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Mainstream Economics and Bangladesh's Economy: Seven Challenges and Opportunities

AHMAD AHSAN

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Mainstream Economics and Bangladesh's Economy: Seven Challenges and Opportunities

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I. Mainstream Economics

This paper has two distinct aims. First, it discusses some aspects of mainstream economics, their usefulness in addressing real world issues, and how they are mistakenly conflated with neo-liberal thinking. Second, it uses a narrow sliver of mainstream economics, growth accounting, to demonstrate how it can be used to highlight several challenges facing the Bangladesh economy.

It is useful to give a definition of mainstream economics at the outset. Mainstream economics (ME) is a body of concepts, theories, and techniques to determine and explain facts about the economy, economic behavior, and its impact on the welfare or well-being of people, and where possible, make predictions and apply these for policies to improve welfare. So mainstream economics, a term that will be interchangeably used with modern economics, tries to explain in a coherent way why and how goods and services are produced and distributed and how that impacts welfare - loosely defined as satisfaction from consumption, income, profits, and efficiency in obtaining them, and propose changes in policies to improve outcomes.

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The body of analysis, following its origins in neo-classical economic theory,[1] uses choice theory–the choices by self-interested free agents of consumers, producers, and public officials–to work, consume, produce, sell, and exchange goods and services in markets or within organizations to increase their own or their group's welfare. Worth stressing is the concept of self-interest is broad: self-interested individuals are certainly interested not only in their own well-being but also in those of their children–so as individuals, they will value the interest of their family members. Further extending this thought, their economic behavior may also reflect their interest in and commitment to the well-being of their organization, community, society, country, and the world.

Thus, a volunteer working to advance world peace or reduce global warming is making a choice of using her time (and giving up the monetary income she could have earned by working at that time) because she derives satisfaction from doing so consistently within the framework of mainstream economics. While this approach may appear unconventionally broad, it is perfectly analogous to the way individuals chose between work and leisure in mainstream economics.

The mainstream economics school originating in the works of Adam Smith (Smith, 1776, 2000) historically had human well-being at the center of inquiry. As Nobel Prize-winning economist Arthur C. Pigou wrote, "It is not wonder, but rather the social enthusiasm, which revolts from the sordidness of mean streets and the joylessness of withered lives, that is the beginning of economic science" (Pigou, 1935). Before Pigou,

[1]Economist Joseph Stiglitz, among others, has questioned the continued use of the term “neo-classical” economics given that modern economics has so many departures from it.

however, another English economist, Lionel Robbins, provided a more precise definition: "Economics is a science which studies human behavior between ends and scarce means which have alternative uses" (Robbins, 1932).

Robbins' definition, though derided by many as having put economics in too narrow a straitjacket, has stood the test of time as best stating the theoretical core of economics: a study of individuals, groups, society, and governments who try to improve their welfare by using limited means to make choices of alternative ends.

Such an approach need not be confined to an ideological school. Mainstream economics shows that free choices of economic actors in making exchanges and choices using prices in perfectly competitive, idealized free markets, where they have secure private property rights, lead to the most satisfying outcome for all, given their initial endowments. But modern mainstream economics also recognizes that the world consists of "market failures" where most markets differ from idealized conditions and where society and governments must step in to correct market failures.

While the true nature of ME may be objective and independent of ideological choices, ideology has played a role at times in its interpretation at various times. Most recently during the few decades from the 1980s to 2008, there was a shift in policy thinking towards market fundamentalism. That is best described as leaving almost all economic decision-making to the invisible hand of free markets. For instance, US Federal Reserve Chairman Alan Greenspan thought financial markets were self-regulating and hence did not worry about the rise of complex derivatives, assuming that the financial sector would manage the risks.

But this view ignored fundamental incentive incompatibilities of traders and bankers that allowed them to earn fees by creating excessive risks and then transferring them to others. As a result, leveraging and risk exploded. In a related case in the same period, Larry Summers, then under Secretary of the US Treasury, declared that free-flowing cross-country capital flows would be the "jet engines" that would finance growth, ignoring their herd instinct, the volatility and the economic loss created by them as most dramatically demonstrated in the East Asian Financial Crisis of 1997.

Moreover, the emphasis of economics teaching and research on mathematical rigor often overlooks or understates real-world problems and market failures and suffers from being ahistorical. The nearly exclusive emphasis on mathematical rigor often ignored the lessons of history and weakened cross-sector analysis, leading to costly errors of omission and commission. Partly due to these reasons, most economists were blindsided by the advent of the financial crisis of 2008, where millions lost their jobs and lifelong savings.

Excessive preoccupation with economic growth or financial wealth came at the expense of attention to environmental damage, health and education, and global problems such as climate change and income inequality. Consequently, there is a backlash against what is popularly perceived as hyper-globalization and "neo-liberalism." But that has been a problem with some practitioners, not of mainstream economics itself.

II. Market Failures are Embedded in Mainstream Economics

To its credit, modern economics recognizes that the modern economy is based on what it technically calls "market failures" – i.e., real-world economies have markets that are imperfect in all kinds of ways that are different from the perfectly competitive, level playing field of the original idealized conception of the world.

Another way to look at market failure is when markets themselves do not produce socially desirable results because there is a divergence between social and private interests: i.e., what is good for individual producers or consumers is not good for society as a whole. Then, public policy and intervention are needed to improve outcomes.

In essence, modern economics is mostly built around analyzing market failures and their implications. One question can be, why not start with that reality: there are oligopolies and market power, not perfect competition. Or start with the fact that there are externalities: pollution. But in that case, we would have to proceed on a case-by-case basis – a separate theory may be needed for every case. We would then lack a unifying theoretical framework that could deal with different situations, including several of them simultaneously.

In the footsteps of Jean Tirole (Tirole, 2017), we discuss seven different market failures, although they are not the same in number or nature.

2.1 Market Failure One: Business Cycles, Recessions and Unemployment

First among these failures is when markets fail to balance supply and demand at the national level. When demand for

goods and services falls below supply, national income falls, and the economy goes into recession. Demand can decline due to a range of factors: fall in earnings from exports and remittances, increase in interest rates driving investment and housing demand down, the falling value of assets making consumers feel poorer, and, most broadly, because consumers and investors lose confidence and cut back on spending. All this sets into motion a downward spiral of incomes and employment: producers cut down production, decrease their demand for raw materials and intermediate goods, and lay off workers. Because income falls, there is then another round of decline in demand. Part of this happens because nominal wages and prices are sticky downwards due to institutional reasons, and thus, markets cannot adjust. The most extreme example was the great depression of the 1930s that swept through the United States and Europe, leaving one in four workers jobless in the United States. Even before the great depression, recessions and the cycle of booms and busts were frequent occurrences, causing unemployment and income losses. British economist John M. Keynes's (Keynes, 1936) seminal contribution was to point out that the government's task during a recession is to use fiscal policy to raise expenditures (or cut taxes) to stimulate demand and the economy, as in the case of a liquidity trap, when interest rates are already too low, monetary policy can be ineffective.

One key lesson for all countries that emerges here is the importance of maintaining economic stability, confidence, and optimistic expectations of economic actors about the future, especially investors. Otherwise, this problem of falling demand and excess supply is mainly a problem of higher-income and upper-middle-income economies with excess capacity. The main challenge for lower-income economies is to adequately save and invest in human and physical capital to raise

production capacity. Only by doing so can these countries increase the ability to supply goods and services to their population.

2.2 Market Failure Two: Externalities, Spillovers, and the Tragedy of the Commons

The original concept of economics dealt with transactions between two parties and showed how, under perfectly competitive conditions, both parties would gain from the trade. On the contrary, modern economics knows that such trade can and often affects persons not involved in the transaction. The classic examples are many. When human beings get educated and trained through schooling, they benefit not only themselves by raising their productivity but also by making more productive other workers around them. Thus, education has a multiplier effect. There are negative externalities, too. The two parties benefit when pharmaceutical firms or tanneries produce their goods and sell these to consumers. However, because firms and tanneries may not care to dispose of contaminated material safely or control their effluence and emissions, their transactions pollute the environment to the detriment of the general population. That becomes a negative externality unaddressed by the market.

Markets by themselves cannot value or price both positive and negative externalities. As a result, markets will tend to undersupply goods with positive externalities and oversupply in the case of negative externalities. There are not enough good schools and clinics, but water and air pollution exist. There is also the crowding up of open space, the filling of water bodies and canals, and so on. This latter class of problems generally exists when private returns and property rights are not well defined and are called "the tragedy of the commons."

This issue becomes deeper when we consider agglomeration externalities and economies of scale that explain the emergence of towns and cities, the productivity gains they provide, and, on the converse side, the many urban problems of congestion and pollution that arise from negative externalities and diseconomies of scale. We will take up this issue later.

A broader class of problems that markets cannot deal with are what are called public goods and goods that can be non-rival and non-excludable. Public goods are those goods and services consumed jointly, e.g., healthy environmental conditions or a sound legal system or defense for a country. When the benefits of such goods and services accrue more narrowly–.e.g., good neighborhood schools and parks, clean roads, these are called "club goods." It is difficult to exclude a citizen from enjoying the benefits of these public or club goods. Because of this, markets fail to produce a robust legal system. Here, governments will need to step in to raise revenues through taxes, which brings us to the field of public finance.

It is worth noting that these issues are intrinsically important for long-term growth. When policies and institutions work to provide public goods adequately, they increase the economy's overall productivity, which is essential for long-run growth.

