in the industry indicated that "competitive price level is clearly the [country's] prime advantage" and that "price attractiveness [was] the first and foremost reason for

[4] The World Bank, "Consolidating and Accelerating Exports in Bangladesh," Bangladesh Development Series Paper No. 29 (Washington DC: The World Bank, June 2012) p. xv

[5] Mohammed Ali Rashid, "Rise of Readymade Garments in Industry in Bangladesh: Entrepreneurial Ingenuity or Public Policy," Paper Presented at the Workshop on Governance and Development organized by the World Bank and BIDS at Dhaka on 11-12 November 2006, p. 15

purchasing in Bangladesh."[6] The industry employs perhaps as many as 4 million workers, most of whom are women who work 10-15 hours a day, six days a week.[7] A 2011 survey indicates that "a typical worker" is paid at a level that approximated the country's minimum wage of about $43 per month.[8]

A low wage level is not the only problem facing RMG workers. Sweatshop-like working conditions are wide spread. According to the authors of a survey of workers in the garment and construction industries, workers in both "are deprived of many of their rights such as the non-issuance of appointment letters and identity cards, the non-observance of OSH [Occupational, Safety and Health] standard and social security provisions, the limited space for unionism and collective bargaining and the weak protections provided by the labour law enforcement and judicial system." Further, "there are also delayed wage payments, long working hours, work discrimination, unsafe working conditions and poor work environment."[9] Not surprisingly, labor relations in the industry are poor. Strikes are frequent and violence is more than occasional.

III

The relationship between Bangladesh's agricultural sector and the RMG industry resembles Arthur Lewis's model of economic growth with unlimited supplies of labor. In Lewis's model the shift of labor and other resources from "subsistence" agriculture to a modern capitalist sector is the mechanism by which growth occurs.[10] That mechanism closely corresponds to Bangladesh's experience. The RMG industry is able to attract low cost workers principally because labor productivity and incomes in the

[6] McKinsey's Apparel, Fashion and Luxury Practice, Bangladesh's Ready-Made Garments Landscape: The Challenge of Growth (Munich: McKinsey & Company Inc., 2011) p. 4
[7] Serajul Quadir and Ruma Paul, "Unrest Threatens Bangladesh's $19-Billion Clothing Industry, *The Globe and Mail* (On-line) September 7, 2012
[8] "Minimum Wage Implementation in Bangladesh's Garment Sector," (Fair Wear Foundation, 2012) p. 5.
[9] Jakir Hossain, Mostafiz Ahmed and Afroza Akter, "Bangladesh Labour Law: Reform Directions," (November 2010), p. 10, 3.
[10] W.A. Lewis, "Economic Development with Unlimited Supplies of Labour," in Sharad Chari and Stuart Corbridge (eds.), *The Development Reader* (London and New York: Routledge, 2008) pp. 167-178.

country's agricultural sector are even lower than in RMG. The government's statistical bureau estimates than in 2009-10, 43.6 percent of the labor force worked in agriculture but were responsible for only 20.3 percent of the country's output.[11] As a result, poverty is disproportionately present in that sector. The World Bank reported that in 2005 the rural poverty rate was 43.8, percent compared to a comparable level of 28.4 percent in urban areas.[12]

This high level of rural poverty exists despite the fact that between 1998/99 and 2008/09 the market value of the agriculture sector's output increased by 46.3 percent in real terms.[13] These were years when the country's farmers shifted their cultivation to the boro variety of rice, a shift that substantially increased yields. As late as 1988/89, acreage under boro was lower than the aus variety and only half the level of aman, the third variety of rice cultivated in the country. By 2008/09 acreage under boro was almost five times that under aus and only slightly lower than aman. Nevertheless rural poverty declined only slowly.[14]

