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ECONOMIC GROWTH: WHERE DOES IT COME FROM?

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PREFACE

No one understands completely why economies grow, and no one has a magic formula for inducing growth. In this paper, Dr. Joe Amoako-Tuffour looks at the forces that economists believe underlie growth with an eye toward what public and private institutions can do to make growth possible, especially for economies seeking new directions.

The conclusions are simple. Growth is not an accidental process. It can occur in a variety of settings provided economies (1) identify their core competencies (what they are capable of doing), and (2) develop public policies to build on those competencies and to support those directions. Political instability is bad for growth. High and volatile inflation, lack of internal social cohesion, arbitrary rule of law, and a big, greedy government that do not hold taxes down are just as bad for economic growth.

But government actions and the provision of institutions that maintain the rule of law, secure rights of private property, enforce rights of contract all encourage investment and enterprise. The intangibles such as societal values, group reputation, work ethic, culture and temperament of citizens do matter. Savings and capital accumulation do matter greatly, but they must be aided by technological improvements. That is not new. What is new is that technological improvements come about through learning-by-doing, imitation and invention. All of which are made possible through the quest for ideas, accumulation of knowledge through research and investment in human capital.

For poor economies seeking new directions, the search for a path of growth must point to directions (1) that enable the economy to provide for basic human needs- food security, opportunities of good general health system, reliable and affordable supplies of energy resources – and (2) that build economic organizations and institutions that stimulate

and support growth, and protect as well as reward beneficial private initiatives and enterprise.

Besides the provision of economic infrastructure, government policy matters in so far as industry policy affects investment levels and also affects opportunities for investment through company laws, regulation, and taxes. Government should be able to use social and economic policies to motivate and to complement private sector initiatives and to foster individual opportunities to spur growth. Government efforts as a national policy in these directions should be seen as one of the very few efficient and effective instruments of economic intervention.

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"Man is a mystery: if you spend your entire life trying to puzzle it out, then do not say you have wasted your time. I occupy myself with this mystery, because I want to be a man." **Fyodor Dostoevesky, The Brothers Karamazov, 1880.**

If the Russian novelist Dostoevesky had been an economist, he would have said about economic growth what he said about man because the economic history of mankind paints a curious picture. No wonder that since 1776, when Adam Smith first raised the issue, economists have continued to look for an answer to perhaps the most important question in economics: what drives economic growth over the long run, or why are some countries richer and some poorer? Understanding growth is an urgent task in economics because, as the 1995 Nobel Prize winner in economics, Robert Lucas, once said, "the consequences for human welfare are so staggering. Once one starts to think about them, it is hard to think of anything else."[1]

No one understands completely why economies grow, and no one has a magic formula for inducing growth. But, as in the study of man, economists continue to search for insights. And the findings to date should be of interest to everyone concerned with the process of economic growth. In this essay, I look at the forces that economists believe underlie growth with an eye toward what public and private institutions can do to make growth possible, especially for economies seeking new directions.

The conclusion is that growth is not accidental. It can occur in a variety of settings provided economies identify their core competencies (what

[1] Robert Lucas, R. Jr. (1988), "On the Mechanics of Economic Development", Journal of Monetary Economics, 22 (July): 3-42

they are capable of doing) and develop public policies to build on those competencies and to support those directions. The lessons to date are that big government is bad for growth. Political instability, lack of internal social cohesion, high inflation, arbitrary rule of law, and a greedy government that do not hold taxes down are just as bad for economic growth. But government actions and the provision of institutions that maintain the rule of law, secure rights of private property, enforce rights of contract all encourage investment and enterprise. Intangibles such as societal values, group reputation, work ethic, culture and temperament of citizens do matter. Savings and capital accumulation do matter greatly, but they must be aided by technological improvements. That is not new. What is new is that technological improvements come about through learning-by-doing, imitation and invention. All of which are made possible through the quest for ideas, accumulation of knowledge through research and investment in human capital. For the poor striving to catch up, the new insights offer a sense of possibility, raising hopes that there is room for all to grow.

1. In Search of the Forces of Growth

Economic growth is about providing a greater quantity of goods and services in the future. When growth occurs, we see it in the form of increased productivity, rising real wages of workers, higher living standards, low infant mortality rates, and higher life expectancy. When Adam Smith wrote about growth in 1776, he pointed to pieces of the growth puzzle: division of labour, specialization, capital accumulation, technology, peace, easy taxes, market institutions, and tolerable administration of justice. With the history of that period as the background, Adam Smith saw no greater impediments to growth for small economies than there were for large economies.