2.3 Market Failure Three: Asymmetric Information

A revolutionary advance in economics has been recognizing the profound importance of information and knowledge and how access to them determines market outcomes. On one side, this insight is precisely the reason decentralized markets work so well. Because the market processes an inconceivable amount of information every hour it works, centralized bureaucracies and governments – even with all the Computing Power at their disposal-can perhaps never successfully replace markets. When

computing power was growing in the 1970s and 1980s, some economists thought computers could process enough data to provide prices to match supply and demand in markets in a socialist economy. That hope or fear, depending on the point of view, proved to be wildly inaccurate.

This insight, however, also leads to the *third* market failure: When access to information is unequal, i.e., sellers know more than buyers, or vice versa, then one of the parties can lose in the transaction or become a victim of outright fraud. And if parties are aware of that, markets will have fewer transactions and, in the extreme, even become "missing." That is why advanced economies have regulations to ensure greater transparency and access to information in markets. That is also why "insider trading" is severely punished as an economic crime.

2.4 Market Failure Four: Imperfect Competition

This class of market failures concerns market power. Contrary to the concept of introductory economics, consumers and producers, buyers and sellers, do not play on a level playing field – they do not have the same amount of bargaining power. The classic example of this comes from labor markets. On the whole, there are many more workers seeking jobs than firms provide them. An asymmetry here leads to market power in the case of employers over the workers. Hence, it is likely that, left on its own, corporations and firms will try to pay workers much below the productivity contribution and make excess profits. That can adversely impact the economy by weakening the purchasing power and the market for goods produced by the corporations. More profoundly, such a skewed distribution of power can lead to high inequality, social unrest, and uncertainty, all of which are harmful to modern economies. That is why modern economies regulate the use of minimum wages.

Market failures become deeper when market capture by large businesses, oligopolies, and oligarchs leads to less competition and lower efficiency. Advanced capitalist countries employ a host of regulations to guard against collusive and monopolistic practices. Laws and agencies protect against anti-competitive practices and mergers and acquisitions of firms to prevent market dominance. The United States, the heartland of capitalism, has a history of trust-busting and breaking up large railroad, steel, and banking corporations since the late 19th century. Even in the last few decades, it has broken up mammoth entities such as IBM, AT&T, and Microsoft. Even so, concern about the growing dominance of large corporations is growing in the United States. Recent research, summarized by economist Thomas Philippon in his insightfully titled book *The Great Reversal: How America Gave Up on Free Markets,* shows how market concentration – the share of markets captured by a few firms - has dramatically increased in critical sectors in the United States. He further documents how this decreased competition in critical sectors has led to more expensive services and, unsurprisingly, markedly lower and declining investment rates in the last 20 years to almost half of what they were in the 40 years between 1960 and 2000. Instead of investing, large corporations are using their high rates of profits to buy their stocks (stock buybacks) to drive up the prices and the earnings of both shareholders and management.

2.5 Market Failure Five: Complementarities and Coordination Failures

Modern economics recognizes there can be complementarities between economic activities: i.e., some activities have to take place together to produce good outcomes. The market failure here is that markets cannot create these good outcomes because they do not recognize these complementarities.

The clearest example of complementarities and coordination problems comes from the development of towns and cities. By bringing people and firms together by creating economic density, towns create efficiencies of economies of scale and agglomeration externalities. Because of agglomeration externalities, when workers, producers, firms, and consumers get together in an urban area, they also raise each other's productivity and benefit through nearness to markets, supplies of inputs, workers, the availability of a wide variety of goods and services including health, education, and culture, and, not least, from the exchange of ideas and experience.

Initially, these towns evolved out of marketplaces where producers and consumers gathered from surrounding rural areas to sell their produce and wares. Soon, providing services to these markets– a tavern to stay and dine, warehouses to store produce, market stalls, and roads to enable commerce- evolved out of these activities and created a town.

However, well-functioning cities and towns were not naturally created by markets. Several activities need to happen together: the development of roads, lighting, sanitation, and other infrastructure; public services of health, education, and water; and, most importantly, the planning and coordination of these activities. They also needed good local governance to carry out these activities. Because these elements are weak in many emerging market economies, high-quality urban development fails to be achieved. Governments have to step in to encourage through the public provision of, or subsidies for, goods that have positive externalities and complementarities.

Conversely, concentrated activity produces negative externalities such as congestion, pollution, and disease if sanitation is poor. Because markets cannot address these

problems on their own, cities can grow and overgrow in an uncoordinated manner that lowers welfare and becomes unsustainable. In this case, governments should intervene with taxes and regulations to discourage congestion and the supply of goods (sometimes called "bad") with negative externalities. If public policies cannot address this task effectively, cities, towns, and economies can be stuck in a bad equilibrium.

2.6 Market Failure Six: Bandwidth Problems and Behavioral Economics

The fourth market failure arises from the human inability to protect their interests in market transactions. This inability may arise out of what has been called the mental "bandwidth" problem. It is most apparent in the case of economically struggling people who can be too harried to have the ability to make the right decisions. When people struggle to pay the rent, educate their children, and even find food and drinking water, as happens in urban slums, they will be too distracted and unable to bargain correctly with their customers, landlords, or employers. Wealthier people engaging in a complex financial or legal agreement may be unable to understand the fine print. The second kind of human inability arises from psychological weaknesses that can make them victims of private-sector greed, viz., through the sale of tobacco, liquor, and drugs. Public policies are needed to make corrections in these cases.

2.7 Market Failure Seven: Extreme Inequality

Finally, unregulated capitalism and markets do not guard against extreme inequality. Even in economic theory, markets can be efficient in terms of reaching a Pareto optimal efficient outcome, but which allows extreme inequality of opportunity and inequality of outcomes.

A certain amount of inequality of outcomes is necessary for economic and social development: if markets did not reward hard work, education, savings, investment, and risk-taking by investors, there would not have been the economic progress the world has seen. However, if wealth and capital are too unequally distributed, to begin with, markets will deepen inequality through creating a cycle of inequality of opportunity with inequality of outcomes. That leads to a downward spiral in two ways. First, in sheer economic terms, high inequality can make the economy stagnant and declining by reducing demand, investment, human capital development, and long-term growth.

More deeply, in mainstream political-economic terms, increasing inequality leads to "elite capture" of the state by the rich, who use the state for more rent-seeking and asset-capturing, further worsening and perpetuating inter-generational inequality. Together, these effects of high inequality create social conflict, reduce public services, shrink domestic markets, discourage investment, and lower overall economic activity in a vicious cycle. It is this cycle that perpetuates poverty and the middle-income trap that many potentially rich countries suffer from in Africa, South America, and South Asia. What is needed are firm public interventions, institutions, and policies to progressively tax incomes and, more controversially, excessive wealth, spend more on welfare-enhancing public goods, reduce inequality of opportunity, provide a level playing field, and infuse economic dynamism.

III. Public Economics and Government Failures

Because governments need to intervene to address these market failures, there is no such thing as pure capitalism. Instead, we have mixed economies, where governments take an active role. The role of government and institutions – rules,

laws, regulations, and organizations- is to take care of "market design" and public policies to address these failures.

In Europe and North America's advanced economies, governments can tax as much as 35 to 45 percent of what the economy produces yearly and spend even more through borrowing from the private sector. They run over a third of all economic activities, including providing vital public goods and services such as law and order, education, health, infrastructure, defense, etc. Second, critically, only governments have the authority to issue fiat money. Third, governments can regulate private sector activity and use it extensively.

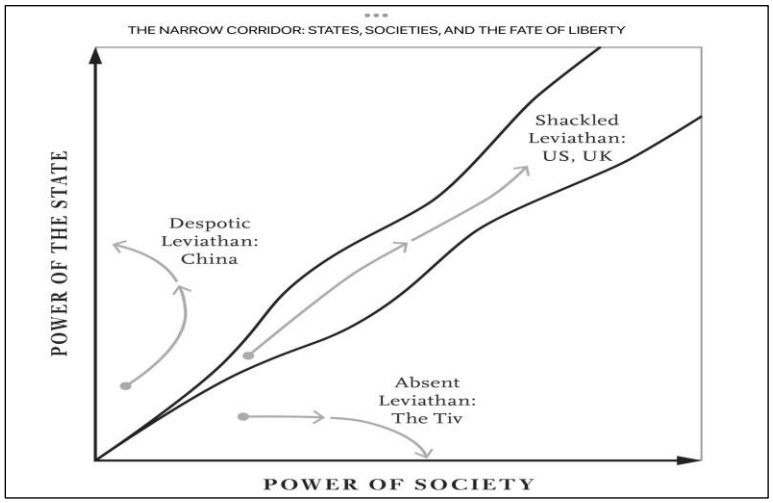
Thus, the state's role as a partner of the private sector and civil society is essential for long-term growth. In this context, one more advance of modern economics has been acknowledging and addressing the issue of government failure. It is naïve to assume that government leaders and civil servants will always make policies that selflessly serve the general good and society. Like private sector producers and consumers, government officials can be motivated through self-serving interests by attaining higher powers or financial gains through corruption. Hence, there is a need for a balance between state power to intervene in markets and society and the society's ability to pursue its interests without regulation.

This need for balance is best captured by the following diagram by Acemoglu and Robinson in their book, the Narrow Corridor, below. This diagram suggests if Government or state power measured by the vertical axis becomes too dominating– as has happened in autocratic societies in the past and present– the private sector will withdraw, and growth and progress will be stifled.

