SPEECH BY PRIME MINISTER LEE HSIEN LOONG AT THE LSE ASIA FORUM, 11 APRIL 2008

Mr Peter Sutherland, Chairman, LSE Court of Governors,

Sir Howard Davies, Director, LSE,

Mr K Kesavapany, Director, ISEAS,

Excellencies and Distinguished Guests,

Ladies and Gentlemen,

INTRODUCTION

1. I am happy to join you this morning at this LSE Asia Forum. LSE has always had a strong Singapore connection. For decades, it has attracted top Singapore students studying in the UK. Many have left their mark in a wide range of professions. Several have distinguished themselves in public service. Two LSE alumni have served in the Cabinet so far – Dr Goh Keng Swee, who was our first Finance Minister (and much more besides), and Mr Tharman Shanmugaratnam, the current Finance Minister. It is an illustrious record.

2. The theme of this conference – knowledge – engages many of us in Asia. The whole continent is on the move today, because China and India have taken off. But Asian countries know that to sustain their growth and improve their people's lives, the use and creation of knowledge are crucial. Hence many countries are seeking to educate their people, upgrade their economies, and create conditions for knowledge and innovation to flourish.

KNOWLEDGE ECONOMIES IN ASIA

3. Knowledge creation is not a new phenomenon in Asia. The ancient Indian civilisation made significant contributions at the frontiers of knowledge. Fundamental mathematical concepts like the number zero and the decimal system, as well as inventions like rocket artillery and coins, can be traced back to India.

4. Ancient China was arguably the most technologically advanced society in the world. This pre-eminent status lasted for at least two thousand years until around the 15th century. The monumental efforts of Joseph Needham and others to document China's scientific history reveal the long list of its discoveries and inventions: the magnetic compass, gun-powder, paper, printing, and porcelain, to name just a few, were all available in China centuries before they became known in the West.

5. However China did not realise the full potential of the ingenuity and inventiveness of its people, and the scientific knowledge that it had accumulated over the centuries. Instead under the Ming and Qing dynasties China closed itself to the outside world. Chinese society stagnated, and eventually decayed and broke down. In contrast, Europe from the 16th century onwards saw dramatic advances and breakthroughs, as scientists like Copernicus, Galileo and Newton revolutionised scientific thinking and laid the foundations of modern science. This set the stage for the intellectual movement of the Enlightenment, and later the Industrial Revolution, and today's modern developed economies.

6. Today Asia continues to lag behind the West in the level of science, engineering, technology, all key fields of knowledge for economic development and human progress. But this

is changing with schools, colleges, universities and research institutes sprouting across China and at a more measured pace also in India.

7. Both China and India have deep talent pools, with huge numbers of extremely able and bright people. This talent has scattered all round the world, and are making themselves felt in top universities in the US and UK, in the City of London and Silicon Valley. Top Chinese and Indian universities like Beijing University and the Indian Institute of Technology (IIT) have student bodies which are collectively at least as bright as the top universities in the West. Statistically, their admissions are indeed more competitive. Indian students are known to apply to IIT first, and only if they fail, go to MIT.

8. However, what the universities in China and India have not yet succeeded in doing is to create the environment of open inquiry and experimentation, conducive to, and indeed essential for, cutting-edge research and major breakthroughs. Researchers in these countries have yet to win Nobel Prizes in the sciences, or Fields Medals in mathematics, although Chinese and Indian scientists and mathematicians working abroad have done so. One reason is that these universities have a less diverse academic community. Unlike the top Western universities, they do not draw the best students, researchers and professors from around the world. The intellectual ferment and exchange required to challenge great minds to do great things is not yet there. They are also weighed down by the legacy of academic hierarchies based on seniority rather than talent, unlike the best American universities. This is changing, but it will take time. Meanwhile we already see more researchers from Chinese and Indian institutions publishing papers in leading international academic journals.

9. The growing scientific and technological prowess of China and India is an important factor in their economic takeoff. India was not long ago seen as the world's back office for low-end business process outsourcing (BPO), but it is now doing more and more knowledge-intensive work, like interpretation of medical scans, data mining and modelling, and writing of legal briefs. Indian BPO companies like Infosys, Wipro and Tata are all providing high value-added, complex systems solutions to MNCs around the world. Their operations are as sophisticated and knowledge-intensive as global companies like Google or Accenture.

10. Similarly, China is not just growing low-end industries, but making rapid in-roads into high-tech sectors. MNCs are setting up not just manufacturing plants in China, but also R&D centres to take advantage of the abundant supply of talented Chinese engineers. We are starting to see home-grown Chinese high-tech firms like Huawei and Lenovo, which design new products using indigenous technology. Having established themselves in the domestic market, they are now expanding abroad, and competing in the global league.

