

# **MAS-ESS ESSAY COMPETITION 2001**

**East Asia in the New Economy: Problems and Challenges**

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**By**

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## Summary

The IT revolution has sharply reduced the cost of information and increased its availability. This revolution is also said to be creating a “New Economy” in which the old rules of economics no longer apply. My essay discusses the economic impact of the New Economy on East Asia. First, we discuss the potential economic benefits of the New Economy for the region. We argue that East Asian countries should focus on applying existing technology to local needs, since doing so promises large tangible returns, especially in terms of improving the efficiency of the manufacturing sector, the main engine of the region’s economies. In the long run, the IT revolution will also raise the quality of corporate governance in the region. Second, we point out that while the IT revolution may enable East Asian countries to leapfrog some technological barriers, it does not enable them to leapfrog sound economic policies. Such policies remain as relevant to good economic performance in the New Economy as they did in the Old Economy. Furthermore, the potential of IT to accelerate growth and reduce poverty will be largely unfulfilled in the absence of complementary investments such as a sound infrastructure for transportation and logistics. Third, East Asian countries must fulfill certain pre-conditions to make sure that the New Economy takes hold. Above all, they must liberalize their telecommunication sectors so as to improve the quantity and quality of telecom services. They should also make the necessary investments in human resource development to maximize their returns from the IT revolution. In short, although the New Economy holds out a tremendous economic potential for East Asia, realizing that promise will require a lot of determination and hard work.

## Introduction

One of the most fashionable words these days among government officials, academics and the general public alike throughout East Asia is “New Economy”. In this essay, I will focus on the economic impact and implications of the New Economy for East Asia in the 21<sup>st</sup> century. This is not to make light of the social, political, and other effects, of which there are bound to be many, some of them profound, but simply to concentrate on my field of expertise as well as to provide a sharper focus to my reflections on this most important subject. And, as its name suggests, the “New Economy” is above all an economic phenomenon.

Casual observation alone suggests that the rate of technological progress in the information technology (IT) field over the past ten years or so has been absolutely breathtaking. Moore’s Law, according to which the processing capacity of a silicon chip doubles every eighteen months, powerfully sums up the speed of innovation. Although web surfing and e-mailing have now become as much part of our daily routines as eating and sleeping, they were no more than fascinating novelties until quite recently. Microsoft, Cisco and Sun Microsystems, to name just a few, have come out of nowhere to become among the biggest and most recognized companies in the world. The New Economy is much more than the hype and hot air so often associated with it. It is here, and it is here to stay.

But what are the implications of this New Economy for the global economy? The extraordinary macroeconomic performance of the U.S., the

undisputed standard bearer of the New Economy with its Silicon Valley, countless dot.coms and venture capitalists, in recent years has led some economists to proclaim the arrival of an economic nirvana in which high growth went hand in hand with low inflation. At the other extreme, New Economy skeptics attribute the remarkable U.S. economy simply to an accidental convergence of growth promoting cyclical factors such as the IT investment boom and inflation subduing circumstances such as the strong dollar.

At the heart of this heated debate between the supporters and critics of the New Economy is an empirical issue - the contribution of IT to productivity. That is, theoretical arguments aside, by how much has the IT revolution helped workers to actually produce more with a given amount of capital? Whether or not IT enables an economy to achieve faster growth on a sustainable basis without triggering inflation ultimately depends on the magnitude of productivity gains. Although it is too early to make definitive judgments, the preliminary evidence indicates that IT has clearly led to some productivity gains, nowhere near as small as the skeptics would have us believe but nowhere near as large to justify the boundless optimism of the true believers. As is so often the case, the truth lies somewhere in between.

The basic theoretical reason for why IT should promote productivity is intuitively compelling and clear. As anybody who has searched for books on both hard copy library catalogues and online library catalogues knows, IT sharply reduces the cost of information. And, the cost of information is as

much of a cost of production as the cost of oil or steel. In fact, information is perhaps the most important input of all since all economic transactions require information. To cite just one example of how IT boosts efficiency by reducing information costs, it delivers lower procurement costs to firms by making it easier for them to find the cheapest suppliers and cut down their processing costs. Now that we have touched upon some general conceptual issues, we turn our attention to East Asia.