On the other hand, if the power of society (individuals or private groups) is too strong and state power and capacity are too weak to address the problems of market failure and restrain all activities of individual agents, anarchy will rule. It is this state-society-balanced mixed economy capitalism that has delivered unprecedented economic and social progress in the world in the last 200 years. To keep the discussion concise, let us focus on three related indicators of improvement: people's health, which is the most summary indicator of their welfare; second, their incomes; and third, their escape from poverty.

Take first the case of health. Perhaps the best summary measure of social health is population size: in the initial stages of development, populations grow when people become healthy and prosperous. According to the US Census Bureau's research summary, the world population has hung by a thread for most of human history: anywhere from 1 million to a few million. Even after the food supply became more reliable when agriculture came about 12,000 years ago, the global population was, at best, 10 million and increased very slowly. It took all that time since then to reach the 1 billion people at the beginning of the 19th century, when science, the industrial revolution, and capitalism began to reign. In the next 200 years, the world population has increased more than seven times to 7.8 billion people.

Figure 1: The Need to Balance State and Social Power



Source: Acemoglu Robinson (2019).

A related indicator is that, for most of human history, average life expectancy hovered around 30 to 35 years until the beginning of the 20th century. Since then, average life expectancy has doubled to 72 years in 2020. Second, in the case of income, over the past one hundred years, world GDP has grown from less than $5 trillion (in 2011 in international dollars) to $91 trillion.[2] Correspondingly, the share of people living in extreme poverty (consuming less than $1.90 in 2011 international dollars per day) decreased from 61 percent in 1918 to less than 10 percent in 2018.

These gains in human welfare reflect not only the increase in income but also the advances in policies to support health, education, employment, and other welfare indices that have

[2] New Maddison Project Database and World Bank, 2017.

come from greater understanding and research on these issues. While research in core health and education has been vital, so has been the complementary research on economic policies that applied the advances in science in society.

IV. Extensions and Adaptations in Mainstream Economics

The range of modern, mainstream economics is thus vast. Currently, the *Journal of Economic Literature* has classified 20 main and 119 secondary fields in economics (See Annex 1). Within secondary fields, there are also tertiary fields. For instance, public economics has not only nine secondary fields but also has 55 tertiary fields (Government scope, performance, taxes, subsidies, publicly provided private and public good). On the other hand, the core fields of microeconomics and macroeconomics each contain about 52 and 46 tertiary fields.

Within this vast range of economics, particularly noteworthy are some fundamental changes in approaches to economics. It is perhaps best summarized by one of the foremost macroeconomists of our day, Olivier Blanchard, who made a leading contribution to creating modern macro-economics. Blanchard (2017), formerly a Professor at MIT and Chief Economist of the IMF, writes:

> "*Until 30 years ago, macroeconomic policy was seen in the same way as the control of a complicated machine. Methods of optimal control, developed initially to control and guide rockets, were increasingly being used to design macroeconomic policy. Economists no longer think this way. It has become clear that the economy is fundamentally different from a machine, even a very complicated one. Unlike a machine, the economy is composed of people and*

> *firms who try to anticipate what policymakers will do, and who react not only to current policy but also to expectations of future policy. Hence, macroeconomic policy must be thought of as a game between the policymakers and "the economy"—more concretely, the people and firms in the economy.*"

Economics is thus now interactive. It is not a case where impersonal consumers, producers, and other actors react to governments and markets in a robotic, mechanical way. Instead, their actions are based on their "*expectations*" about other consumers, producers, and governments. Alongside expectations, there is now the explicit recognition of market failures discussed above. Thus, economics now directly addresses the need to improve market performance through "*market design*" that considers the *imperfections* in the market and the role of expectations. It addresses the need to build i*nstitutions–rules of the games and organizations* – through which economic behavior takes place. It recognizes the crucial role of *political economy*, where not only market power but also political power and "elite capture" can adversely affect economic outcomes.

The challenge then becomes how to create rules and incentives in these institutions to create the best possible outcomes – the welfare of most people.

One of the most important and promising developments is the new political economy recognizes that such "economic" activity consumes resources to gain rents and excess (non-competitive) profits and benefits from redistribution rather than producing value. One can classify some of the new financial engineering products and excessive financialization of

the economy as belong this type. If inadequately regulated, "without proper rules, finance can easily degenerate into a rent-seeking activity," as was frankly stated in a Presidential Address to the American Financial Society (Zingales, 2015).

These rent-seeking activities lower social gains. Hence, this new branch of political economy emphasizes the need to organize institutions–rules of the game–that increases accountability and imposes constraints on oligarchic, "insider" power and arbitrary executive behavior so that economic competition is fair and inclusive, protects private property from arbitrary taxation and confiscation, and reduce transactions costs to create what Nobel Laureate North and his coauthors (North et al., 2012) have called open-access orders.

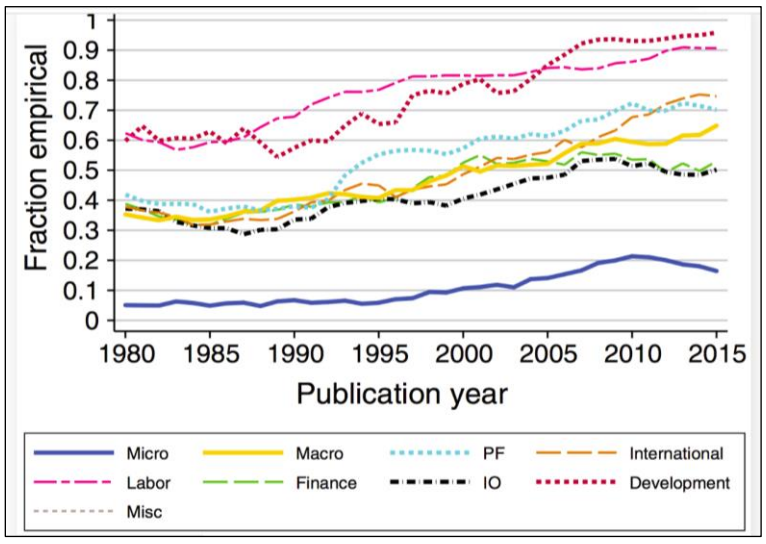
Related to this, other new branches of economics now address issues such as creating institutions to organize collective action to address the "tragedy of the commons" class of problems. When community resources– e.g., a village grazing field or a pond–do not have individual property rights, they are neglected and become prey to unsustainable overexploitation. Or, more broadly, it can be a Government agency that is not providing services. Single individuals or even groups find it difficult to resolve these problems because of "free rider" problems. Many individual will not participate because they will gain from the resolution of the problem without having to participate if others solve it for them. This discourages collective action and becomes a collective action problem. Hence, rules and incentives are need to incentivise enough people to work together solve this collective action problem. Designing institutions to do so has spawned another branch of economic work (Ostrom, 1990) that, hitherto ignore, led to the much-deserved Nobel Prize of Elinor Ostrom in 2009.

Some other new applied and diverse branches of economics are the economics of climate change, body organ exchanges and placement, and auctions of electromagnetic spectrums that

provide highly useful services for society and have been duly recognized by Nobel prizes (Angner, 2023). Although still not yet rewarded by a Nobel prize, economists are doing valuable work in areas such as education, health, and even happiness.

The other extremely significant methodological advance in economics – that brings it closer to being a science–is that it has become far more empirical and evidence-based. Even until 30 to 40 years ago, economics, dominated by theory and inadequate evidence, often degenerated into sterile ideological debates shedding little light. The most promising development here has been the rise of empirical research to establish facts and test and settle theoretical discussions. Thus, between 1980 and 2015, the share of empirical research in major fields such as macroeconomics and public finance increased from one-third to nearly 70 percent of top-ranking research as judged by high-quality journal publishing (Figure 2).

Figure 2: The Rise of Empirical Economics



Source: Angrist et al. (2017).

There is enormous scope to apply all the discussion above and show how they apply to Bangladesh's development issues. We will leave that task for the future. For now, in a disjointed fashion, we will turn to the second distinct part of the paper, where we will use only one important slice of mainstream economics to illustrate some key challenges facing Bangladesh.

V. Growth Mechanics and Fundamentals–Seven Issues for Bangladesh

Fifty-two years after independence, Bangladesh has an admirable poverty reduction, human development, and growth record. Extreme poverty declined by three-fourths from 44 percent of the population in 1991, when democracy was restored, to less than 10 percent in 2022, the last year survey data was available. Primary school enrollment is universal, and there is gender parity in primary and secondary education. In the case of life expectancy (now 73) and maternal and infant mortality, Bangladesh performs better than not only its neighboring India and Pakistan but also much more affluent Indonesia and the Philippines.

Human development was underpinned by accelerating economic growth, especially after the restoration of democracy in 1991. In the five years preceding COVID-19's emergence, GDP growth exceeded 7 percent on average, placing Bangladesh among the five fastest-growing countries globally. Real per capita income has quadrupled since independence. At the same time, it has increased by more than twenty times in current US dollars to $2,469 and to PPP$7,066 in the more accurate measure of international dollars. Growth has been comparatively inclusive because Bangladesh invested significantly in agriculture and rural development and adopted employment-intensive, export-oriented manufacturing. Jobs

grew rapidly, about 2.6 percent annually in the last two decades, and more than two-thirds of job growth in the past decade has been in higher productivity manufacturing, construction, trade, and services. While there was an initial increase in inequality after growth accelerated in the early 1990s, the Gini coefficient of consumption, a widely used measure of economic inequality, has been steady at around 0.33. By that measure, which albeit understates inequality through under-sampling of the very rich and the very poor, there is greater economic equality in Bangladesh than in India, China, Indonesia, and Vietnam.

