

Structural Transformation: Paths to Provide Better Quality Employment

by

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Contents

- Conceptual issues
- Economic growth and structural change: A theoretical perspective
- Change in economic structure: History of developed countries
- Economic growth and structural change in developing countries
- The theory and reality
- The balance between industry and service sectors: some questions and policy issues

Structural Change: Conceptual Issues

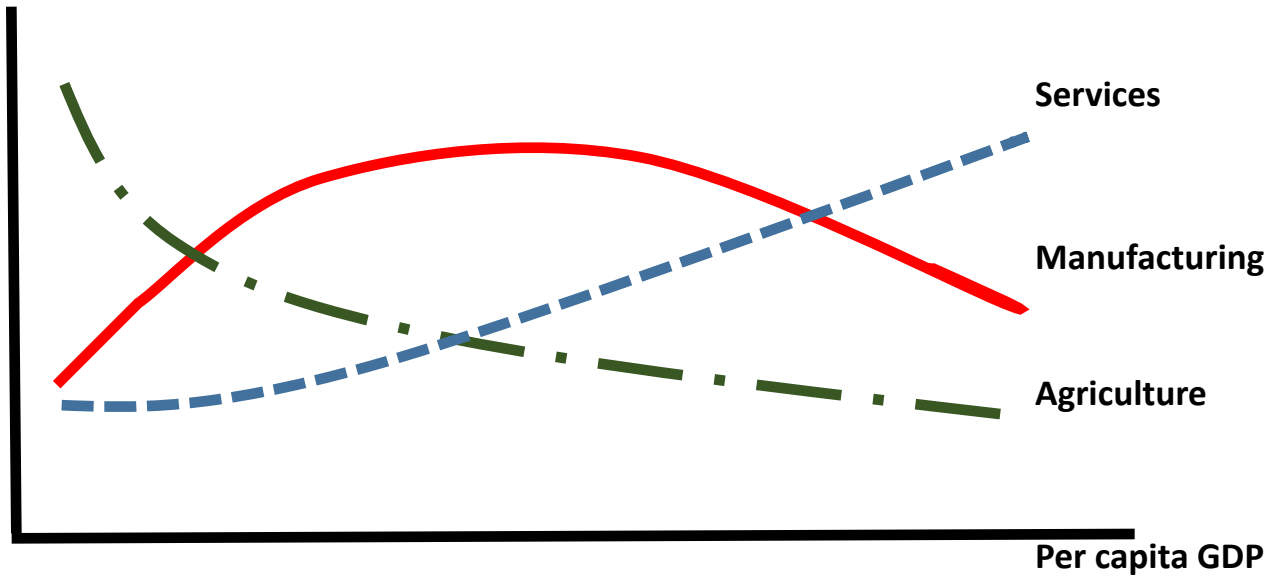
- Two variants of the analysis of structural change
 - Macro: Change in the relative importance of sectors in terms of production and factor use
 - Micro: Functioning of economies, markets, institutions, and mechanisms for allocating resources, income generation and its distribution
- The central features of the macro approach:
 - Transformation of an economy from low income, agrarian and rural economy to an industrial urban economy with higher level of income
 - ✓ Industrialization
 - ✓ Urbanization
 - ✓ Agricultural transformation
- In the macro approach, economic growth and structural change are inter-related

Economic Growth and Structural Change: A Theoretical Perspective

- **Commonly observed pattern of structural change: agriculture → manufacturing → services**
- **Explanations by Kuznets and Kaldor. Demand vs supply**
- **Kuznets: Income elasticity of demand of**
 - **manufactured goods > agricultural products**
 - **services > manufactured goods**

Stylized Depiction of Structural Transformation

Share in GDP



Growth and Structural Change: Theoretical Perspective (contd)

- **Kaldor: Both demand and supply sides**
- **Agriculture subject to diminishing returns on land**
- **Manufacturing**
 - **faces no such constraint**
 - **Enjoys higher income elasticity of demand**
 - **and thus acts as the engine of growth at initial stages of development**