### The Promise of IT

In order to discuss the potential economic benefits of IT for East Asia, it is necessary to first look at the region's strengths and weaknesses. In terms of regional strengths, a glance at shops and department stores around the world will reveal that East Asia is the manufacturing hub of the world. This is particularly true for Japan and the four newly industrialized countries of Korea, Taiwan, Hong Kong and Singapore but also, to a lesser extent, for Southeast Asia. A noteworthy development in this connection has been the recent emergence of China as a manufacturing powerhouse, especially for low-tech goods. The region is especially good at, and heavily dependent upon, making and exporting electronics products, the hardware of the IT revolution. It is no big exaggeration to say that East Asia is the world's factory.

Despite a widespread tendency to talk up software and services and a corresponding tendency to talk down hardware and manufacturing these days, one should not forget that export-oriented manufacturing was the engine of the Asian miracle and will remain an important engine of regional

growth into the foreseeable future. Fortunately for East Asia, the potential benefits of IT for manufacturing are large indeed. While the region does enjoy a comparative advantage in manufacturing, this does not mean there is little room for productivity improvement. As a matter of fact, there is plenty.

The conventional wisdom is that although B2C (business to consumer), with its Amazons, e-Bays and Yahoos, grabs all the headlines, B2B (business to business) will generate the lion's share of growth in e-commerce over the next few years. What this means is that whether through lower procurement costs, more efficient supply chain management, or more timely inventory control, East Asian manufacturers stand to gain a productivity windfall if they can capitalize on the IT revolution. Again, the cost of information is a cost of production like any other and its reduction is no different from a reduction in the price of, say, oil. Furthermore, there are good reasons to believe that information costs are quite high in Asia, as best evidenced by a relative lack of corporate transparency, making lower information costs all the more beneficial for the region.

A point worth emphasizing here is that East Asian economies should focus their investment in areas that yield the highest tangible returns, which is the application of existing technology for local needs, especially in the manufacturing sector. There is no need for East Asian economies to compete with each other to create their own Silicon Valleys. At the present, they would do better to focus on localizing and adapting the software and technology developed in Silicon Valley, which enjoys huge advantages in terms of

network effects as well as availability of an innovative workforce and venture capital. There are as just as many risks of making “white elephant” investments in the New Economy as in the Old Economy. The main point here is not that East Asia is incapable of its own Silicon Valleys; rather, why waste scarce resources on investments with uncertain payoffs when there are alternative investments with large certain payoffs?

Returning to the lack of corporate transparency discussed earlier, and combining it with the quality of investments we just talked about, naturally brings us to the issue of corporate governance. With at least some justification, poor corporate governance is widely held to have been a key catalyst in precipitating the Asian crisis. By the same token, improving corporate governance, or the way companies are managed, is central to preventing another crisis and more generally, improving the performance of East Asian companies. While it is neither feasible nor desirable for the region to have an American-style market for corporate control, there is certainly room for improving the quality of East Asian management, which needs to become less family-based and more market oriented.

Again, the essence of the IT revolution is to make information, including information about companies, more available and less costly to the man in the street. Lack of corporate transparency, with all its negative implications for corporate governance, ultimately boils down to privileged access to information for the well-connected few and lack of access to information for the not-so-well-connected majority. In an age where

information is increasingly available to all, it is only natural to expect the hitherto disadvantaged majority to demand their rights. For example, minority shareholders will no longer sit silently when insiders abuse and manipulate information for their own benefit. In this way, the New Economy will enhance the quality of corporate governance throughout the region in the long run.

