

**SPEECH BY TUN DR MAHATHIR BIN MOHAMAD AT PIKOM
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“The Convergence of Technology leads to Economic Stability”

1. I would like to thank PIKOM for the invitation to speak on a very tricky subject namely “The Convergence of Technology leads to Economic Stability”.

2. Economic stability normally depends on the political and social situations prevailing in a country. Social disparities and political rivalry will result in economic instability. The opposite, i.e. the satisfaction of the people with their social status, the freedom, equality and fraternity of the people will sustain economic stability. The exploitation of the poor by the rich and the struggle of the poor to free themselves from political and social oppression will also result in economic instability.

3. But today we are seeing a new factor, the radical changes in technology which can also affect economic stability. Travel time has been greatly shortened because of the continuous progress in jet propulsion technology. Then there is the progress in telecommunication technology which is truly amazing. Everyone can carry in his pocket a whole broadcasting and receiving station. We have forgotten and for the young there is no knowledge of the huge broadcasting stations buildings with very tall antennas. Actually the cellular phone is more powerful than the huge broadcasting stations of the past, being able to reach the other side of the globe with ease, sending data and pictures and enabling people to talk and interact with each other through Skype freely.

4. There is convergence of the technologies here. Where before different technologies were needed to transmit sounds, and different technologies for TV broadcasting and again different ones for data, now all these different technologies have been brought together on just one chip the size of a thumb nail. And digitalisation has made all these transmission, by copper, fibre optics or wirelessly, almost faultless. Sound and colour come through perfectly because of the assignment of numbers to every information. Everything can now be in high definition.

5. The digits are not the usual numbers that we write. There are only two digits: 1 and Zero. It is strange to note that the lesser the number of alphabets the more versatile the ability to convey information. The Chinese Kanji characters number in the thousands, the Roman alphabet and the Arabic scripts about 30 plus but the digital alphabet is made up of only two, yet almost unlimited information can be conveyed through the two digits – 1 and 0. Whether we are sending and receiving letters, sounds or pictures the digits can carry at the same time through the same media – an example of convergence of technology made possible by digitalisation.

6. Truly between the digital alphabet and the microchips, convergence of technologies has rendered almost anything in terms of communication possible, Additionally sensors have been developed which make it possible for the chips to respond to stimuli such as movements and sounds so as to make machines react to the messages they receive. Some of these messages from sensors are carried by radio waves .

7. The perfect example of convergence of technologies is shown in the UAV (Unmanned Aerial Vehicle) – developed from the toy radio-controlled airplanes. All kinds of manoeuvres can be performed by the radio-controlled planes remotely.

8. But the UAV has carried this remote control technology to a high degree. Through the convergence of technologies, the UAV can now fly for days through programmed flight or control by radio to perform tasks such as bombing and rocketing, to be jet-powered using GPS technology to determine position and video-cameras to record and send back pictures and data over long distances. The controller need not be anywhere near the target. Sensors and radio or radar seem to be used for avoiding collision with other aircraft or object in the air. Clearly the UAV is a fantastic example of the convergence of technology.

9. The UAV can also be used for Search and Rescue.

10. Now how does the convergence of technology contribute to economic stability? Models or examples do not come easily to mind. The immediacy of information on market performance may enable decisions to be made before a particular counter collapses. A Government may be able to make early decision on the amount

of Quantitative Easing that would be needed to forestall economic and financial collapse.

11. The world will be so connected that the performance of the economies separated by big time zone differences can be monitored and again action taken to prevent the collapse of the stock market in Tokyo from being followed by similar collapse in London and New York. The same can also be done for currency depreciation in various parts of the world.

12. Crooks and financial pirates will find that hiding in other countries will not be easy anymore because of the connectivity available to the law enforcers of all countries.

13. Remote control and automation have also invaded the industrial field. The trade unions and their disruptive strikes etc can be frustrated by replacing workers with robots and the fully automated plants. The robots do not complain and will not rebel if made to work 24 hours a day. Unfortunately the unemployment caused by the workers being replaced with robots is one of the root causes of economic instability.

14. Today it is possible to switch the lights and turn on TV from thousand of miles away. All one needs is a cellular phone. By giving the appearance that the house or the office is occupied, the thieves may be deterred from breaking in. There are numerous other applications of the technologies involved with this deception. They will obviously contribute to the security of doing business while holidaying for example.

15. With less possibility of losses and damage through accidents, pilferage, robbery etc. through sensors and IT technology businesses would prosper and grow and the economy would be stable.

16. Work will no longer be confined to offices and plants. Work, even physical work can be done from far away, including in the desert or the jungles. Of course work can be done at home, reducing traffic accidents and other mishaps.

17. Being far away from the supporting infrastructure such as security personnel and hospital may put the distant businessman at risk. But the cell phone can reduce much of this risk.

18. An incident in Malaysia has proven the capacity of the cellphone to provide security. When a planter was chased by a

tiger, he ran and climbed up a tree. From the safety of this perch he was able to ring up for help and his friend came quickly to his rescue.

19. Now doctors can actually diagnose a patient stuck in the middle of a tropical jungle using a small gadget worn on the wrist which can monitor pulse rate, ECG etc to be read by the doctor via radio communication. Advice could be given immediately and a helicopter can be sent with medics to attend to his ailments.

20. All the while the remotely located businessman can monitor the stock market, the performance of his company's shares and any other information that he might need for the peace of his mind.

21. Doing business to contribute to the economy and it's stability is now easily done because of the convergence of technology. There are really an infinite number of ways for technology to be used to ensure things are under control. Even the Government can make use of the convergence of technology.

22. In fact there are now many enterprising young people who think up of ways to use the different technologies and combine them to make life safer and to provide early warnings of potential trouble. Without doubt these will contribute towards easier management of the economy and to render it more stable.

23. We are in fact at the beginning of the age of technological convergence and its application. Whether these technologies will contribute towards economic stability or mayhem depends upon us.