But that was before the end of the colonial era gave birth to a new branch of economics; namely, how to promote growth and development among the "backward" and "poor" countries. In the 1950s, pioneers of the field of development economics offered well-intentioned strategies for development. In their view, countries were poor because they had less human and non-human capital. Their prescriptions were: increase the resources of these countries through foreign aid, external borrowing, or by transferring capital to them. To many observers, the promotion of import-substitution industrial strategy, export of primary products, and reliance on central planning of change, seem less convincing today as sure paths to growth than they did four or five decades ago. It is now also well recognized that simple-minded political tinkering, the corruption of governments, and inefficient bureaucracies all played no small roles in undermining any prospects of growth that these development strategies could have held out.

Side-by-side with the work of mainstream development economists in the 1950s and 1960s, two economists Robert Solow and Trevor Swan, pursued a different line of inquiry into the forces of growth.[2] Like Adam Smith, Robert Malthus and David Ricardo before them, Solow and Swan showed that where economic activity is organized on competitive basis, savings and capital accumulation interact to drive growth. Capital accumulation comes from how much of a nation's current output is not consumed. The more that is saved the more that is invested. Investment represents additions to capital, and capital produces more output for future consumption. A country that consumes

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[2] Robert M. Solow (1956) "A Contribution to the Theory of Economic Growth." Quarterly Journal of Economics 70, (February): 65-94. Trevor W. Swan (1965), "Economic Growth and Capital Accumulation." Economic Record 32 (November): 334-361.

more of what it produces would have less to save, and less to invest, unless it had access to resources.

Three important predictions were made from this line of research. First, a high population growth rate can impede growth. A high population growth rate means that more of national output is consumed; less of it is saved; less is invested, and therefore future production and consumption are diminished. Second, capital accumulation alone will not spur growth in the very long run unless the know-how to produce goods and services also improves. What this means is that no matter how much machinery and labour are applied to, say, farming, sustained increases in output per farmer will soon decline, unless the farmer learns to use the machinery more efficiently, unless there are improvements in the know-how of farming such as the patterns of rainfall, soil types, incidence of crop diseases, and seed improvements. This is the phenomenon of diminishing returns. To sustain increase in output, farming must benefit from improvements in know-how or technology. The third prediction was that poorer countries would grow faster than rich ones because capital would flow from capital-rich to capital-poor economies where, because of scarcity, capital has a higher rate of return. This prediction became known as the catching-up hypothesis.

But this view had its fault lines and missing links. Most significantly, it did not tell us how technological improvements or know-how, the key driving force of long run growth, come about. In addition, researchers found that the actual experience of different countries did not support the prediction that capital would flow automatically from capital-rich countries to capital-poor countries, so that productivity growth would narrow the gap in standards of living around the globe. The hard evidence is that poorer countries are not catching up. Many in sub-

Saharan Africa and South America have difficulty simply in recording positive growth rates, let alone maintaining standards of living over time. According to a UNCTAD World Investment Report[3] published in 2001, the share of Africa in total foreign direct investment flow fell from 2 percent in 1989-1994 to only 1.4 percent in 1995-2000. Many believe that catching up can only occur if all economies have access to the same technologies, if capital is free to roam around globally, if there are no differences in the quality of human capital, and if there are no imperfections in capital markets. These characteristics, of course, differ from one country to the other and therefore living standards are not likely to converge.

Professors Solow and Swan also saw only a limited role for governments to spur the forces of growth. Public action was seen as not extending beyond the task of encouraging and facilitating national saving in ways that provide opportunities for profitable investment. But Japan and the Asian industrialized countries such as Taiwan, South Korea and Singapore proved that government encouragement stimulates growth. According to Professor Takafusa Nakamura of the University of Tokyo, the government's Income Doubling Plan published in 1960 provided the blueprint and much-needed stimulus to Japanese economic growth.