Growth and Structural Change: A Theoretical Perspective (contd)

- **Three « laws » of Kaldor:**
 - **Growth of GDP is strongly correlated with the growth of manufacturing output**
 - **Productivity growth in an economy varies positively with growth of manufacturing**
 - **Productivity growth in an economy varies inversely with non-manufacturing employment**

Growth and Structural Change: A Theoretical perspective (contd)

- **Influence of trade**
 - **Demand for manufactured goods may be met by imports**
 - **Some services (e.g., IT-based) may be exported**
- **Structural change in employment**
 - **Change in the share of output should lead to change in the share of employment**
 - **The timing and pace of change may vary**
 - **Implications for labour productivity**

Change in Economic Structure: History of Developed Countries

- Common sequence of change: agriculture to industry to services
- Monotonous decrease in the share of agriculture and increase of services
- Share of industry increased initially and declined later
- Structure of employment changed with that of output _ shares roughly similar

Change in Economic Structure: History of Developed Countries (contd)

- Share of agriculture in total output
 - Half to two-thirds before growth started
 - Declined to 25% in 75-100 years
 - Less than 5% by end-20th century
- Share of industries
 - About 25% at the beginning of growth
 - Rose to 50% by 1950
 - Declined to 25-30% by 2000

Change in Economic Structure: Developed Countries (contd)

- Share of the service sector
 - Increased continuously
 - Crossed 50% by early 20th century in UK and USA
 - Grew rapidly after the sixties
 - Currently around 70%

Share (%) of Different Sectors in Total GDP and Employment in Selected Developed Countries

Country	Share in GDP (2010)			Share in Employment (2007-10)					
	Agri- culture	Indus- try	Servi- ces	Agriculture		Industry		Services	
				Male	Femal e	Male	Female	Male	Female
Australia	2	20	78	4	2	32	9	64	88
France	2	19	79	4	2	33	10	63	88
Germany	1	28	71	2	1	40	14	58	84
Japan	1	27	72	4	4	33	15	62	80
UK	1	22	78	2	1	29	7	68	91
USA	1	20	79	2	1	25	7	72	92