Related to the issue of improving corporate governance is the issue of public sector governance. Many governments throughout the region, even in the more advanced economies, lack the confidence and trust of the general public. In some instances, though certainly not all, the introduction of e-services may reduce the scope for undesirable behavior among government officials. Furthermore, by promoting the development of stock markets and bond markets through online trading, the IT revolution can help to weaken the region's over-dependence on banks, which all too often channeled resources toward favored borrowers at the government's behest. Therefore, in the long run, the New Economy will help to break up the unhealthy aspects of the relationship between the region's governments, corporate sectors and financial systems.

### No Panacea

As we have seen in the preceding section, the New Economy does indeed offer enormous economic opportunities for East Asia. Unfortunately, focusing solely on potential benefits, however big they may be, often leads us to unrealistic expectations. And so it is with the New Economy and East Asia. That is, its strongest advocates tout the IT revolution as a solution to



everything under the sun – from poverty and malnutrition to war and conflict. Granted, the IT revolution will clearly bring about big benefits for mankind, but we must be realistic about its limitations as well.

In this connection, IT's true believers often bring up India as an example of how a poor country can leapfrog the Industrial Age and straight into the Post-Industrial Age. No doubt India has done well for herself in exporting software and allied services as well as IT-enabled back-office work, and the country has become a global powerhouse in certain niches. So one might be tempted to argue that despite its traditional lack of international competitiveness in manufacturing, India has managed to achieve such competitiveness in services thanks to the New Economy's technological advances and that the country is on its way to becoming the next tiger.

If only the New Economy were that powerful! In the first place, India remains a very poor country by any measure and it is too early to tell whether India's ascent from its Hindu rate of growth will be sustained. Second, although it is untrue that the IT revolution has, as some critics argue, had only minimal impact on India's noticeably better economic performance in recent years, it would be equally implausible to attribute all or most of the improvement to the country's booming IT sector. In other words, IT's impact on the Indian economy extends well beyond the pristine premises of, say, Infosys, but it is simply nowhere big enough to carry the entire economy to a higher level. Third, it may be difficult for East Asia to replicate the experience of India, with its millions of English speakers and abundant supply of

engineers. More significantly, as stressed earlier, the region, with its strong comparative advantage in manufacturing, faces no compelling need to do so.

Another important area that often generates unrealistic expectations of IT is poverty reduction. One of the most impressive achievements of the East Asian miracle was a remarkable reduction in the proportion of the population living below the poverty line throughout the region. Nevertheless, hundreds of millions of East Asians still live in grinding poverty, especially outside Japan and NIEs. The Asian crisis has made matters substantially worse, undoing decades of hard-earned progress in countries such as Indonesia and Thailand.

There are several ways in which IT can help East Asia in its fight against poverty but they all ultimately relate to the essence of the New Economy – the availability of more information at lower cost. The poor, who usually suffer from the poorest access to information and in fact this is a big source of their poverty, stand to gain the most from the greater supply of information brought about by IT. For example, IT can provide East Asia's small farmers access to valuable timely market information such as the price of inputs and outputs, weather forecasts, and income-maximizing crop mix. IT can also improve the access of the rural poor to education through distance learning and health care by training rural health workers. In either case, the end result will be higher productivity and incomes.

However, despite its potential to contribute toward poverty reduction in East Asia, IT by itself cannot do the job. For example, small farmers who gain greater access to information will not be able to make good use of this information if they cannot get their products to markets on time due to poor roads and storage facilities. Or, an artisan who finds new overseas customers through the Internet will find his ability to deliver his products severely constrained by the lack of adequate ports and airports. East Asian economies will not be able to unlock the promise of IT as an anti-poverty tool unless they have good physical infrastructure and other necessary complements.

This brings us to a more fundamental point. All the talk about using IT to leapfrog, bypass and so forth is not merely illusory; it is downright dangerous. Such talk makes us lose sight of the fact that the New Economy does not at all change the fundamental ingredients of economic growth. As we just saw, the New Economy's advent renders good physical infrastructure more, not less, important. And so it is with human infrastructure. East Asia would do well to stick to things that have served it well during the course of its economic miracle – sound macroeconomic policies, openness to foreign technology, an outward-looking export-oriented development strategy, focus on education, and rapid accumulation of physical capital. New Economy will not allow countries to leapfrog sound economic policies.