Having attained lower middle-income status, Bangladesh has started its middle-income journey. In this journey, it faces the so-called "middle-income trap challenge." That trap refers to the empirical observation that productivity and income growth slow down as countries rise up middle-income ladders and near high-income status. Most of the research literature defines higher-income economies relative to the United States. Approximately 50 percent of the US's per capita income, or about $37,000 in current purchasing power parity dollars, is the threshold for becoming a high-income country. In the fifty years since 2010, only 15 economies, mostly East Asian and EU members, have successfully made this transition. The World Bank's higher income country threshold – after which countries are no longer eligible for World Bank loans – is much more modest, at $13,025. But even that modest threshold has proved difficult for countries such as Malaysia, Turkey, Brazil, or Mexico, which have been hovering near the threshold for decades but cannot cross over; only Chile and East European EU accession countries have crossed that boundary.

With a per capita income of $2,800 ($7,397 in PPP terms), Bangladesh is still far from high-income thresholds. However, the evidence for some of the countries discussed above shows a

pause in growth when their per capita incomes were between USD 3,000 and USD 5,000. Much of that took place in the 1990s when, as today, these countries were dealing with exchange rate volatility, fragile financial sectors, the Asian financial crisis, and internal structural problems, including the dominance of oligarchies and crony capitalists.

Bangladesh is now entering that phase of the lower-middle-income trap range. One example is neighboring India, where growth rates have markedly decelerated in recent years, even though per capita income is about $2,400. Bangladesh is also facing some of the initial signs of middle-income challenges. Two specific ones are the prospect of losing the advantage of preferential tariffs under the Everything-But-Arms programs of the European Union and concessional lending terms when Bangladesh graduates to become a developing country under UN classification at the end of this decade. A second challenge is the macroeconomic volatility that Bangladesh is currently passing through due to aggregate imbalances, structural constraints, and external terms of trade shocks.

Against this backdrop, in this second part of the paper, we use one small but influential slice of mainstream economics, growth theory, to show how even such a narrow technical approach can illuminate seven key challenges and opportunities for growth in Bangladesh. In Box 1, four basic neo-classical growth equations highlight the main fundamentals of long-term growth.

These equations highlight the importance of investment and net capital accumulation -i.e. capital after depreciation (equation 1), employment of the working age population (equations 1 and 4), education and schooling to boost labor productivity (all the equations), the total productivity of both capital and workers (the term A in equations 1 and 2);

allocating capital and labor to their most productive uses and sectors and facilitating their mobility (equation 3), and the demographic dividend measured by the share of the working age population (equation 4).

Box 1: Four Sources of Growth Equations

Y= GDP, y = GDP per worker adjusted for education. A=Total Factor Productivity, K = Capital Stock, L = labor units, h = the increase in productivity that comes from schooling, and WAP =Working Age Population

GDP

(1) $Y = AK^{\propto}(hL)^{1-\propto}$

Productivity

(2) $y = Y/hL = A(K/hL)\alpha$

Implications of (1) and (2): GDP and productivity depend on capital stock, employment, schooling, and crucially, Total Factor productivity that depends on higher education, research (that produces non-rival knowledge), and institutions that ensure safety, basic rights, property rights, public goods, and well-managed markets.

(3) $y = \sum_i L_{i/}L \times Y_i/hL_i$

Implications: Allocation of workers and enabling Structural Change is critical because resources and labor need to go to the most productive sectors. There should be factor mobility supported by efficient financial sector and price signals.

(4) GDP/Population = Y/hL x (hL/WAP) x (WAP/Population)

Implications: Per capita GDP depends on educated Labor Productivity, the employed working-age population, and demographics – the share of the working-age population in the total population.

A key factor called total factor productivity (TFP), denoted by A in equations 1 and 2, has been empirically shown to drive almost half of the growth in advanced economies. The wealthier an economy becomes, the more critical the role of total factor productivity becomes. A vast literature on the drivers of TFP highlights the importance of public learning, research–producing non-rival and non-excludable goods–that can be employed by all, economies of scale, agglomeration externalities, urban development research, and effective institutions and organizations.

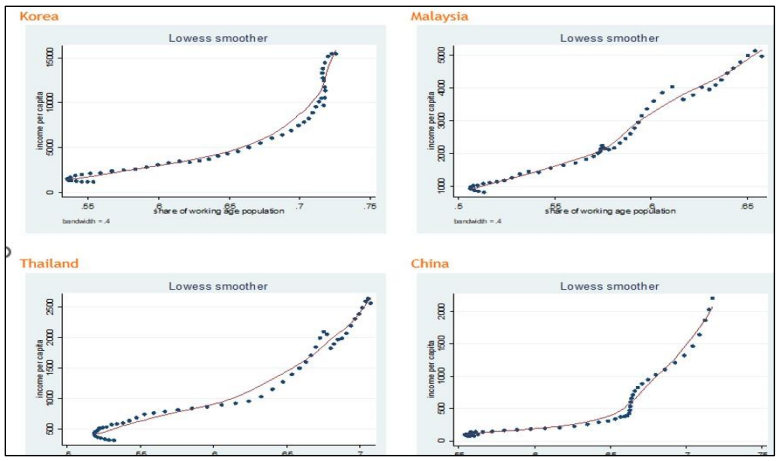
In the forward-looking exercise we will do here, we will use the equations to illustrate seven key challenges Bangladesh faces. If these challenges are well met, these challenges will turn into opportunities to sustain long-term growth in Bangladesh. We start with equation 4, which highlights an essential issue: the ability to use large numbers of working-age people when demography makes them available. But to do so effectively, we need to educate and train them well and employ them productively.

Challenge One: Using Our Demographic Dividend

Demographic dividend refers to the period when countries have a high ratio– typically about two-thirds–of the working-age population to the total population. That is, two workers are available for every third person of the population who is either too old or too young to be of working age. Internationally, the working-age population is defined to be those from 16 years to 64 years. The algebra and the intuition behind the demographic dividend are simple: the more significant the share of the population working, the higher the per-capita income will be, other things being the same.

What was not so evident until recent decades is the significant contribution of this factor. The dramatic example of the use of the demographic dividend comes from the dynamic economies of East Asia, as shown in Figure 3. It is evident that in all four of these countries, per capita income growth markedly increased when the share of the working-age population was 65 percent or higher. In general, the demographic dividend is estimated to have contributed as much as one-third of per-capita income growth of the fast-growing East Asian countries (Bloom & Williamson, 1998).

Figure 3: The Demographic Dividend – The Linkage between Income per Capita and Share of Working Age Population in Four East Asian Economies

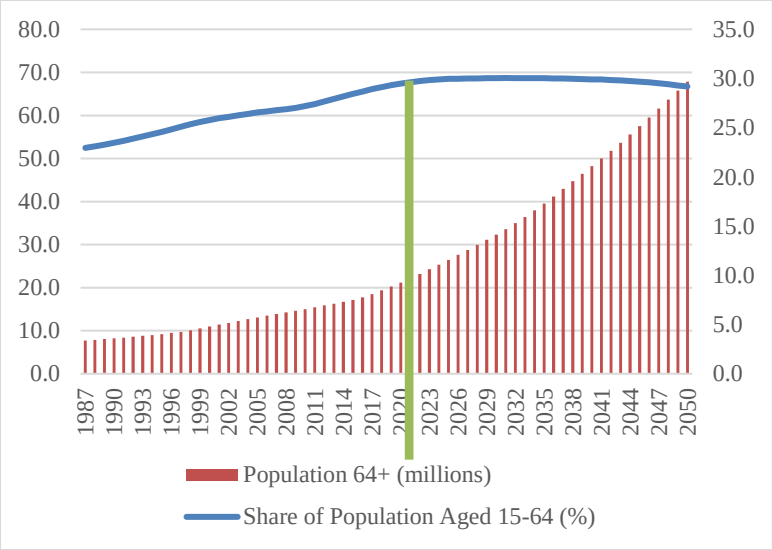


Source: Ahsan (2011), Data from WDI.

However, a second term of equation 4 (Box I) also makes clear that to get benefits from a demographic dividend, the working-age population needs to be educated and productively employed. If these are not done, as in many developing countries, the demographic dividend can become a demographic disaster. Instead of growth, there will be a significant increase in the unemployed working-age population–especially the youth – leading to social and political tensions.

That challenge is in front of Bangladesh now. Figure 4 shows since 2017, more than two-thirds of Bangladesh's people have been of working age (16 years to 64 years). There are two working-age persons for every dependent child or elderly, boosting Bangladesh into its demographic dividend phase. UN projections forecast the share of the working-age population to peak at around 2033 at about 69 percent, but the two-one ratio will persist until about 2050.

Figure 4: Bangladesh: Demographic Dividend and Ageing



Source: UN DESA data and projections.

This is a critical window and opportunity for Bangladesh to utilize this demographic window of low dependency and growth. However, that can happen only by providing employment for the working-age population in higher productivity jobs in the domestic economy. The critical point here is the need for urgency to address these issues. The impact of providing good education and employment will last over four decades.