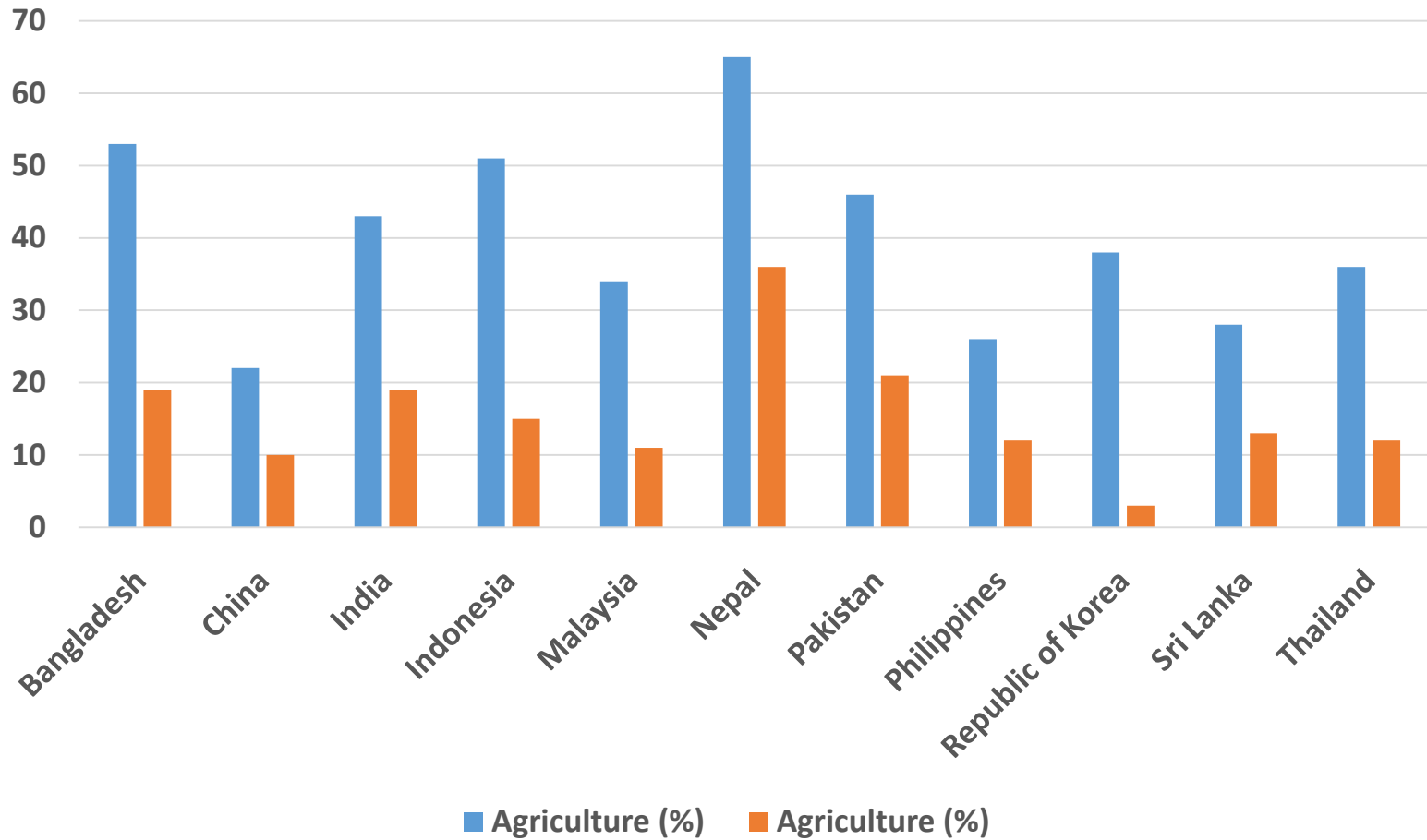
Economic Growth and Structural Change in Developing Countries

- Direction of change similar in all countries
- Rate of change varies: sharper in East and South-East Asia (ESEA)
- Share of industry rose more rapidly in ESEA
- Share of services increased more rapidly in India
- The change in the structure of labour force has been slower than that in GDP
- In India, share of service sector in employment much lower than its share in GDP