Much of the problem of rural poverty finds its source in farm fragmentation, a long-standing problem in the country. In their study of Krishnapur Village, Sherpur District, Akanda and Ito found that between 1965 and 2004 the number of large and medium farms decreased from to 9 to 6, while the number of small farmers and non-farm households increased from 2 to 22.[15] Similarly Rahman in a study that was carried out in 2005 found that "land fragmentation is on the rise in Bangladesh" and concluded that that process "has a significant detrimental effect on productivity and efficiency."[16] The Agricultural

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[11] *Bangladesh Economic Review 2011*, p. 82.
[12] The World Bank, *Poverty Assessment for Bangladesh* p. 2.
[13] *Bangladesh Economic Review 2011*, Appendix 3
[14] Calculated from *Bangladesh Economic Review 2011*, Appendix 27.
[15] Amaminul Islam Akanda and Shoichi Ito, "Evolution of Land Ownership and its Market in Rural Bangladesh - Case Study of Selected Clain Krishnapur Village, Sherpur Distrcit," Internal Journal of Rural Studies, Vol. 15, no. 2 ()ct 2008) Table 2.
[16] Sanzidur Rahman and Mizanur Rahman, "Impact of Land Fragmentation and Resource Ownership on Productivity and Efficiency: The Case of Rice Producers in Bangladesh," Land Use Policy, 26 (2008) p. 95

Table 2

Percentage Distribution of Farm Size (hectares) by Type of Tenure, 1983/84 – 2005

Tenure Type	1983/84	1996	2005
Owner	2.13	1.61	1.06
Owner-cum Tenants	2.58	1.90	1.02
Tenants	0.89	0.88	0.40
All	2.27	1.71	1.01

Source: *Agrarian Transition and Livelihoods of the Rural Poor*, Table 02, p. 16

Table 3

Computation of Operating Surplus Boro Rice 1987/88 and 1995

	1987/88	2007
Yield (Tons per Hectare)	4.46	5.36
Farm Size	2.27 Ha	1.01 Ha
Convert Farm Size to Acres	2.27= 5.61 acres	1.01= 2.47 acres
Total Output = Yields per acre X Acres	4.46*5.61 = 25.02 tons	5.36*2.47= 13.24
Cost per ton (US$ per ton of paddy)	$109	$106
Total Cost = Total Output X Cost per Ton	$109*25.02=$2728.18	$106*13.24= 1403.44
Harvest Price (US$ per ton of paddy)	$159	$152
Total Revenue = Total Output X Price per ton	$159*25.02= $3978.18	$152*13.24= 2012.48
Operating Surplus	$3978.18-2728.18 = $1250.00	$2012.48 – 1403.44 = 609.04

Source: Yield, Cost per ton, and Harvest Price: Hamabub Hossain, "The Impact of Shallow Tubewells and Boro Rice on Food Security in Bangladesh," (International Food Policy Research Institute, Table 6, p. 13; Farm Size: Akand Muhammad Faisal Uddin, and Jabin Tahmina Hawue, "Agrarian Transition and Livelihoods of the rural Poor: Agricultural Land Market" (Dhaka: Unnayan Onneshan – The Innovators, n.d.) , Table 02, p. 16)

Census of 2005 as reported by Uddin and Haque indicates that for the country as a whole, during the twenty years between 1987/88 and 2007, the mean household farm size declined from about 5.6 acres to about 2.5 acres. During these same years, boro yields increased by about 20 percent, but production costs and prices remained relatively flat. As a consequence, the 56 percent decrease in farm size resulted in farm household income falling from $1259 to $609. Despite increased productivity, land fragmentation reduced household rural income levels (Table 3).