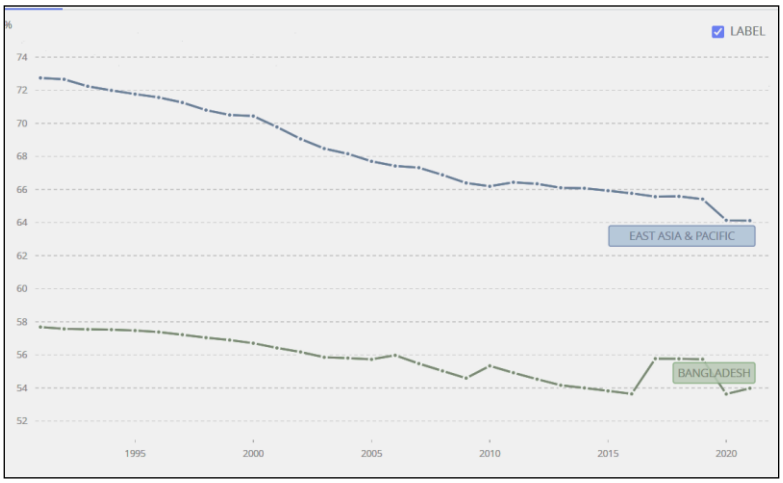
The second significant point from the diagram above is the population will be aging: the number of people aged 65 and over will triple from 10 million currently to 30 million by 2050. That will require much more expenditure on pensions and healthcare, which will burden the economy. Estimates suggest that such old-age care costs can increase from 5 to 15 percent of GDP. The only way to handle this is for Bangladesh to utilize

the demographic dividend window and grow the economy rapidly. Otherwise, future growth will markedly slow down.

As evident from Figure 5, Bangladesh lags far behind in its ability to provide employment to the working-age population: Bangladesh's employment rate of about 55 percent of the working-age population is about 10 percentage points less than in East Asia. Not only that, when East Asia had a similar per capita income, it used to employ 70 percent of its working-age population.

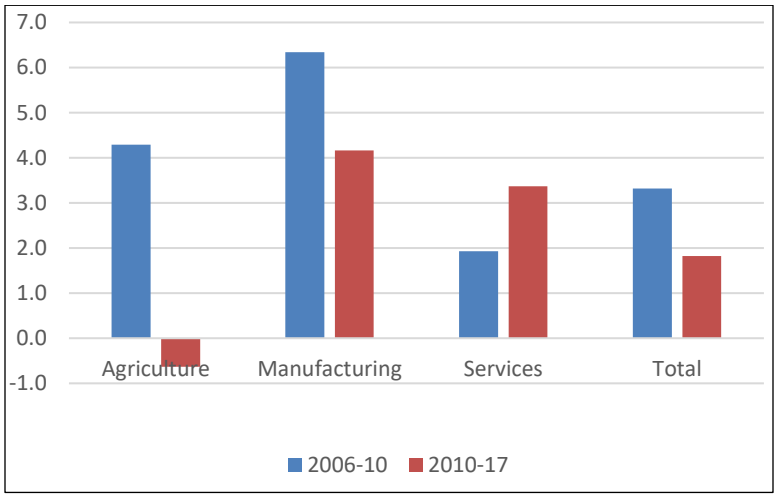
A significant challenge to increasing employment rates will be bringing more women into the labor force. Bangladesh's female labor force participation rate of 43 percent in 2022 will need to be increased to about East Asia's 63 percent. Worth noting is that such an increase in female labor force participation will only be possible if the overall employment demand for males and females increase through more robust, labor intensive economic growth. There will also be needed for more specific measures such as child and elderly care. Research on declining Indian labor force participation indeed suggests that greater job opportunities, cultural change, and measures such as providing better childcare services will be needed (Ahsan & Pages, 2008) to increase female labor force participation.

Figure 5: Employment of Working Age Population (in %)



Source: World Bank (Modeled ILO estimates).

Figure 6: Employment Growth Slowed Down until 2017



Source: World Bank (Modeled ILO estimates) and Author's Estimates from Labor Force Surveys.

The preliminary 2022 labor force survey findings for Bangladesh suggest a sharp jump in female labor force participation to 43 percent, driven wholly by the rural female labor force.

Otherwise, the data on Bangladesh's job growth and wages suggests a mixed picture. Compared to the 2006-2010 period, when employment grew on average by 3.3 percent annually, during 2010-2017, employment growth slowed to 1.7 percent per annum. The decline in industrial employment was particularly marked, from 6.3 percent to 4.2 percent per annum, while services employment increased to take up the slack. In the case of wages, while real wage growth grew by 2 percent per annum between 2010 and 2017, more recent informal sector real wage index data collected by the Bangladesh Bureau of Statistics show negative real wage growth over the past two years.

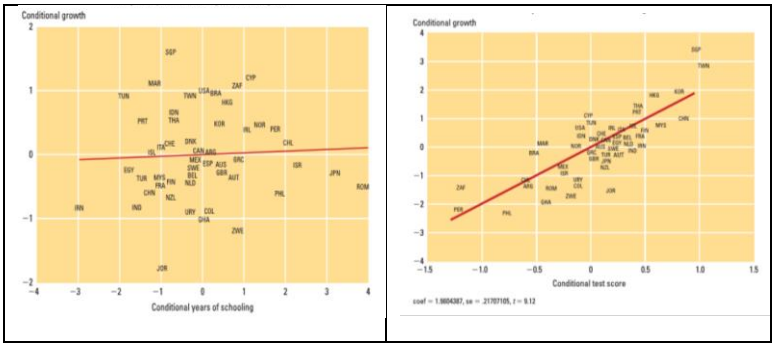
The preliminary 2022 labor force survey suggests an accelerating employment growth between 2017 and 2022 to 3 percent per annum but driven entirely by the rise of female employment in agriculture and rural areas. Almost all the growth is accounted for by the increase in female rural employment from 14.1 million in 2017 to 21 million in 2022, indicating a 48 percent jump. During the same time, urban female employment has declined from 4.6 million to 4 million. While initial discussions suggest no change in the questionnaire or definitions, and there are indications of an increasingly vital rural economy, this preliminary finding will require further inquiry. However, this data also suggests that in line with previous trends, there is a sharp drop in urban employment growth from 4.5 percent to 0.75 percent and a decline in the industrial labor force -0.7 percent compared to a growth of 4.5 percent in the previous (2010-17) period.

Challenge Two: Improving Education Quality

The second big issue from the growth equations above is the need to educate and train the labor force well. The equations in Box I highlight the enormous significance of education in driving growth in three ways. First, education increases human capital–i.e., learning embodied in the human being–by raising worker's productivity. Second, education and learning also raise the productivity of other workers through spillovers: if one worker is more productive, then others who work with her also become more productive. Third, education raises productivity substantially by stimulating innovation and helping create and run better institutions. These raise what we call the economy's total factor productivity–i.e., the part of the growth that cannot be explained by increasing physical capital and workers. Further, and particularly important, promoting education is essential not only for growth but also for a more equal and just society.

However, one of the research puzzles has been that the increase in schooling in countries has not been associated with the rise of economic growth and productivity. This puzzle has been answered most prominently by Education economist Prof. Hanushek of Stanford University. His research finds that more than years of schooling, it is the quality of education that relates strongly to economic growth, as shown in Figure 7. The first diagram shows no relationship between schooling years and countries growth rates. The second diagram, however, shows a strong association, even after accounting for other factors, between achievements in international learning test scores – that measure students' learning and education quality– and the growth of countries.

Figure 7: Not Only Education, it is Education Quality that Matters



Source: Hanushek & Woessmann (2007).

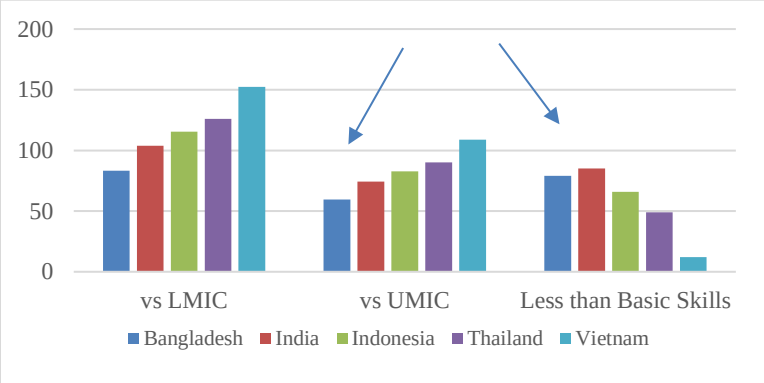
Bangladesh has made good progress in providing equitable access to school education. Net enrollment rates in primary education are at the high 90 percent with full gender equality. Overall, school years have increased to nearly 11 years.

Figure 8a: National Student Assessment

Administration year	2013		2015		2017	
Bands→	Below Grade 3	On/Above Grade 3	Below Grade 3	On/Above Grade 3	Below Grade 3	On/Above Grade 3
Bangla Grade 3	25%	75%	32%	68%	26%	74%
Mathematics Grade 3	43%	57%	59%	41%	59%	41%
Bands→	Below Grade 5	On Grade 5	Below Grade 5	On Grade 5	Below Grade 5	On Grade 5
Bangla Grade 5	75%	25%	77%	23%	88%	12%
Mathematics Grade 5	75%	25%	90%	10%	83%	17%

Source: Ministry of Primary and Mass Education, *NSA (2017)*.