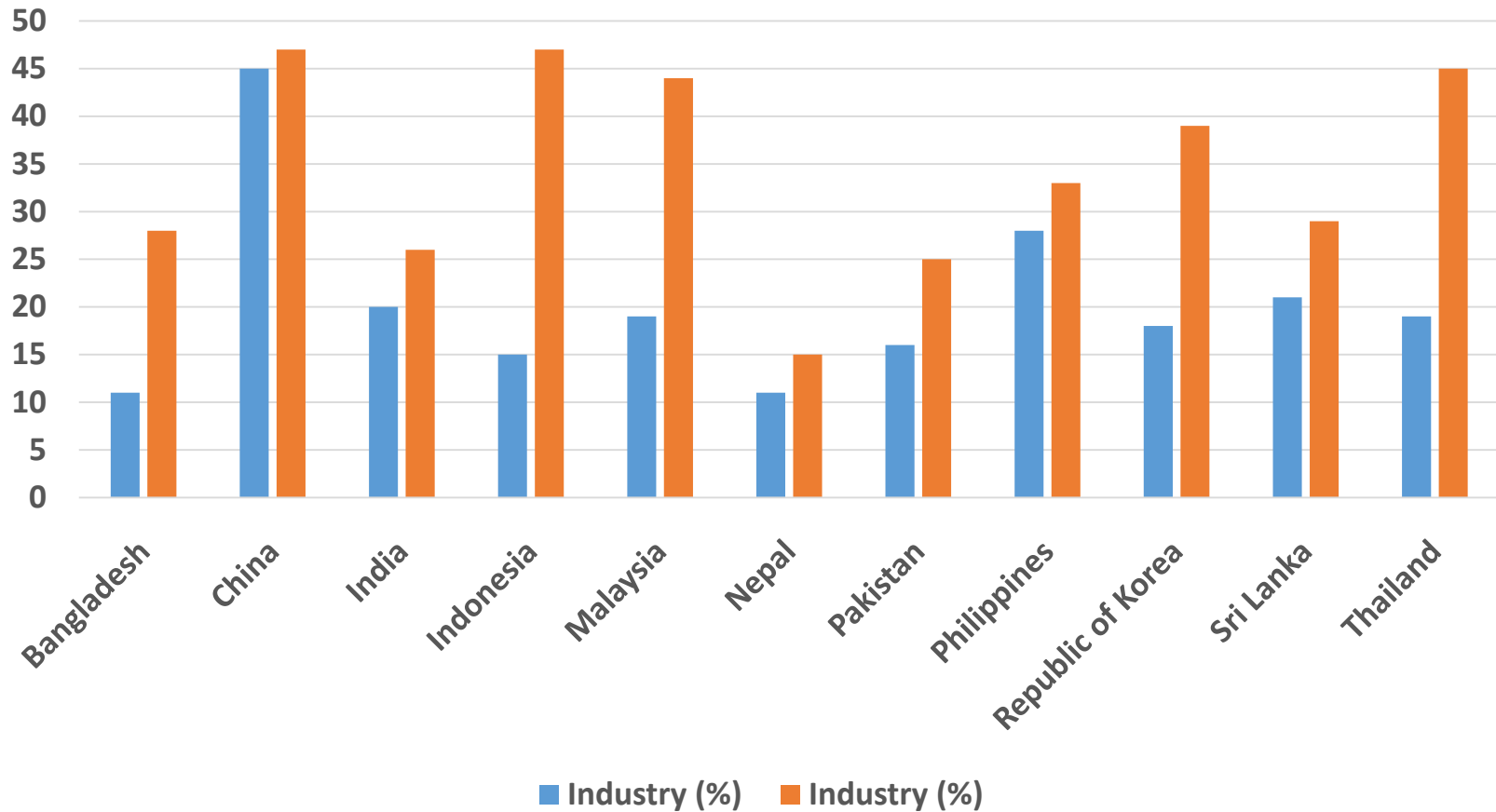
Change in the Sector Composition of GDP in Selected Developing Countries, 1960-2010

Country	Agriculture (%)		Industry (%)		Services (%)	
	1960	2010	1960	2010	1960	2010
Bangladesh	53	19	11	28	36	53
China	22	10	45	47	33	43
India	43	19	20	26	38	55
Indonesia	51	15	15	47	33	38
Malaysia	34	11	19	44	46	45
Nepal	65	36	11	15	23	48
Pakistan	46	21	16	25	38	53
Philippines	26	12	28	33	47	55
Republic of Korea	38	3	18	39	43	58
Sri Lanka	28	13	21	29	51	58
Thailand	36	12	19	45	45	43