With this the case, agriculture in Bangladesh's rural areas declined in its relative importance as a source of employment. Mahabub Hossain reports that between 1987-88 and 2007 agricultural employment as a primary occupation for the rural labor force declined from 65.6 percent to 50.5 percent. Two-thirds of this decline occurred in the "agricultural wage labor" category, with losses in the two other categories – "crop farming" and "other agriculture"- about equally contributing to the remaining decline. The inverse of this loss was an increase in non-agricultural rural employment, almost all of which occurred in "services" and the residual grouping "nonagricultural labor." That only about a fifth of the increase in non-agricultural rural employment occurred in the "business" sector suggests that the changes in that occurred in rural occupations did little to alleviate poverty.[17]

IV

One way to gain perspective on Bangladesh's economic growth is to compare its experience with Vietnam's. Such a comparison provides insight because in the early 1990s both countries were classified by the World Bank as low income nations , with Vietnam's GNP per capita estimated at $170 and Bangladesh's only slightly higher at $220 (Table 4). In the years since then however, Vietnam's more rapid growth has meant that by 2010 its per capita income exceeded that in Bangladesh by 70 percent.

[17] Mahabub Hossain, "Dynamics of Poverty in Rural Bangladesh, 1988-2007: An Analysis of Household Level Panel Data," Paper presented in the Conference on "Employment, Growth and Poverty Reduction in Developing Countries, organized by the Political Economic Research Institute, University of Massachusetts, Amherst in honor of Professor Azizur Rahman Khan, March 27-27, 2009, p. 5

The difference between the two countries in the growth in output per employed workers is of particular importance in this regard. Between 2000 and 2010 that measure of productivity grew in Vietnam at a rate of 5.2 percent per year, compared to 3.3 percent in in Bangladesh. Because of that, Vietnam has graduated to the lower middle income status to which Bangladesh still aspires.

But while it is true that productivity growth in Vietnam has been superior to that in Bangladesh, the fact remains that both countries are technologically dependent. Neither possesses an advanced

Table 4

Bangladesh and Vietnam Gross National Product per capita 1993-2010 and Average Annual Rate of Growth of Gross National Product 1990-2010

	Bangladesh	Vietnam
1993 Gross National Product per capita ($1993)	$220	$170
2010 Gross National Income per capita ($PPP)	$1,810	$3,070
Average Annual Rate of Growth Gross National Product 1990-2000	4.8	7.9
Average Annual Rate of Growth Gross National Product, 2000-2010	5.9	7.5
Average Annual Rate of Growth GDP per employed Worker 2000-2010	3.3	5.2

Source: 1993 Gross National Product per capita, World Bank, *World Development Report 1993*, Table 1; 2010 Gross National Income per capita ($PPP), World Bank, *World Development Indicators 2012*, Table 1.1. Average Annual Rate of Growth GNP 1990-2000, 2000-2010, World Bank, *World Development Indicators 2012,* Table 4.1. Average Annual Percent Increase in GDP per employed Worker computed from World Bank, *World Development Indicators 2012*, Tables 2.2 and 4.1

machine tools industry – the industry that produces the equipment used in other industries. This void to a large extent means that both countries require foreign direct investment to achieve advances in technology and productivity.

Vietnam experienced a higher rate of productivity growth than did Bangladesh because it was more successful in attracting foreign direct investment than was Bangladesh. As a result Vietnam has participated in what Mizuno describes as a "technology network for machine tools," an involvement that has occurred at a much lower level in Bangladesh. Vietnam received about $8,000 million of foreign direct investment in 2010, or about 7.5 percent of its gross domestic product. The corresponding figures for Bangladesh were $917 million and 0.9 percent of GDP.[18] More specifically, between 2007 and 2011, the import of machinery and transport equipment was four times higher in Vietnam than Bangladesh. The technology embodied in that equipment was a principle reason for Vietnam's superior productivity performance.