Figure 8b: Bangladesh Low Scores in International Tests

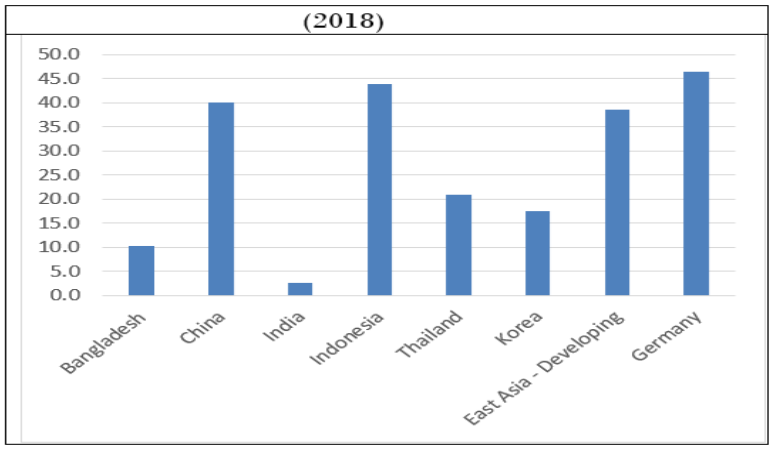


Source: Gust, Hanushek, & Woessmann (2022).

However, as shown in Figure 8a, education quality has become a significant challenge. According to the 2017 National Student Assessment of Class 5 students, less than 20 percent had grade-level competency in Bengali and Mathematics. In the World Bank's harmonized test score data for countries, Bangladesh ranks 123rd among the 158 countries in the data set, while its competitors Vietnam and Cambodia rank 26th and 57th, respectively. Figure 8b shows that 80 percent of Bangladeshi students displayed less than basic skills in these exams. Their performance was only 60 percent of that of upper-middle-income countries.

The last point concerning education concerns the lack of attention paid to training students in technical and vocational training. Only about 10 percent of Bangladesh's secondary-age students get technical and vocational training compared to about 40 percent in manufacturing superpower countries such as Germany, China, and developing East Asia. This means that Bangladesh's education system inadequately supplies key skills such as electricians, mechanics, carpenters, plumbers, masons, drivers, and computer-skilled workers.

Figure 9: Upper Secondary Students in Vocational Programs (%)



Source: World Bank Education Statistics, 2018.

Challenge Three: The Challenge of Providing Jobs – Improving Competitiveness

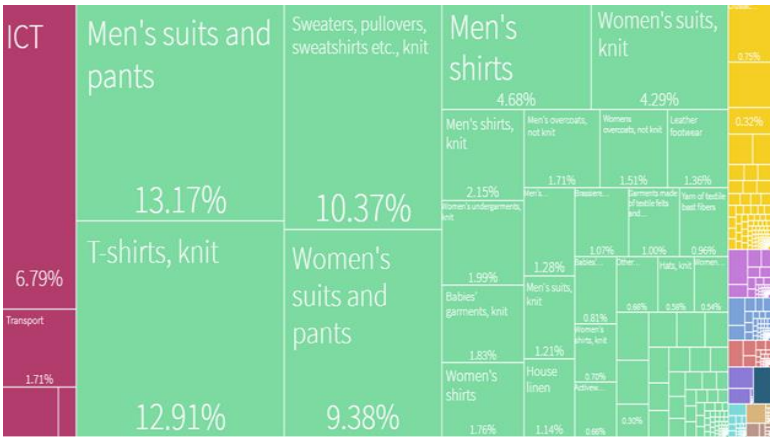
The third task in using demographic dividends is to provide productive jobs for well-educated and well-trained workers. How can good manufacturing and service jobs be provided? Sustained productive employment for Bangladesh's rapidly growing 70 million labour force can only be provided by making the economy globally competitive. The critical constraint here is inadequate investment in diversified and competitive export sectors. Although Bangladesh exports more than 1,400 items, most have remained incipient. Readymade garments still constitute over 80 percent of Bangladesh's exports.

By comparison, as Figure 10 shows, Vietnam, a similar country, and Bangladesh's near competitor, exported $458 billion in 2022, of which less than 10 percent was in garments. Instead, it exported $187 billion in electronics and electrical appliances, $40 billion in computer equipment, and $33 billion in leather. Worth stressing here is that Bangladesh's RMG

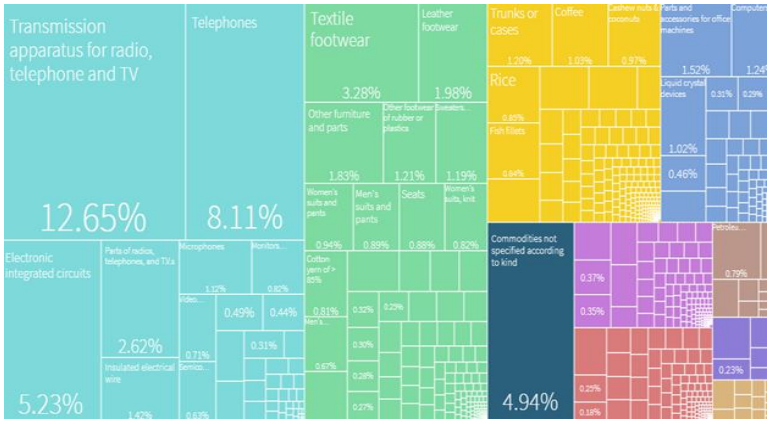
export prospects will be under pressure when Bangladesh graduates into the UN's "Developing Country" status a few years from now and loses its significant European Union tariff preferences. Hence, increasing productivity, even in the RMG sector, has become a paramount necessity.

Figure 10: Vietnam's Exports are Highly Diversified compared to Bangladesh

Export Composition in Bangladesh



Export Composition in Vietnam



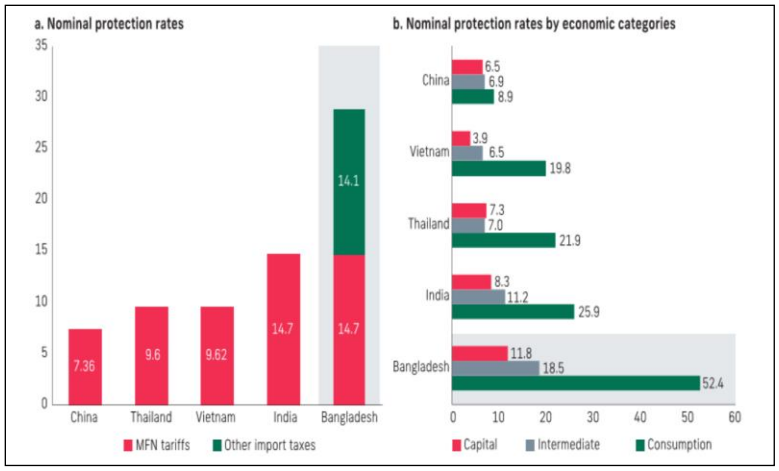
Source: Center for International Development, Harvard, app. 2019.

How can Bangladesh shift to more diversified exports and increase overall productivity? According to PRI research (PRI, 2023), Bangladesh exported more than $1 million each of 346 non-RMG products, of which 228 were highly or moderately competitive in global markets. The challenge will be to bring these exports up to scale as the market sizes of these products are huge. Several factors are involved, including the vital need to educate and technically train our people. But more pressingly, the critical constraint is the marked absence of export-oriented foreign direct investment (FDI). In 2019, in the pre-COVID period, the total stock of FDI was just short of $20 billion while it was eight times larger, $160 billion in Vietnam. FDI brings not only capital for investment. The technology, knowledge, market access, and linkages to global supply chains are as important as the capital.

Because of the absence of a supportive investment climate and regulatory framework, Bangladesh has been unable to attract export-oriented foreign direct investment. The critical point here is to attract export-oriented investment.

The second barrier to diversifying the economy is one that Bangladesh has inflicted on itself: its extraordinarily high tariff and protection rates. Bangladesh's overall nominal protection rate – including supplementary duties–is twice the rate of India and thrice that of Vietnam and Thailand. Together these create an anti-export bias where the rates of returns can be 30 percent higher for manufacturing for the domestic economy than producing for exports (PRI, 2023).

Figure 11: Bangladesh's Exceptional High Tariffs Reduce Exports and Manufacturing Jobs Growth

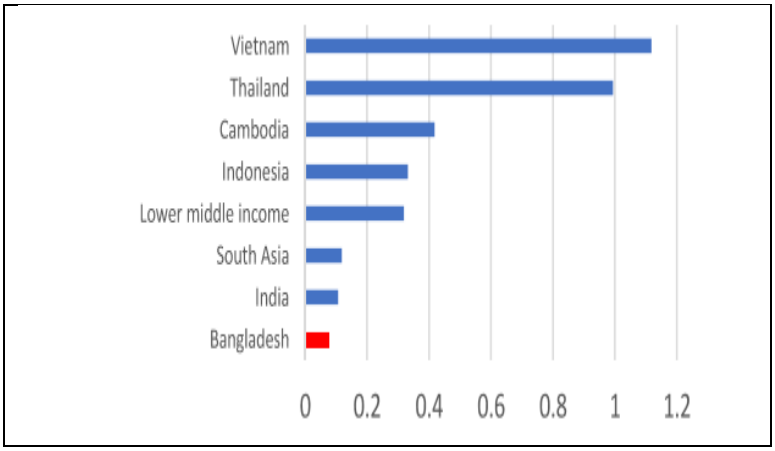


Source: Change of Fabric, World Bank (2022), Figure 3.11.

However, because the global economy is much larger, it necessarily means the employment a domestic market-oriented sector can provide will be far less than it would be for export-oriented industries. A telling example comes from the electronic home appliances sector, where domestic manufacturing, such as television, is expanding with nearly one hundred percent protection in some cases. The current sales of the dominant firm in the home appliances sector, which has an 80 percent market share, are just over $1 billion, a drop in the ocean compared to the global market of $500 billion. If our home appliances manufacturing sector could be made export-oriented in the same way as our readymade garment sector or as the home appliances sectors of East Asian economies such as Thailand, Vietnam, and Indonesia, growth and job creation in Bangladesh would be much higher.