Even if this view of growth was only partly right, for African countries, and many in Latin America, the message was blunt. High population growth rates, low saving, low investment in machinery, and no technological progress, foreclosed any possibility of economic growth. Puzzles now turned into concerns. For these countries, the concern

[3] Promoting Linkages: Overview World Investment Report, United Nations Conference on Trade and Development, Geneva, 2001.

was not the lack of specialization and division of labour, nor that more physical capital will become less and less effective in producing goods and services. Theirs was, and remains a problem of insufficient and inefficient use of capital, and, perhaps, more importantly, in figuring out which way forward.

Viewing these problems from the outside, it was said that all was not lost. What African countries lacked they could borrow or attract through aid, even if the way forward is not necessarily clear. Grants and loans (aid) will make up the saving shortfall, and therefore provide much needed capital for growth. By now the political and economic interests attached to aid, the corruption of aid recipients, and the gross mismanagement of borrowed funds are well known. Also well known is the fact that debt has become a merciless exactor from the very poor that the resource inflow was intended to help. The Nigerian novelist, Amos Tutola, in his allegory of work and play, The Palm-Wine Drinkard, wrote that a community that lets some invisible hands do its work, will sooner or later forfeit its harvest. Debt-cum growth has not worked as envisaged.

Forty years after Solow and Swan, a new generation of economists, most notably Professor Romer of Stanford University, is pointing to new directions. The message is this. Knowledge, creativity and skills embodied in the workforce (or human capital) are essential means to producing goods and services, no matter how much resources are anchored to the ground. These mental qualities are acquired through investment in education, research and development, invention, innovation and learning-by-doing. None has a monopoly over them. Knowledge creates new ideas. New ideas generate new know-how, which shows up in more efficient methods of production and organization and in new and better quality goods. If we don't run out of

ideas, then growth rates can remain positive in the long run. Moreover, because knowledge and new ideas (unlike a piece of machinery) can be shared without diminishing their usefulness, the path to growth can be shared and learned. Imitation and innovation spur growth. Imitating know-how that builds on the strengths of every economy is a recipe to for catching up.

This new view signals that growth is not an accidental process. For the poor striving to catch up, the new insights offer a sense of possibility, raising hopes that there is room for all to grow because as Professor Romer puts it, "It's all in your head". We make progress in almost any area we put our minds to. We don't make progress in anything if we don't put our minds to it. The prospects of growth have never seemed brighter.

2. The Forces of Growth So Far

So what does fifty years of research tell us about the mystery of growth? First, the diversity of the growth experiences of different countries – from Europe to Asia- suggests that every economy has certain features that are more conducive to growth than others. The challenge is to identify these strong features. These features are key because they define the potential of the economy and the initial conditions in designing a strategy for growth. Resource endowments, the work ethic, societal values, group reputation, the culture and temperament of citizens, and geography, fall into this category.

Some counsel that countries must fashion their own paths to growth based on their current comparative advantage. This advice, religiously pursued, has not been to the advantage of the many developing countries that remain exporters of their raw natural resources. In 1840

John Bowring advised the member states of the then German Zollverein to grow wheat and sell it to buy British manufacturers. The economic historian David S. Landes, in his book the Wealth and Poverty of Nations, pointed out that Germany would have been the poorer today for it. The Germans knew that with few exceptions comparative advantage is not permanent. Today's comparative advantage may not be tomorrow's. Moreover, for any two economies with the same resource endowments, their growth experiences can be dramatically different depending on the complementary factors needed to capitalize fully on their latent growth and development potential.

Of the complementary factors, patterns of saving and investment decisions play a central role. The Japanese economist Tadao Uchida summed up the Japanese enthusiasm for investment in the 1960s with the remark "Investment begat investment", which emphasize the multiplier effects of growth investment. Too much illiquid investment that does not spin-off other investment nor provides an income stream to the owners, is not conducive to growth. The consequences of low household savings and low private sector investment are made worse by government dissaving in the form of budget deficits that characterize many African, Caribbean, and Latin America countries.

