**Criticisms over the claim that the opportunity cost of the delayed 3G auction is equal to that of the 1800 MHz spectrum auction**

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An opportunity cost for one situation only applies to that situation. Thus, the fact that some academic group calculates the opportunity cost of the postponement of the 3G auction and applies it to the prior-to-the-end-of-the-concession 1800 MHz auction is inaccurate. They claimed that the absence of 1800 MHz auction prior to the end of the concession has caused the public an opportunity cost to use 4G technology, totaling 160 billion Baht. Such calculation is inaccurate and causes misunderstanding. The reasons supporting my view are as follows:

1. We all know that an opportunity cost is the act not completed or the value not received for doing some other thing.
2. Between 2009 and 2012 Thailand did not hold an auction of the 2100 MHz in the amount of 45 MHz bandwidth. As a result, some groups raised doubts that this may cause damage to the country and the damage is called “opportunity cost.” This brings up calculation of the opportunity cost.
3. Later, 25MHz bandwidth of 1800 MHz spectrum expired in 2013 and is available for assignment. This was (1) a part of the switch from the spectrum assignment by the concession system to the licensing system and (2) a part of consumer protection (since 18 million consumers will be affected by the 1800 MHz spectrum auction). Under the context of switching from the concession to the licensing system and that of the necessity to protect interests of the subscribers in the system, there will always be an opportunity cost. If Thailand is unable to switch to the licensing system, there will be opportunity cost because the growing economy is hindered. The amount of service provided and the price in the telecommunications market will be dictated by one or several operators. It is likely that the service provided will be reduced and the price increased. (More details to follow in no. 6.). As a regulator, NBTC has to apply proper mechanism to make the change to the licensing system smoothly and effectively.
4. Some academic group equates the opportunity cost in the case of the absence of 2100 MHz spectrum auction over the period of 2009-2012 (No. 2 above) to that in the case of the lack of 1800 MHz spectrum auction in 2013. This calculation indicates the lack of understanding of the situation and ignorance of accurate analysis. The opportunity cost of the absence of 1800 MHz auction in 2013 relates to the switch from the concession to the licensing system and consumer protection. The situation of the lack of 1800 MHz spectrum auction has not arisen. The opportunity cost claimed is conjectural.
5. **The substitution of the opportunity cost of one situation (2100 MHz auction in 2009-2012) and that of another situation (1800 MHz spectrum auction in 2013) is inaccurate. The opportunity cost of a specific situation only applies to that situation. Variables for one situation are particular to that situation. The conclusion of one situation cannot be assumed to be the conclusion of another situation – because of different contexts and variables.**
6. As mentioned in no. 3 above, the failure to switch to the licensing system means Thailand’s telecommunications industry will be driven by the concession system, which yields a completely different outcome. The licensing system aims at creation of competition in the market, encouragement of horizontal value creation and generation of income in various industries relating to telecommunications. This is different in the concession system. The concession system prevents value creation and income generation by limiting income to be solely in the hands of the concessionaire. It is a system that survives by economic rent seeking (also called “monopoly rent”). It should be stressed that this “rent” results from a monopoly. From the graph, the price charged under the concession system is Pm and the amount of service provided is Qm – which is less than that in a cost-based pricing system or the licensing system.
   1. **Cost-based pricing system**

In the cost-based pricing system, the price charged is at Pp (which is lower than Pm) and the amount of service provided is Qp (which is high than Qm).

* 1. **Licensing system** (competition system)

In the licensing system, there is more competition and service provided, which moves the demand from Rm to Ro. The increased demand (MR) moves from MRm to MRo. As a result, price is set at Po which is closer to Pp and the amount of service provided (Qo) is greater than that in the concession system and closer to that in the cost-based pricing system.

Thus, it can be concluded that consumers and our country benefit more from lower price and more service provided in an open system (where there is competition), such as a licensing system, when compared with a closed system, such as a concession system. Our conclusion is still the same when analyzing using the General Equilibrium Model. This is the true opportunity cost of our country if we fail to auction off the spectrum.

1. **Regarding consumer protection, it is generally accepted that consumers’ inconvenience or inability to access telecommunications service is damaging to the country and the economy. This is the opportunity cost of the transitional period. But consumer protection is more important. In other words, consumer protection is valued at ∞ which means we absolutely must perform.**
2. **Conclusion**

**The estimation of the opportunity cost in one situation cannot be equated with that of another. More importantly, the situations mentioned have not arisen, so how can there be opportunity cost?**

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