One impact of this inward orientation of the current manufacturing regime is the growing market dominance of the few firms. As a result, the churning and entry of new industries that are the hallmarks of a dynamic economy are absent in Bangladesh. International surveys show that new business entry per 1000 people in Bangladesh is only one-tenth that of Vietnam or Thailand, one-fourth that of Cambodia, and one-third that of lower-middle-income countries' average. When market dominance by firms is as high as in Bangladesh, the high-profit margins from such market power create disincentives for these firms to become globally competitive and export-oriented. Job growth will remain limited in such a scenario.

Figure 12: Very Low New Firm Density in Bangladesh per 1000 Working People Hurts Job Creation



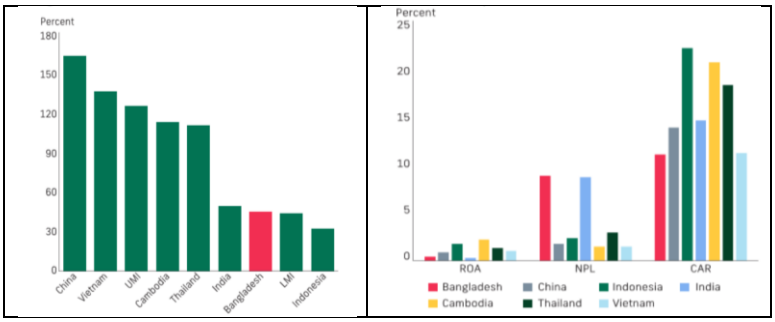
Source: Change of Fabric, World Bank, 2022.

Challenge Four: Financial Sector Shallowness and Vulnerability– and SME Underdevelopment

The financial sector is the nerve center of modern economies as it mobilizes and allocates savings and capital to the most productive sectors–a fundamental requirement for long-run growth, as indicated by Equation 3 in Box 1. The financial sector in Bangladesh is shallow, vulnerable, and dysfunctional in carrying out this task. The summary indicator here is that private sector credit to GDP at 38 percent is the lowest among middle-income economies (see Figure 13). Comparatively, Vietnam has a private credit-to-GDP ratio of 126 percent.

Bangladesh's financial sector's shallowness is further compounded because more than 10 percent of loans are non-performing. Further, the capital adequacy ratio of Bangladesh's banks is among the region's lowest. Taken together, the high rates of non-performing loans and low capital adequacy ratios lead to constraints such as liquidity crunch and the lack of investor confidence in the economy- all potential sources of macroeconomic instability.

Figure 13: Bangladesh's Financial Sector is Shallow and Vulnerable



Source: Change of Fabric, The World Bank, 2022, Figures 4.7 and 4.3.

Thus, unless the financial sector addresses these weaknesses, inadequate investment in the most productive sectors and the mis-allocation of capital in general will remain a stagnating constraint on Bangladesh's development.

One result of a shallow financial sector is the underdevelopment of Bangladesh's small and medium enterprise (SME) sector. In most countries, the SME sector provides the dynamism of new firm entry and employs most workers. However, Bangladesh is exceptional in that the manufacturing industry survey indicates that the SME sector currently accounts for only about one-third of manufacturing employment and output and that its share has declined. The decelerating growth of employment in urban areas and the declining number of workers engaged in industrial sectors appear to support this finding.

Challenge Five: Sustaining Urban Development

One of the most robust associations in economic growth is between urban development and per capita income levels. International data suggests that sustained economic growth is not possible without urban development. The clustering of firms, employees, and workers provides increasing returns to scale and agglomeration externalities that raise productivity. Thus, a one percent increase in the share of the urban population is accompanied by more than a two percent increase in real per capita incomes in large countries of more than 20 million population (Ahsan, 2019). However, the data also suggests that urban development must be of good quality to boost growth. Poor quality urban development that does not provide good jobs and public services and leads to congestion and pollution does not lead to higher long-term growth as in many African, South American, and South Asian countries.

Further, when, as in the case of Bangladesh, urban development is excessively concentrated in the primate city – i.e., the largest city – there are adverse effects. When the share of the largest city in the urban population exceeds 25 percent of the urban population, per capita income levels are adversely affected because an excessive growth of the primate city lowers labour productivity (Henderson et al., 2001) and overall urban development (Ahsan, 2019). Given that Dhaka's urban population share is around 32 percent, initial research has estimated significant national economic costs (Ahsan, 2019; Henderson et al., 2001). Further, Dhaka also suffers from congestion and pollution, resulting in one of the worst environments in the world and significant health hazards. So, policy now needs to move to a more dispersed and planned urban development. Ongoing research also suggests the state of urban public services in urban centers in Bangladesh is highly inferior. As a result, urban education and health indicators are worse than those in rural areas in many districts.

As noted earlier in the discussion about Market Failure 6, markets fail to provide the coordination needed to deliver these services effectively. The principal factor behind these poor urban outcomes is weaknesses in urban planning and the absence of unified authority in city governments, as a result of which public services in health, education, water and sanitation, roads, power, and other infrastructure are all provided in a fragmented and uncoordinated manner. This discussion naturally leads us to the following two challenges.

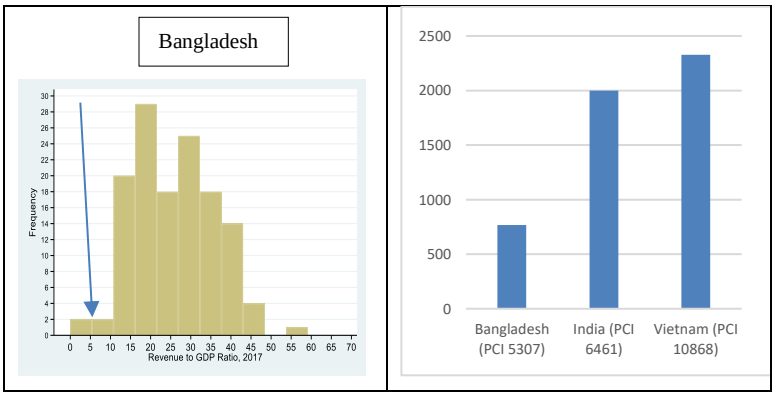
Challenge Six: Building State Capacity and Institutions

The overarching challenge for long-term development is building institutions and norms that can provide public services and goods – whose benefits are jointly shared by many, such as clean air, water, better education and health, public transport, cities, and towns. Because of their shared nature, markets will

not deliver these services adequately on their own. In building institutions, transparency, accountability, and contestability in the government's executive, legislative, and judicial branches will need strengthening. Further, Bangladesh has to build institutions that not only use expertise but also encourage critical discussions. Otherwise, there will be no course corrections for inevitable policy mistakes.

Let us specify using three examples. Bangladesh's first task here will be raising revenues and increasing public expenditures. Bangladesh's revenue collection of about 8-9 percent of GDP ranks in the bottom 10 percent of countries. One consequence is that our public expenditures are highly inadequate, as shown in the figure below. Our per-capita public expenditures in comparable international dollars are about one-third of India's and one-fourth of Vietnam's. Public expenditures in human capital are woefully below international norms. There is also the need to ensure that our public expenditures are effective where much attention is needed, as noted below.

Figure 14: Bangladesh's Public Revenues and Expenditures are Woefully Inadequate



Source: Estimate from World Development Indicators.

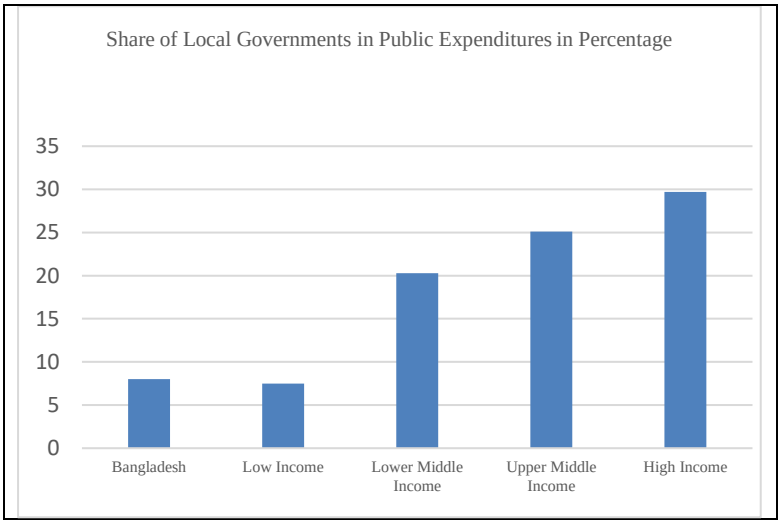
A second broader task is to strengthen our weak and eroding economic management capacity. This wide-ranging matter affects many institutions, such as the Ministry of Finance, the National Board of Revenue, the Ministry of Planning, the Bangladesh Bank, and regulatory bodies. But the critical issue here is the need to invest in implementation, monitoring, and evaluation, and more broadly, in data. Bangladesh invests staggeringly little in these matters: about 0.1 percent of the annual development budget is spent on its monitoring and evaluation. Not surprisingly, project implementation suffers. Equally alarmingly, we expend only 0.05 percent of our GDP in gathering data on our increasingly complex 460 billion-dollar economy (in 2022 exchange rates). Data collection is thus poor and delayed. Policymakers often have to make decisions half-informed, looking at the rearview mirror with outdated data.