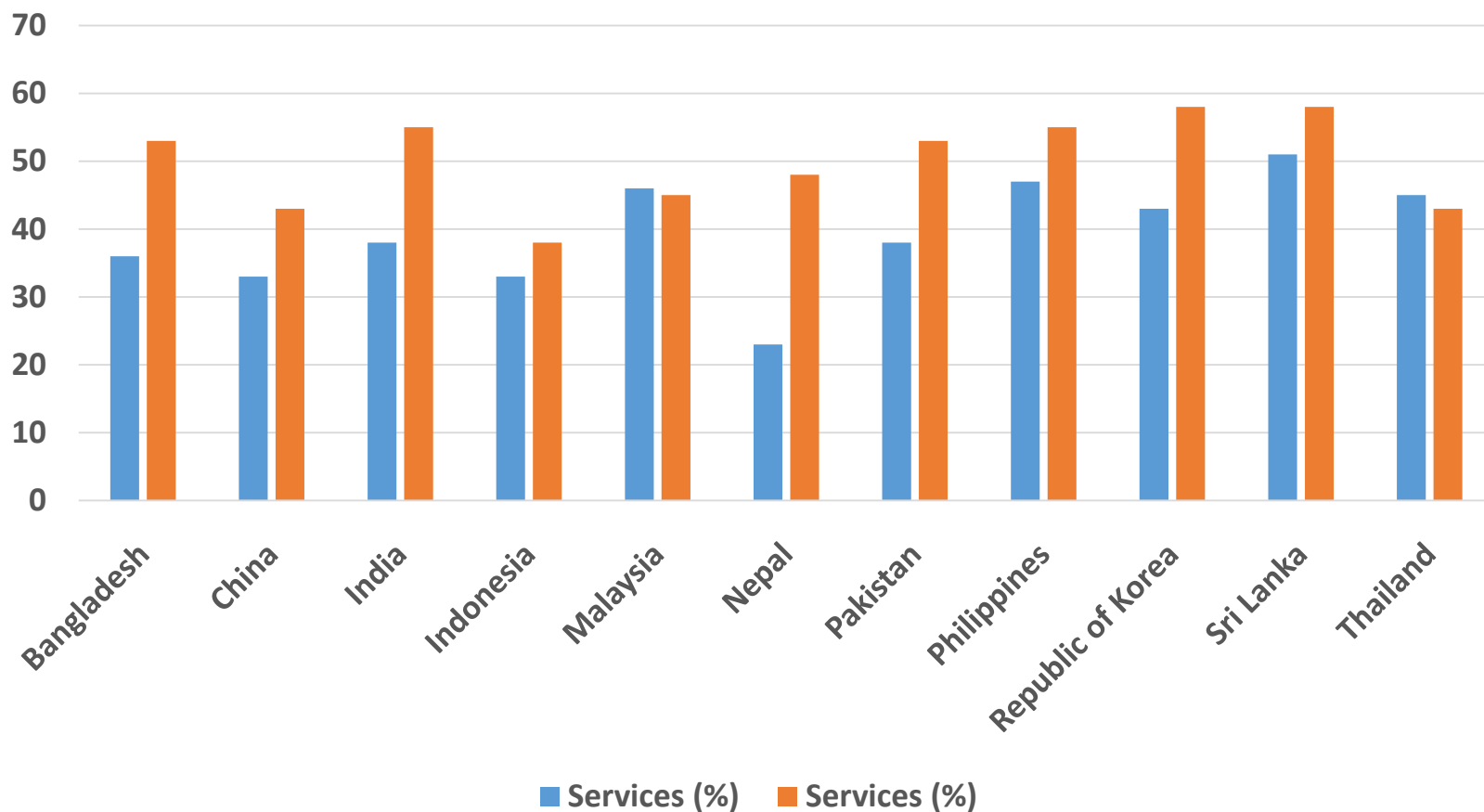
Share of Agriculture in GDP: 1960 and 2010



Share (%) of Industry in GDP, 1960 and 2010



Share (%) of Services in GDP, 1960 and 2010



Sector Composition of Employment in South Asia (% of total employment)

Country and period	Agriculture	Industry	Manufacturing	Construction	Services
Bangladesh					
1999-2000	50.7	12.3	9.5	2.8	36.1
2005-06	48.1	14.5	11.0	3.2	37.5
2010	47.6	17.7	12.5	4.8	35.3
India					
1993-94	64.8	14.7	10.5	3.1	20.5
2004-05	58.5	18.1	12.0	5.6	23.4
2011-12	48.9	24.4	12.9	10.6	26.7
Nepal					
1998-99	78.2	10.5	5.8	3.6	11.3
2008-09	73.9	10.8	6.6	3.1	15.3
Pakistan					
2005-06	42.3	20.7	13.8	6.1	37.0
2010-11	44.2	21.3	13.7	7.0	34.4
Sri Lanka					
2004	33.5	24.1	n.a.	n.a.	42.4
2011	33.0	24.0	n.a.	n.a.	42.8