11. In Southeast Asia too, countries are striving to upgrade through education and technology. Malaysia, which decided to use Malay to teach all subjects in state schools a generation ago, has now switched back to using English to teach mathematics and science. This switch has not been easy, either politically or practically. But the Malaysian government has committed to this reform because it understands that this is the only way to keep in touch with developments in the world, and give their population the best chance of keeping up in a global knowledge economy.

12. Vietnam, which is on the verge of economic take-off, is also emphasising education. Vietnamese students are highly motivated and quick to learn. They have an aptitude for science and mathematics, and consistently excel in international Olympiads. Vietnamese workers also show tremendous drive to improve themselves. Huge numbers take classes after work to learn English, and many now want to learn Chinese. They know that English will open doors to a world of knowledge and technology, and Chinese will expand economic opportunities.

SINGAPORE'S APPROACH

13. As a small country with no natural resources, Singapore has long known that we have no choice but to make the mastery of knowledge our competitive advantage. We have been implicitly building a knowledge economy, long before this became a buzzword. From the late 70s,

we realised we could not differentiate ourselves from our competitors or raise our standards of living by competing on cost alone. Hence we pursued several strategies to build up this knowledge edge.

14. First, we have invested heavily in our people through education. Our aim is to give every child a top-rate education, and invest in where his aptitudes lie. Therefore our emphasis is on the quality of all our schools, and not just a few elite schools. The goal is to teach students how to think, to be creative in problem-solving, and to keep on absorbing new knowledge and skills all their life, rather than to squeeze more facts and data into an already full curriculum. Hence our slogan: "Teach Less Learn More".

15. We acknowledge that not every student has the same ability and talent. So we are creating diverse and flexible options for students to choose a path which suits them, instead of trying to cast everyone within a few moulds. Beyond the schools, our junior colleges prepare students for university education, both locally and abroad; our polytechnics impart professional expertise through a practice-based curriculum; and our Institute of Technical Education equips students with hands-on technical skills and critical thinking habits. These heavy investments in human capital, across the whole spectrum of skills, are equipping our people to compete a knowledge economy.

16. Second, we have encouraged the free flow of information. This is the way to keep ourselves fully abreast of new developments and ideas, and to be ready to react promptly to a changing world. Singapore is fully plugged into the world, and wide open to the cross-currents of global interactions. Because English has been our working language, it gave us a tremendous advantage in the internet age. As an air and sea hub, we are linked up physically to the rest of the world, and as a telecommunications hub we are fully hooked up, whether wired or wireless, whether through the internet or cable TV. We still need to filter the flow of information, to maintain basic standards of decency, and preserve racial and religious harmony, but it is confined to a very minimum. All this is essential to nurture knowledge industries, whether it is financial services, interactive and digital media, or just-in-time manufacturing.

17. Third, we are stepping up our R&D efforts, from basic R&D to translational research to development work close to the end products and markets. We are setting up research centres and programmes in our universities, to study focussed areas where our modest efforts can make an impact, like cancers and infectious diseases that are common in Asia, and natural disasters and climate change in our region. We are creating an integrated environment for collaboration across disciplines and institutions, thus maximising opportunities for cross-fertilisation of ideas and expertise. Through such cross-disciplinary efforts, we aim to be part of the global endeavour to push out the new frontiers of knowledge and possibilities.

18. Fourth, the whole tenor of our society is geared towards welcoming new ideas, and adapting to change. Our ethos is cosmopolitan and pragmatic. Our society is meritocratic and egalitarian – everyone has a chance to learn and excel. We strive to operate rationally and flexibly, and to keep our sense of identity as an Asian society without being constrained by rigid social hierarchy or stifling political correctness. We respect the rule of law and intellectual property rights. We reward effort and work, encourage risk-taking, and embrace diversity.

19. This broader social and political context helps us to create an environment which attracts talent and entrepreneurs from around the world. They come because here they can access information, markets and global services, operate within a reliable, efficient and honest business environment, and do well for themselves and thus for Singapore. They bring with them diverse experiences, extensive expertise and new ideas, which add to the richness of our society and spur our own people to innovate and break new ground.

CHALLENGES AHEAD

20. To stay competitive on the global stage, Asian countries have to keep on moving in this direction of knowledge, scientific excellence and innovation. But it will not always be a smooth

journey. There will be difficulties to overcome along the way. Let me highlight three broad challenges.

21. The first challenge is to ensure that everyone in a society benefits from the knowledge economy. Even as we strive to develop every individual's abilities and talents, we know that those without the right skills will have an increasingly difficult time. The premium on ability and skill is high and growing. IT is automating simple jobs. We already see automated checkout lines at supermarkets and touch-screen check-in kiosks at airports. In the coming decades, many more routine jobs will be replaced by computers or robots that work 24/7, and cost less than the wages that a worker will expect. Overall the knowledge economy will be a boon for mankind, but individual workers will need the skills to do things which the computers and robotic tools cannot do.