Third, the challenge will be to make our governing institutions more accountable, transparent, and closer to the people. By that, we mean moving away from the highly centralized public service delivery system, where the central government spends about 92 percent of all government expenditures. In contrast, 900 other city, municipal, and Upazila governments, including Dhaka, formally have wide-ranging responsibilities for public services and basic infrastructure and have less than 10 percent of the national budget for their use. The big agenda here is to develop high-quality urban centers that house and provide residents with public services and higher productivity jobs. That will be an essential requirement for raising overall economic productivity. Unless town and city governments are empowered and made accountable by providing them resources through taxation powers, shared revenues, and the capacity to coordinate urban activities well, such transformations will not be possible. In that event, Bangladesh will be in a lower middle-income country trap.

Challenge Seven: Can Bangladesh Develop without Decentralizing?

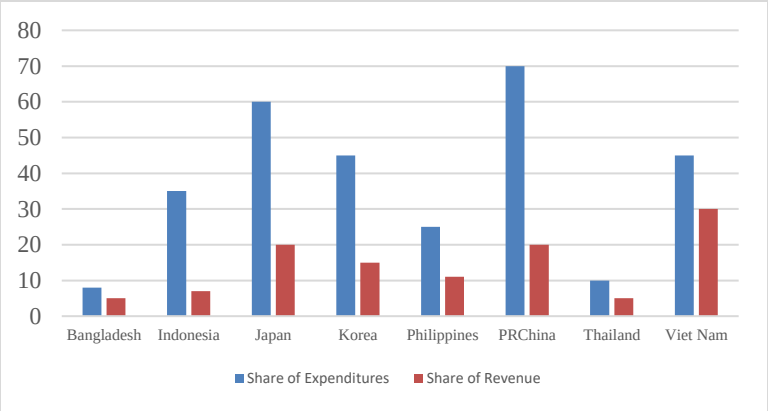
Answering this question has become centrally important, given that Bangladesh has one of the most centralized governments. The Central Government spends about 92 percent of all government expenditures, while 700 other city, municipal, and Upazila governments, including Dhaka, have less than 10 percent of the national budget for their use. Internationally, local government expenditures are 30 percent of all public spending in high-income countries, 25 percent in middle income, and 20 percent in the lower-middle-income group to which Bangladesh belongs (Figure 15). Sub-national governments in China, Korea, Vietnam, and Japan spend between 40 and 70 percent of all government expenditures (Figure 16).

Figure 15: Share of Local Governments in Public Expenditures in Percentage



Source: OECD (2016).

Figure 16: Local Government Share of Expenditures and Revenue (%)



Sources: Lewis & Searle (2011).

International experience and economic theory suggest that information asymmetries and principal-agent problems create accountability and coordination challenges in district and upazila administration for central governments. Under a highly centralized system, the ruling elite in national capitals can ensure that they have adequate public and, more typically, private provision of education, health, and other services. But they have little incentives to provide adequately these services to towns and regions that are away from the capital. Given this, it will likely be impossible to develop well-functioning cities and towns and provide high-quality public services to the people, including education and health, water and sanitation, without strong local governments. Those with experience in secondary education in Bangladesh point out that teachers' performance declines when the central government undercuts local accountability by directly providing teachers' salaries through monthly payment orders.

A deep insight into the importance of local government comes from game theorist and economics Nobel Laureate Roger Myerson: decentralized governments allow the opportunity to identify and train capable national leaders. In the absence of this opportunity, a country's people may perceive no alternatives to existing leaders. Finally, decentralization with accountability and capable local government fosters healthy competition among regions to develop, and it is an essential driving force for national development, as most evident in the East Asian experience (Ahsan, 2018).

VI. Concluding Thoughts—Motivating Economists and Facing Bangladesh's New Challenges

As noted in the beginning, this paper has two distinct parts. However, it should be apparent from the discussion in the preceding section that mainstream economics (ME) has much to offer by way of tools to address the real-world issues of a developing country such as Bangladesh. However, it is also unfortunately true that the pedagogy of mainstream economics fails to highlight the richness of its applications. The dryness in first teaching indifference curves, isoquants, production functions, and maximizing inter-temporal utility functions conceals, rather than reveals, the richness of ME in helping the problems of the world. Such an approach makes many bright minds uninterested in economics, as an arid subject without "soul." This is not the place to discuss pedagogical changes needed in economics. But, one approach can be to first highlight empirically the economic challenges that people, society, countries, and the world face and then show how the tools of ME can help to address them.

Now for concluding the second part of the paper, the last two years have revealed yet other critical challenges ahead for Bangladesh. Over the last decade, the current government has made remarkable progress in building transport and power infrastructure. The construction of the *Padma* and *Jamuna* bridges and, most recently, the addition of the *Bangabandhu Tunnel* and high-quality highways to the 7,000 km road network have opened up economic opportunities to the lagging Northwest and Southern west of the Padma-Meghna rivers.

Energy is the vital engine of raising economic productivity and growth. In this arena, significant gains, too, have been made. Power production capacity has increased from 5,202 MW to 25,284 MW in 2022 (BER, 2022), while maximum generation was 13,525 MW the same year. Another 13,219 MW of capacity is under construction, including 2,200 MW of nuclear power. Under the official definition, there is 100 percent connectivity in the power sector. This massive expansion will undoubtedly give Bangladesh's economic prospects a boost.

However, this surge in power production has highlighted several complex issues that need to be addressed: (i) the imbalance between power production and power demand that has made the principal public power sector financially unviable and a drain on scarce government resources; (ii) investing in grid capacity and efficiency so that already existing and expensive power capacity can be used; and (iii) investing in more economical energy sources for power production, including domestic gas production. Presently, excess capacity and purchasing power agreements based on installed capacity– and in some cases contracted in dollars – and the high import costs of using have led to significant foreign exchange losses and the need for fiscal subsidy to the tune of BDT 200 billion for the

power sector utility. Given that some studies have suggested that Bangladesh has a mean probability of gas reserves from 30 to 40 trillion cubic feet (tcft) against its current annual demand of about 1 trillion cft, there is an urgent need to invest in gas exploration that has been acutely neglected over the past two decades. Here again, Bangladesh will have to be realistic and involve FDI in exploration.

In conclusion, it is worth stressing that two other challenges have not been discussed, one short-term immediate and the other long-term, but that also needs addressing now. The first refers to the ongoing and, for Bangladesh, unusual episode of macroeconomic instability caused by high deficits of the 2021-22 fiscal year, years of nominal exchange rate rigidity that have led to the current volatility, high inflation, and a sharp drop in reserves by more than half. These, in turn, have led to the suppression of needed imports intermediate and capital goods and declining economic activity and employment opportunities. If not handled carefully, these economic developments can spiral out of control. The second concerns climate change, where Bangladesh is known to be among the ten countries that will be most adversely affected. While plans to address mitigation and, especially important, adaptation, have been formulated, the state of implementation is unknown.

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Annex 1

	Primary Fields	**Secondary Fields**	**Selected Tertiary Fields**
A.	General Economics and Teaching	3	Role of Economics, Economists, Markets for Economists, Relation of Social Values, Sociology of Economics
B.	History of Economic Thought, Methodology, and Heterodox Approaches	5	Thought before and after 1925, Individuals, Methodology, Heterodox Approaches
C.	Mathematical and Quantitative Methods	9	Econometrics and Mathematical Methods, Game Theory, Bargaining, Experimental Economics
D.	Microeconomics	9	Market Design, Information, Uncertainty, Income Distribution, Micro based Behavioral Economics, Institutions
E.	Macroeconomics and Mo netary Economics	6	Consumption, Savings, Investment, Employment, Prices, Business Cycles, Interest Rates, Behavior
F.	International Economics	6	Open Economy Macroeconomics, Exchange Rates, Optimum Currency Areas International Finance, Inter & Intra Industry Trade and Impact on Growth

(Contd. Annex 1)

	Primary Fields	Secondary Fields	Selected Tertiary Fields
G.	Financial Economics	3	Financial Markets, Corporate Finance, Behavioral Finance
H.	Public Economics	8	Government Structure, Scope, Performance, Taxes, Subsidies, Externalities, Publicly Provided Private and Public Goods
I.	Health, Education, and Welfare	3	Education, Health, Poverty Measurement
J.	Labor and Demographic Economics	8	Demographic Impact on Macro; Family, Marriage, Fertility, Gender, Value of Life
K.	Law and Economics	4	Economics of Property, Contract, Regulation, Business, Labor, Tax, Family, Immigration Law
L.	Industrial Organization	9	Market Structure, Market Design, Performance, Firm Strategy, Regulations, Industrial Policy, Industry Studies, Matching
M.	Business Administration, Economics • Marketing • Accounting	5	Marketing, Accounting, Personnel Management
N.	Economic History	9	Fiscal and Monetary History, Industrial Structure, Sectoral, Regional and Country Studies
O.	Economic Development, Innovation, Technological Change, and Growth Development	5	Role of Macro, Micro, Public Finance, Aggregate Growth, Productivity, Institutions
P.	Political Economy and Comparative Economic Systems	5	Capitalism Socialism, Political Economy, Comparative Economic Systems
Q.	Agricultural and Natural Resource Economics, Environmental and Ecological Economics	5	Agriculture Renewable and Non-renewable Resources, Energy
R.	Urban, Rural, Regional, Real Estate, and Transportation Economics	5	Regional Spatial Distribution and Size, Land Use, Housing, Transportation, Region Governance
S.	Miscellaneous	9	Data, Tables, Charts, Dissertations
T.	Other Special Topics	3	Culture, Society, Sports

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