Growth and Structural Change in Developing Countries (contd)

- Growth of manufacturing output in relation to GDP growth has been higher in ESEA countries compared to South Asia

(See Table in slides no. 20 and 21)

Growth Rate of Overall GDP and Manufacturing Output (annual compound rate of growth in percentage)

Country	India	Indonesia	Rep. Of Korea	Malaysia
1960-1970				
GDP	3.6	3.5	8.5	6.9
Man	4.8	3.3	17.2	n.a
Man/GDP	1.3	0.9	2.02	n.a
1970-1980				
GDP	3.4	7.2	10.1	7.9
Man	4.6	14	17.7	11.7
Man/GDP	1.4	1.9	1.8	1.5

1980-1990				
GDP	5.8	6.1	8.9	5.3
Man	7.4	12.8	12.1	9.3
Man/GDP	1.3	2.1	1.4	1.8
1990-1996				
GDP	5.8	7.7	7.3	8.7
Man	7.5	11.1	7.9	13.2
Man/GDP	1.3	1.4	1.1	1.5
2000-2005				
GDP	7	4.7	4.6	4.8
Man	6.9	5.2	7	5.2
Man/GDP	0.99	1.1	1.5	1.1

Alternative Paths to Structural Transformation: Diversification of Agriculture

- Product diversification within agriculture can contribute to raising productivity and employment in rural areas
- High value added crops like fruits and vegetables have high growth potential
 - During 2000-2010, fruit and veg setor grew by 11 per cent at the global level and by 17 per cent in Asia (FAO data)
 - Average labour use per ha is higher in vegetables
 - Returns to labour are also higher than in cereal production
 - Exporting HVA crops can be an important element in the inclusive growth strategy

Diversification of Agriculture: Nepal

- Percentage share in total cultivated area

Crops	1985/86	2009/10
Paddy	48.5	35.2
Maize	22.9	20.8
Wheat	18.9	17.5
Fruits	0.0	2.5
Vegetables	0.0	5.6

Agricultural Diversification and Employment: Nepal

- Labour input (person-days per ha.) in different crops

Crops	1981/82	2009/2010
Paddy	206	133
Maize	211	129
Wheat	158	120
Vegetables	204	267

Agricultural Diversification and Employment: Cashew in Vietnam

- From household level production by poor farmers, Vietnam has emerged as a major cashew exporter
- Accounts for 24% of world's processed cashews
- Exports to 30 countries
- Both direct and indirect employment impact is positive
- Employs about 500,000 workers _ women are the majority
- Incomes earned by cashew farmers are above the country average
- Concerns remain about wages and working conditions in the industry

Structural Diversification in Rural Areas: Bangladesh (No. and % of People Engaged in Rural Non-farm Activities)

Sector	2002-03		2005-06		2010	
	Number	Percentage	Number	Percentage	Number	Percentage
Manufacturing	2,836	27.89	3,086	25.80	4,188	27.86
Electricity, gas, water supply	49	0.48	40	0.33	62	0.41
Construction	983	9.66	1,006	8.41	1,799	11.97
Wholesale and retail trade	3,879	38.12	4,513	37.72	5,467	36.37
Hotels and restaurants	343	3.37	462	3.86	578	3.84
Transport and storage	2,015	19.80	2,670	22.32	2,804	18.65
Financial services	68	0.67	186	1.55	135	0.90
Total	10,175	100	11,963	100	15,033	100