It is true that in a 2010 study, Nazneen Ahmed and Zaid Bakht report that light engineering in Bangladesh "has the potential to make significant contribution[s] towards technological advancement and economic development along with wide opportunities for employment generation." At the moment however that potential has been realized only to a limited extent. The industry suffers from electricity supply disruptions, unreliable supplies of raw materials and inadequate financing. The authors report that entrepreneurs suffer from "lengthy and cumbersome procedure[s] to receive bank loans, difficulty to get required amount of loan, nonavailability of sufficient working capita difficulty to get financial help for technological innovation and development and for risky investment[s], non-availability of venture capital, high interest rate on bank loan etc." On top of these bottlenecks, the human capital present in the industry is too low to enable it to produce technologically sophisticated equipment. A field study of 15 enterprises in Dhaka revealed that "the firms are owned by people having education of less than 10 years," that the employees learn to work on the job, and that there is no facility for formal training."[19]

[18] World Bank, *World Development Indicators 2012* (Washington DC: The World Bank, 2012) Table 6.11)
[19] Nazeen Ahmed and Azid Bakht, "Light Engineering Industry in Bangladesh: A Case Study," (Dhaka: Bangladesh Insitute of Development Studies, June 2010), p. 1, 6.

Table 6

Comparative "Input" Education Data, 2010

	Bangladesh	Vietnam
Percent of GDP per capita Spent on Public Education per Student		
Primary	8.8	19.4
Secondary	12.0	17.0
Tertiary	27.7	60.6
Percent of GDP Spent on Public Education	2.2	5.3
Percent of Total Government Expenditures Spent on Public Education	14.1	19.8
Percent Trained Teachers in Primary Education	58.4	98.3
Primary School Pupil Teacher Ratio	43	20
Gross Enrollment Rate		
Pre Primary	13	82
Primary	103	106
Secondary	49	77
Tertiary	11	22

Source: World Bank, *World Development Indicators 2012*, Tables 2.11, 2.12

Data compiled by the World Bank underscores the issue of inadequate human capital in Bangladesh. Again, to place Bangladesh's experience in an appropriate context it is useful to compare education there to that in Vietnam (Table 6). The pattern is unambiguous. On all seven measures of educational "inputs" collected by the World Bank, Vietnam's commitment to public education is superior to that in Bangladesh. Particularly revealing is the fact that the pupil-teacher ratio Bangladesh is

twice that in Vietnam. Further, while almost all (98.3 percent) of the primary school teachers in Vietnam are trained, that percentage in Bangladesh is only 58.4 percent. At every level and no matter how measured, Vietnam's educational expenditures are higher than those in Bangladesh.

Only limited data are available with regard to the "output" of education. But again Vietnam's performance is superior to Bangladesh's. It is only at the primary school level, where both countries have achieved universal education, that Bangladesh matches Vietnam. At all other levels, a larger percentage of children in Vietnam are enrolled in school. Perhaps most telling in this regard is the fact that at the secondary school level in Bangladesh, less than one-half of the relevant age group is enrolled. This contrasts with the 77 percent that are enrolled in Vietnam. Similarly the tertiary level enrollment rate in Vietnam is twice that in Bangladesh. It is true that there have been educational gains in Bangladesh in recent years. Nevertheless the fact remains that during the last ten years, Bangladesh's secondary school enrollment rate has barely moved from its initial very low level. The secondary school net enrollment rate stood at 44 percent in 1999 and at 46 percent in 2010.[20]

At least in part, Vietnam's superior ability to attract productivity-raising foreign direct investment has its source in its relatively well educated population and labor force. To a considerable extent the level of human capital required for the efficient use of advanced equipment has been available to overseas firms. That has much less been the case in Bangladesh. The technological sophistication of the capital it has imported corresponds to the relatively low level of educational attainment present in the country. In Bangladesh, foreign investment has tended to be composed of the relatively rudimentary equipment used in the RMG sector. The same educational shortfall which constrains the development of machine tools domestically is also the explanation for the country's limited ability to tap into global technological networks.

[20] The World Bank, *World Development Indicators 2012*, Table 2.12

V

If Bangladesh is to move beyond growth that is largely dependent on one sector characterized by labor intensive methods of production, it will have to upgrade the human capital possessed by its managers and labor force. With about 70 percent of the Bangladeshi population resident in rural areas, educational planning and investment to a large extent will necessarily have to be implemented in the country's villages.