Then there are the indirect forces of political and social institutions that can impede or stimulate the direct forces of growth. The evidence suggests that government actions and the provision of institutions that maintain law and order, secure rights of private property, and enforce contractual rights, explicit or implicit, all encourage saving, investment and enterprise. On the other hand, big government is bad for growth and so are political instability, lack of internal cohesion, high inflation, high fertility rates, arbitrariness rather than the rule of law, more unequal

income distribution,[4] individual and group disorder (crime and corruption), tyranny of civil abuses, and a greedy government that do not hold taxes down.[5] In a thought-provoking essay, Professor Debraj Ray of New York University raised the philosophical question whether some of these factors may be just as much an outcome as a cause of retarded development process.[6]

Jeffrey Sachs of Harvard University attributed much of the shortfall in Africa's slow growth to high taxes, and low savings, and the high trade barriers Africans impose on foreign-made goods.[7] I'm not the only one who disagrees with Sachs on the latter. Many others do. Dana Rodrik (1996, p. 14) of Columbia University points out that empirical work on growth has often claimed to discover a negative relationship between trade protection and growth for smaller economies. "However, this literature is marred by severe analytical and conceptual confusions..." Macroeconomic failures are often wrongly attributed to micro policies such as trade restrictions. Making distinctions between microeconomic distortions and macroeconomic failures arguably has made little impressions on development experts.

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[4] Persson and Tabellini (1994) formulate a model that relates equilibrium growth to income inequality and political institutions and conclude that income inequality leads to policies that do not protect property rights and do not allow the full appropriation of the returns from investment. Government's budgetary policy can be burdened by distributional issues as the rich seek policies that will protect their rents, and the poor policies that transfer rents.

[5] See Robert J. Barro (1997) for more in this.

[6] Debraj Ray (2000), "What is New in Development Economics?" Monograph New York University.

[7] Jeffrey Sachs, Growth in Africa: It can be done. The Economist, June 29, 1996.

The perennial adverse terms of trade of commodity exports, the high trade barriers imposed by industrialized countries on Africa's food exports and processed products, are now well known. The UN Secretary General, Kofi Annan, argued that fully opening markets of prosperous countries to the goods produced by poor ones would be the single most effective contribution toward the fulfilment of the pledge of helping the world poorest to grow.[8] He may be right.

3. The Way Forward

Is there any room in the New World for sub-Saharan economies? The answer must be surely yes. But what goods should the "poor" produce? Two Canadians Nuala Beck and Micheal Downie have described the evolution of the old to the new economy as "circles of development".[9] In the old economy, economic growth was driven by access to natural resource products. The commodity-based growth, however, was superseded by the manufacturing economy of mass production and mass markets around the 1920s. In the late 20th century, technology and knowledge have superseded commodity-based and mass manufacturing as the engine of growth.

Should the poor countries continue to remain in the commodity circle, producing only commodities that are absorbed into the industrialized economies at worsening terms of exchange? Or should they find modest niches? An eminent economists, Professor Stiglitz puts it this way: "Are there adaptations of products and processes for ... which

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[8] Kofi A. Annan, "A Chance for the World's Poorest." The Ghanaian Chronicle, Volume 9 (26), April 19, 2001.

[9] Nuala Beck and Associates in Tilting at Smokestacks by Bruce Little, Globe and Mail (Canada), July 20, 1991.

they [less developed countries] find themselves, which will give them a market niche which they can maintain?" The less developed countries are faced with two options: continue with 'basic raw material production' as in the past, or search for niches, linkages, and complements that build on these 'basic products', with the potential for beneficial spillovers in knowledge and ideas, through learning- by-doing.

Surely, the new world economy still needs resources – agricultural commodities, metals and wood products. But, it is worth noting that many primary commodities are finding new end uses with greater value to the transnational corporations; thanks to increasing research and development. Here are three examples. In British Columbia, Canada, the demand for resource conservation has sparked innovation, by the forest company MacMillan Bloedel, in the use of engineered wood from waste wood and sawdust- a boost to the cabinet-making industry. Alcan Aluminum is increasing the aluminium content of cars and high performance bicycles, eventually replacing steel as the main content. A remarkable development is in the end- use of cocoa. Cocoa is increasingly finding its way into cosmetic and pharmaceutical uses. Researchers at Osaka University in Japan, reports the New Scientist magazine (undated), have found that cocoa bean husks- the outer covering of the bean, which usually goes to waste in production- is a potential source of antibacterial agents that can fight mouth cavities and prevent tooth decay. In all of these it is not likely that the primary commodity producers will profit from the new gains in market value of the inputs.

The search for a path of growth must lead us in directions (1) that enable the economy to provide for basic human needs- food security, opportunities of good general health system, reliable and affordable supplies of energy resources – and (2) that build economic

organizations and institutions that stimulate and support growth, and protect as well as reward beneficial private initiatives and enterprise.