In fact, it is precisely such policies that will maximize the benefits of IT as well as allow IT to take hold in the first place. That is, good policies will not only enable East Asian countries to realize the potential benefits of IT for their

economies; it will also accelerate their entry into the digital age. Of course, those policies are desirable for their own sake but in the New Economy their benefits will go even further. For example, investments in education yield higher returns because IT enables exports of labor-intensive back office services. At the same time, a strong policy environment will promote domestic and foreign investment in the necessary physical infrastructure for IT, such as an efficient telecom sector. A specific example of a simple but useful IT-enabling policy is to liberalize imports of computer hardware and software, which will sharply bring down their prices and thus accelerate the spread of IT.

### Pre-Conditions

Just as there are clear limits to what IT can do, it is also remembering that the IT revolution will not arrive throughout East Asia automatically. That is, East Asian economies must work hard to fulfill some basic pre-conditions if they are to enjoy the substantial potential benefits of the New Economy. It is not sensible to discuss the implications of the New Economy for East Asia when it is far from certain whether all the region's economies will experience it a meaningful way in the first place. Some countries already appear to be doing better than others in terms of creating an appropriate enabling environment for the New Economy.

The foundation for the IT revolution and the New Economy is undoubtedly the telecommunications sector. Quite simply, a country that does not have an efficient and well-functioning telecom sector will find itself at the

wrong end of the emerging international digital divide. We cannot emphasize enough the central importance of telecom in IT. So much so that ICT, or information and communication technology, is increasingly replacing IT in the jargon to emphasize the convergence of information technology and telecommunication technology in the New Economy. Those of us living in richer countries have a tendency to take affordable and reliable telecom services for granted but unfortunately, this is not the case in poorer countries. Even in some richer countries, government policy is keeping telecom costs artificially high.

Therefore, telecom liberalization has to be the point of departure for any East Asian country that wants to join the New Economy. Most available evidence indicates that liberalization tends to improve both the quality and quantity of telecom services as well as more investments. Although bringing in the private sector has not always been successful, liberalization generally does involve a bigger role for the private sector. A sound regulatory framework that promotes competition is required in order to promote efficiency and innovation as opposed to a private monopoly merely replacing a public one. In East Asia, as elsewhere, governments' reluctance to liberalize owes to the fact that public telecom monopolies are a major source of revenues. However, such shortsightedness, costly for the economy as a whole to begin with, will be all the more so in the New Economy. Just as liberalization, beneficial and desirable in and of itself, is all the more so in the New Economy.

One possible danger inherent in the IT revolution for East Asian economies is that it would exacerbate income inequality. A digital divide, or inequality in terms of access to and use of IT, can only put the less fortunate segments of the society at an even further disadvantage in an age when information and knowledge are becoming ever more important determinants of success and advancement. The essence of the New Economy is more information at lower cost, as we pointed out earlier, so in principle, IT can serve as a force for greater economic equality. However, in practice, this depends on the extent to which access to IT is available to all. Therefore, once again we come back to our point of departure for the IT revolution – telecom liberalization supported by a sound regulatory framework. The private sector tends to be more flexible and adaptable than the government, yet another big reason why it makes sense to involve the private sector to a greater degree in the telecom sector.

Affordable and reliable telecom services are a start, but only a start in the IT revolution. Human resource development that equips the entire workforce with basic IT usage skills is another indispensable ingredient for an IT revolution. A PC and a telephone line will not do an illiterate person a whole lot of good. Therefore, primary and secondary education that creates a literate and numerate workforce will remain important in the New Economy as ever. In addition, primary and secondary schools should introduce computer education as part of their core curriculum. On the supply side, equipping IT workers with the necessary technical skills as well as investing in tertiary education to produce a steady stream of engineers is essential to develop a

strong IT sector. Although governments continue to play the leading role in education in East Asia, bringing in the private sector into IT human resource development is desirable. In fact, as the proliferation of private IT training institutes across the region shows, this is already happening to some extent. Government regulation of such private sector education should focus on quality control issues.