Bangladesh: Wage Rate (Weekly/Monthly Average Wage Rate) by Sector/Activities

Sector	Wage rate (2005-06) (Taka per week)	Wage as (%) of wage in agriculture	wage/salary (2013) (Taka per month)	wage/salary as % of wage in agriculture
Agriculture and forestry	541		9,146 ¹	
Fishery	201	37.15	n.a.	
Mining	604	111.65	8,336	92.8
Manufacturing	561	103.70	11,112	121.50
Electricity	1185	219.04	11,698	127.90
Construction	749	138.45	9,800	107.15
Wholesale and retail trade	682	126.06	11,442	125.10
Hotels and restaurants	753	139.19	10,745	117.48
Transport and storage	750	138.63	11,232	122.81
Financial intermediation	463	85.58	14,626	159.92
Real estate, renting and business	769	142.14	11,919	130.32
Public administration	649	119.96	13,589	148.58
Education	401	74.12	13,998	153.05
Health and social work	176	32.53	12,888	140.91
Other community, social and personal service	669	123.66	15,529	169.79

Structural Transformation through Service Sector: Issues of Industry-Service Balance

- **Empirical results (Dasgupta and Singh, 2005, data from 30 developing countries and India's states)**
 - Countries with above average manufg growth also have above average GDP growth
 - Productivity growth in an economy varies positively with growth in the manufg sector
 - Productivity growth in an economy varies inversely with non-manufg employment

Structural Transformation through Service Sector: Issues of Industry-Service Balance

- **Compatibility between demand and production (example from India)**
 - Service sector accounts for 15% and 26% of consumption expenditure in rural and urban areas
 - Service sector accounts for over 50% (55% in 2006) of total GDP
 - Income elasticity of demand for manufactured goods is over 1
 - With the share of industry stagnating at 25% of GDP, excess demand may emerge

Structural Transformation through Service Sector: Questions and Policy Issues

- **Can IT sector growth pose a challenge to the notion of industry as the engine of growth?**
 - IT-based services can be exported
 - IT can be used to enhance productivity in other sectors
 - IT can lead to dynamic spillover effects on the rest of the economy
 - IT sector activities need not remain confined to high end jobs

Structural Transformation through Service Sector: Questions and Policy Issues (contd)

- **How employment-friendly has been growth in the service sector? (example India)**
 - **Share of employment is about 25% compared to 52% share in GDP**
 - **Elasticity of employment declined during the 1990s compared to the 1980s**
 - ✓ from 0.62 during 1988-94 to 0.35 during 1994-2000
 - **IT sector accounts for a small share of the service sector and of total employment**
 - ✓ 3.5 m. (2014) out of the labour force of about 472 m.

Questions and Policy Issues (contd)

- **Post-2000 Employment elasticity figures (service sector) show a better picture**
- **Need to look at components of the services sector**
 - Trade and financial services more employment-friendly
 - Transport & communication, and community, social and personal services showed decline in employment elasticity
- **A negative view of the sector as a whole may not be appropriate**
- **But employment generating capacity remains a concern**

Questions and Policy Issues (contd)

- Greater balance is needed in the sectoral pattern of growth
- Manufacturing sector in most South Asian countries has potential to grow at higher rates
- The pattern within manufacturing needs to change
 - From credit-driven demand to more income-driven demand
 - From capital-intensive to more labour-intensive sub-sectors
- Requires a change in the overall pattern and strategy of development

Questions and Policy Issues (contd)

Agriculture

- **Aim at 4% growth per annum**
- **Reverse the declining trend in crop yields**
 - Higher and more effective public investment
 - Improved use of fertilizer
 - More effective irrigation
 - Improvement in dry land farming
 - Strengthen extension services
- **Identify and remove constraints faced by labour-intensive crops**
 - Paddy
 - Plantation crops
 - Fruits and vegetables

Questions and Policy Issues (contd)

Manufacturing

- Aim at raising the manufacturing/GDP growth ratio
- What are the binding constraints on growth?
 - Demand for products
 - Supply side: infrastructure, capital (quantity & price), regulatory framework, etc.
- Policies for strengthening demand: income vs credit
- Policies to promote growth of sectors
 - with high income elasticity of demand
 - that are more employment-intensive
- Policies to remove distortions in relative factor prices and to encourage use of labour