Some may argue that the gains of Ghana's economic reform fell short of expectations partly because the policy priorities emphasized the opening of the economy including, import liberalization, privatization, and getting prices right. That was good for starters. But beyond that, very little was done in developing proactive public policies or in expanding and securing the basic social and economic opportunities of individuals. Much of what followed as poverty alleviation measures (SAP, PAMSCAD)[10] was a rear end not a frontal attack of our deprivations. And many more may argue, perhaps quite rightly, that education and health sector reforms pursued in the 1990s were biased narrowly toward the revamping of public finance not broadly toward the strengthening of individual capabilities.

Nurturing Basic Research

Food security is an essential condition for building a stable, well-functioning society. Not only must we enhance our know-how in food production, we must put minds to investigate best post harvest practices in order to avert hunger, undernourishment and famine in the lean seasons. Second, poor health is a strong predisposing condition for an impoverished life. Providing opportunities for a healthier population is essential because without these old age there will not be, and economic growth will be hardly meaningful.

In terms of both basic human needs of food security and health, it is not the opportunities from the exploitation of the land, forests and

[10] SAP stands for Structural Adjustment Program and PAMSCAD stands for Policy Actions to Mitigate Social Cost of Adjustment.

vegetation that are scarce: it is rather the collective desire and human talent to pursue the many opportunities open to us. There will always be enormous unexplored scope for discovery and innovation in agricultural production, logging and forestry, and herbal medicine. It is for this reason that the introduction of a new herbal drug for malaria (Daily Graphic, January 16, 2002), for example, should be hailed, encouraged, and rewarded. And it is for the same reason that the potential of the Jatropha plant (locally called 'nkra gye dua') as a source of bio-diesel to fuel machines for small scale industries, among its other uses, must be explored to its limit (The Export News, Jan-Mar. 2001). Such basic research breakthroughs often do not gain the ears of policy makers perhaps because they do not add visibly to the nation's foreign exchange earnings. But the immense contributions lie rather in the savings in foreign exchange that would have be needed to import anti-malaria drugs and crude oil, in safeguarding the health of the population, in opening up further opportunities for growth through learning by doing, and in retaining our talented brains given to such pursuits.

Public action must encourage basic research into leaves, tree backs, roots, stems, twines, and cocoa waste, and encourage the cultivation of medicinal plants. The scope of Cocoa Research Institute of Ghana (CRIG) must be expanded to cover all tree crops not just cocoa, coffee and cola. Public action must also encourage the gathering, analyses and dissemination of information on soil types, production management, harvesting and post-harvest handling techniques of all food crops which will form the basic informational pool for all local producers. Such shared knowledge must be readily available at the district level.

Nurturing the Private Sector

In a recent survey of Ghanaian manufacturing sector by the Private Enterprise Foundation, some of the problems identified include: under-investment in physical capital and in human capital, obsolete equipment and machinery, high production costs, administrative bottlenecks, and unfair competition flowing from trade liberalization. Administrative bottlenecks, such as delays in the refund of input VAT, lack of transparency in assessing import duties and in licensing procedures all impose high transactions costs on businesses. Power outages and disruptions in water supply add to production costs. Several of these constraints on private sector development are surely within the reach of government and public policy must lead the way. Unfair competition and high production costs are another way of saying that domestic production is not competitive. But competitiveness is what is likely to sustain growth. Events since the early 1970s and globalization have informed us that devaluation can only do so much for competitiveness. Sustainable competitiveness demands more than currency revaluation by any group of countries.

Under-capacity, obsolete equipment and machinery, and under-investment in technology are at the core of industry non-competitiveness and are largely private sector issues. For innovations in these areas to occur, there must be a change in the culture of business entrepreneurship. There must be a heightened awareness that profit-making is synonymous with risk-taking. They must go beyond seeking public sector support and seek innovations in production techniques and in key target areas such as product quality, price, timeliness, responsiveness and service to customers, bearing in mind that risk-taking and creativity are the bedrock of business growth.