There is certainly a lot of merit to the widely heard argument that East Asian education systems, with their emphasis on memorization and rote learning, will not serve the region well in the New Economy. Thus the region-wide calls for revamping education systems to allow for more creativity and independent thinking. However, there is also a lot that the region's schools, especially those in Japan and the NIEs, do right, such as emphasis on their students' excellent performance in science and math. Encouraging greater creativity is fine, but this must not mean wholesale imitation of the curricula of Western countries. Furthermore, we must recognize that the region's education systems, along with the mindset and mentality they have engendered, have been in place for a long time so that the emergence of a mindset and mentality more appropriate for the New Economy will not take place overnight. Also, many talented East Asians still move to Silicon Valley rather than contribute their skills to the region. In this case, the problem is not the education system but instead the lack of a favorable overall environment for IT entrepreneurship.

Central to such an environment is the availability of capital for would-be IT entrepreneurs. One of Silicon Valley's biggest advantages over aspiring IT hubs is its large corps of venture capitalists who evaluate the viability of New Economy start-ups and help them grow. Unfortunately for East Asia, the region lacks venture capitalists, and for a good reason. Venture capitalists reflect the depth, width and sophistication of U.S. financial markets. When East Asia's banks and capital markets did a poor job of evaluating risk and monitoring investments even in the Old Economy, and this was one cause of the crisis, it is unrealistic to expect them to do a good job in the much more complex and unstable New Economy. Venture capitalists, just like more independent thinking, cannot be created overnight. However, East Asian countries can make a start by opening up and liberalizing their financial systems so that scarce resources will finally begin flowing to their most productive uses.

### Concluding Remarks

I have limited the discussion to what I believe are the most important issues for the sake of clarity and focus. This means I have omitted some relevant considerations. For example, in addition to telecommunications infrastructure and human resource development, e-commerce requires a well-functioning legal and regulatory environment that covers areas such as contract enforcement and consumer protection.

Be that as it may, let me briefly point out the central messages of my discussion, in the hope that they may stimulate discussion among East Asia's



policymakers and general public on how to best proceed with the New Economy. First, the IT revolution presents many opportunities for East Asian economies in terms of improving efficiency and thus promoting economic growth. Those opportunities are especially inviting in the manufacturing sector, the region's economic mainstay, since the bulk of global growth in e-commerce is expected to come from B2B. Thus the focus of the region's IT investments must be on local applications of existing technology.

Second, while East Asia stands to benefit significantly from the IT revolution, we should be realistic about its limitations as well. In particular, while IT may allow countries to leapfrog some technological barriers, IT will not enable countries to leapfrog sound economic policies. The New Economy may have changed the world, but not by so much as to change the key ingredients of successful economic performance. IT will help East Asian countries achieve sustainable economic growth and development only insofar as they maintain a sound overall policy environment.

Third, sitting back and waiting for the New Economy to arrive is a foolproof recipe for making sure it will never arrive. The New Economy requires basic pre-conditions. Above all, East Asian countries must liberalize their telecommunications sectors in order to improve the quantity and quality of telecom services. They must also make the necessary investments in human resource development.

The dawn of the new millenium has thrust upon mankind a technological revolution that is sharply reducing the cost of information. In combination with globalization, the IT revolution is creating a world economy in which competitive pressures are as fierce and relentless as never before. East Asian economies will survive and thrive in this highly competitive New Economy only if they keep doing the things that they have done right, such as saving and investing a lot, while improving the things that they need to improve, such as the quality of corporate governance. If they do so, the New Economy will indeed prove to be a boon for all East Asians.

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