22. This is why we in Singapore are investing heavily in continuous education and training, to help vulnerable workers learn new skills, and master new jobs. It is also why we are emphasising quality education for all, and paying special attention to children from low-income families, so that we reduce the problem of poverty in the next generation.

23. Another challenge is the complete and instant exposure to an overwhelming torrent of information through the internet and online channels. This brings great economic benefits, and great potential for sharing and using knowledge, but it also causes people to respond to unfiltered, raw information or misinformation without the benefit of reflection time or informed interpretation. Furthermore, instant communication is not just about conveying information. Inflammatory opinions, half-truths and untruths will also gain currency through viral distribution. The online film "Fitna" which has offended Muslims worldwide is just the latest example of wrong-headedness, asserting the right to freedom of expression in democratic Holland while overlooking the costs, namely the stoking of hatred between devout Muslims and Christians. Terrorist groups are using the internet too, to find recruits, spread their extremist ideologies, and prepare attacks.

24. With satellite TV and the internet, events are also magnified across a global listening board. The world is now their stage. We see this in the protests that have erupted during the Olympic torch relay. The Olympics is China's coming out party, to celebrate its progress and opening up to the world. They sent the Olympic torch overseas in what is described as a "journey of harmony". But not surprisingly, China's opponents see this as a golden opportunity to make their point. So as the torch travels the world, it has faced challenges at virtually every stop so far. Vivid TV images of demonstrators waving banners, scuffling with police, and making concerted assaults to snuff out the flame are beamed live around the world, achieving an asymmetrical prominence, and so influencing public opinion against China and the Games.

25. No protesting group truly expects that their public display of anger and outrage at China's treatment of Tibetans or ethnic Han dissidents will change China's policy when it affects its core security concerns. They know no government can give ground on any core issue under such public duress, whatever the merits of the arguments. So whatever the intentions of the demonstrators, the people of China believe they want to inflict maximum humiliation on China and the Chinese people more than the Chinese government. The outrage in China, especially among the young, can be read on the flooded internet bulletin boards, all carrying virulent anti-foreign sentiments. Pity they are in unintelligible Chinese ideographs. Were they in the English language, young Americans and Europeans would realise that these displays of contempt for China and things Chinese will have consequences in their lifetime, well beyond the Olympic Games.

26. In this new environment of raw, unprocessed information with instant worldwide impact, it will not be easy to keep the public debate on a high plane, especially on controversial issues where emotions rather than reason prevail. This will change the texture of societies everywhere. Societies will have to adapt and evolve defensive mechanisms and habits to thrive in these new circumstances. Amidst unceasing and bewildering changes, we will all the more need strong moral and social values that help us keep our bearings and hold our societies together.

27. Finally, fostering a sense of national identity will be a major challenge, especially for small and open societies like Singapore. Globalisation and the knowledge economy have created a single worldwide market for talent. In every field, the most able people are in demand worldwide, and are also highly mobile. The best musicians and sportspersons are already a global breed. But to do well, a country needs a core of its ablest citizens, those with both the intellectual and social acumen, to play leadership roles in the economy, the administration, and the political leadership. Without that central core to take the country forward, the society cannot perform to its full potential, and the citizens will suffer.

28. Big countries like China and India can sustain large outflows of top talent over years or decades, and still be able to retain a central core. Smaller countries like Singapore risk being depleted much faster. More and more Singaporeans are going abroad, whether to study or work. We must accept this flow as a reality, and bring in talent to top up, and encourage Singaporeans who study and work abroad to eventually return and add to the vibrancy of their own society. We will need not only to create economic opportunities here, but also opportunities for people to develop their potential and express their human spirit. Ultimately we must create an emotional attachment to the country, their family members, school and college mates, buddies in National Service platoons, and friends, both to hold our own people and to get others to strike roots here. Then we can maintain our own identity and sense of common destiny. Then we will have the conviction and the sense of purpose to sustain what we have built, and bring it to ever greater heights.

CONCLUSION

29. Despite these challenges, Asia's transformation will continue. It will be powered by knowledge and ideas, and by billions of increasingly-skilled workers and entrepreneurs continually searching for new and better ways of doing things. The politics in Asian countries will inevitably change too. The outcome will not be determined by pressure from outside, but by the internal processes in these countries, which are old societies with deep cultures and long histories.

30. Not all Asian countries will effortlessly adapt to this new environment. But all will make the effort, several will excel, and many will eventually make the grade. Singapore will try its best to be among those who will succeed.