The ability to forge linkages locally, within the sub-region or with foreign private entrepreneurs is a way to enhance capacity usage and to gain access to modern and efficient production technologies. In other words, the private sector must seek technologies (products) they can profitably adopt and adapt through joint ventures in clusters (agro-business, information technology, communications, and tourism) identified as engines of growth of the economy. Adaptation of products and production processes are all forms of innovation and there is an element of adaptation in every imitation.

Government policy also matters in so far as industry policy affects investment levels and also affects opportunities for investment through company laws, regulation, and taxes. Despite the existence of institutions such as Ghana Investment Promotion Council, Ghana, arguably, has not done well in streamlining bureaucratic bottlenecks and in simplifying procedures that investors and local businesses must follow in acquiring the right information, in getting licenses and approvals. The time lags between policy-formulation and policy implementation and the seeming lack of understanding of civil servants at the operational level about new government policies (say, about tax certificates for import clearance) add immensely to the administrative bottlenecks. It is one thing to be seen as a promoter of investment in a new age of business. It is another thing to be seen as a remover of obstacles to private sector development. Removing obstacles would undoubtedly be difficult because of entrenched interests at the operational level. But for the government's drive to have beneficial impact, policies that streamline bureaucratic processes and provide ready information to prospective investors (foreign or local) ought to receive as much attention as policies that solicit the inflow of foreign direct investment.

Still within the realm of public policy, an important factor in the location decisions of global businesses is no longer the availability of raw materials per se, but rather the ability of the host country to provide the complementary labour skills to operate technology efficiently and flexibly. The prospects of being a successful imitator increase with the ability of the nation's workforce to absorb ideas and techniques.[11] These considerations pose important policy challenges for both industry and government in fashioning out directions in developing human capital. In a recent expression of his concerns, the Vice Chancellor of the University of Ghana hinted that we risk becoming even more marginal to the dynamics of international production because the human capital of the current and coming labour force cannot meet the new requirements of the new economy (Daily Graphic, November 1, 2001). Simply having a traditional post-secondary education is no longer enough. There is the need to develop the technical and problem-solving skills of the pool of skilled and semi-skilled labour force. And progress through learning-by-doing demands more than the customary 'rote learning'. More emphasis must be placed on applied learning and applied research (no matter how rudimentary, or how unsophisticated) to the problems that affect the basic human needs in specific environments; because like walking, the path of growth must be learned, corrected, and improved upon by doing. It should concern us that our vocational, polytechnics and universities remain as weak institutions in meeting this important challenge. It should also concern us that our education reform remains at the crossroads.

For the Asian economies, the engines of growth have been well-educated work forces and capital accumulation made possible in part

[11] M. Chui, P. Levine, J. Pearlman and A Sentence, "Innovation, Imitation and Growth in a Changing World Economy, London Business School, Economic Outlook, May 1996.

by the relatively high savings rate. The growth of Taiwan and South Korea, among the East Asian economies, also reflects the process from imitators to innovators. China remains an imitator. But South Korea and Taiwan are fast becoming innovators. Between 1989-93, annual average real growth in research and development spending was estimated at 16% for Taiwan, 12% for Korea, compared with 4% for Spain, 2% for France and 1% for US, granted that technology leading countries are likely to improve less faster than countries catching up.[12] For starters, despite high tariff walls, imitative technology is perhaps the best strategy to build food security for home and exports. Imitating know-how for example in cocoa bean processing beyond the production of cocoa powder and cocoa cake into high value added cosmetics, lotion and food products, is a legitimate path to grow.

Finally, in basic discoveries and useful applications alike, it is the incentives created by the market that affect the pace and direction of economic progress. Growth is faster when incentives for risk-taking are stronger, market opportunities exist, private and collective property rights are well-defined and secured, taxes encourage beneficial initiatives and industry, and the rule of law guarantees individual basic freedom. This is where there are complementary roles for the private and public sectors. And that is why the gradual improvement in the quality of governance based on the rule of law, the recent government initiative to develop the legal framework to support private sector growth, and the call to revise the company law must all be supported and sustained. Besides the provision of economic infrastructure, government should be able to use social and economic policies to

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[12] M. Chui, P. Levine, J. Pearlman and A Sentence, "Innovation, Imitation and Growth in a Changing World Economy, London Business School, Economic Outlook. May 1996.

motivate and to complement private sector initiatives and to foster individual opportunities to spur growth. Government efforts as a national policy in these directions should be seen as one of the very few efficient and effective instruments of economic intervention.

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