In a recent article advocating just that, Islam and Mia have argued that this should be done as part of an effort to enable rural small and medium-scale industries to compete in international markets. They write of the "many indigenous, traditional skills and technologies practiced by rural people for generations," which, as they put it, "are now found to be in decline in the absence of support for upgrading/modernizing the skills and marketing promotion of the products." Islam and Mia believe that if "the skills of the people are improved by combining education and training these age old local production techniques can be turned into local industries and the products can find the modern market."[21] Their anticipation is that in an era of global product market integration, rural industries can become successful participants in the global economy.

There are grounds for doubting the likelihood that long-discarded technologies can successfully penetrate global export markets. But the fact remains that raising educational levels in the countryside probably would make an important contribution to the country's economic modernization. If the growing number of rural non-agricultural workers were able to use enhanced education to earn higher levels of income than they can now, the supply function of labor to the RMG sector would be altered.

[21] Md. Rezaul Islam and Ahmadullah Mia, "The Role of Education for Rural Population Tramsformation in Bangladesh, *Asia-Pacific Journal of Cooperative Education* (2007), 8 (1) p. 17

The industry would have to offer higher wages to attract its labor force. Aside from the desirable social consequence of such an increase, rising labor costs would create an incentive for resident textile firms to adopt more capital-intensive methods of production. The resulting enhanced demand for equipment and machines would represent a potential market for a domestic machine tools industry, as well as attracting more capital from abroad.

But before the demand for equipment could be satisfied from domestic firms, many more well-educated engineers and technicians will have to be available. Self-educated managers and workers cannot produce the tools necessary to design and manufacture the equipment that industry requires. At the beginning of this process - before the country's educational system can be counted on to produce the requisite number of secondary and tertiary graduates - the Bangladeshi diaspora may have a role to play. Elsewhere in Asia, investors and entrepreneurs have returned home at least on a temporary basis to participate in the local economy. In the process they have enhanced the competitiveness of local firms.[22] To date this has occurred only to a limited extent in Bangladesh. But if market opportunities improved, as almost certainly would occur if there were a major improvement in human capital, the country might attract an increased international corps of "New Argonauts," able to contribute to the technological enhancement of the country's economy.

In short, successfully pursuing the goal of economic development will require a policy framework on the part of government that is not yet in place. Needed will be a purposeful public policy to encourage the emergence of more productive and technologically advanced industries than RMG. The government will have to set tariffs to protect infant industries and offer tax incentives to encourage firms to meet market share targets. Further, education – particularly secondary and tertiary levels - will have to be assigned a much higher priority in terms of funding and training than it is now. Even

[22] AnnaLee Saxenian, *The New Argonauts: Regional Advantage in a Global Economy* (Cambridge: Harvard University Press, 2006) Pages 274-324 detail the information technology experience in Inda.

attracting members of the country's diaspora will require a more active intervention by the government than occurs now.[23] Finally, it is possible as well that policy-makers will have to deal with opposition from the RMG sector. The rise of new industries and a better educated population will undermine the industry's traditional production and labor recruitment system. Its resistance will need to be anticipated and effectively countered .In short, the nurturing of structural change will require the government to act as a "development state."

Bangladesh has experienced economic growth but not development. Enhancing rural education would be a first step in diversifying the country's economy beyond its narrow RMG base. Gaining access to the human capital possessed by the country's diaspora abroad would be an additional step that could be taken. But the accumulation of human capital alone with not achieve the goal. Doing so will require government policies that promote the structural transformation that characterizes the process of modern economic growth.

[23] For a historical review and defense of such policies see Erik S. Reinert, "Emulation versus Comparative Advantage: Competing and Complementary Principles in the History of Economic Policy," in Mario Cimoli, Giovanni Dosi and Joseph E. Stiglitz (eds.), *Industrial Policy and Development: The Political Economy of Capabilities Accumulation* (Oxford: Oxford University Press , 2009) pp 79-106