

Jul 21, 2009

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LONG THANH OR TAN SON NHAT AIRPORT: BUILD NEW OR EXPAND?

Thinking About a Solution to the Long Thanh Airport Case

1. The costs for similar airports are in the \$4-5 billion range, and if a light rail from the new airport to HCMC is added, then \$5 billion is a safe and possibly conservative figure to use. (Conservative in the sense that it could be more.) Delays are possible depending on the skill in contracting, the level of corruption (which leads to delays) and technical issues such as soil conditions. If financing is not entirely lined up, that could also add to delays. Overall, a project that spends \$1 billion a year from 2010 to 2014 for a 2015 airport start is optimistic but not unrealistic. Most risks are that it might be worse.¹
2. The net income per passenger is taken to be an optimistic \$5 per departure and arrival. This includes all landing fees, rents on duty free stores, departure taxes and any other income. It deducts labor, fuel and power, materials, and contracting services. Malaysia's airport actually needed subsidies to function and made no net profit, while Singapore – regarded as one of the best in the world – made about \$6 per passenger. Risk analysis would be wise to consider lower earnings per passenger, with possible distinctions between domestic (less income) and international passengers, if both use the new airport.
3. The growth rate of domestic and international passengers is basically a trend extrapolation. The 6% international growth fits closely with actual experience and the long-term Boeing traffic projection. The 12% growth might be a blip or could be a long term trend. Anything much higher is unlikely, but growth in the 8-10% range is quite possible later in the next decade and in the 2020's.
4. The cost of capital, or discount rate, is a major item. Long term finance in billions of dollars is simply not available to Vietnam. It could borrow small amounts but not enough to cover the airport and even a few of other high-priority projects. Indeed, it cannot even sell local currency debt to cover its 2009 deficit! Debate is possible, but a 10% discount rate in real terms in dollars is probably not far off.
5. If we take the default setting of using Long Thanh for international passengers only and open it in 2015, we get a 10% discounted flow of earnings (cumulative, at \$5 per international passenger and 6% passenger growth) of \$133 million from 2015-2025, and less than \$10 million a year (and declining each year) thereafter. The 2015-25 discounted earnings total is \$200 million at 6%. The present value of construction costs, also discounted at 10%, is \$3690 million, or \$4.2 billion at 6%. So, there is no way that the default option will ever cover its costs.

¹ The Dung Quat refinery took fifteen years to bid, built and operate. Normally it is 3-4 years.

6. The closing of the old airport and selling of land is a bit better. However, the land cannot be sold until 2016-2017 to ensure that at least one airport is operating. That means that the estimated \$4 billion in land sales will have a 10% present value of only \$2 billion. (The \$1000 a square meter is a bubble price, unlikely to be realized for large land blocks. Even the \$4 billion might be hard to get paid upfront, as most developers prefer to give a fraction of the project to the government to keep cash outlays low. This delays cash returns.) Income from passengers will be higher, but probably not amount to \$5 per domestic passenger. If we assume half as much net airport income per domestic passenger (\$2.50), the 2015-2025 cumulative discounted passenger income jumps to \$280 million at 10% for the high domestic case, with \$20-\$24 million a year after that, depending on future growth. So, in 2025, we may have gotten \$2.28 billion in land sales and net passenger income, but spent about \$3700 million in construction costs, leaving a net deficit in 2025 of about \$1.4 billion and rather small net passenger income (~\$20 million a year) going forward. At 6%, the land sales are worth \$2.6 billion and the passenger revenues are worth \$407 million. It looks as if the net loss is less but still over \$1 billion. The airport authority would not be able to repay commercial debt, nor would the economic [nor financial] returns justify this choice.
7. If we stay in the old airport, the cash outlays would be \$100 million in about 2015 to expand the existing international terminal; about \$110 million in both 2017 and 2018 to build a new passenger terminal like the existing international terminal, but for domestic flights; and an expansion of \$100 million to that terminal in about 2023 to give a total capacity of 37 million, good until 2025 to 2027. The 10% discounted value of these investments would be \$180 million, less than the \$280 million in net airport earnings from 2015 to 2025. This choice pays for itself, but at the cost of using valuable land close to the city center.
8. A strictly economic analysis would select the "improve the old airport" choice and then reassess in a decade. If a new airport were needed and if the old 7 million passenger terminal could not be expanded or rebuilt for more capacity, then a new airport would be built to open around 2025. Reserving land for it and for a light rail line into Saigon would reduce delays and costs. If the military could be persuaded to part with even a fraction of its airport land, it would be cheaper to increase capacity with new terminals at Tan Son Nhat airport.

10% discount factors 6% discount factors

2009	1.00	1.00
2010	.909	.943
2011	.826	.890
2012	.751	.840
2013	.683	.792
2014	.621	.747
2015	.564	.705
2016	.513	.665
2017	.467	.627
2018	.424	.592
2019	.386	.558
2020	.350	.527
2021	.319	.497
2022	.290	.469
2023	.263	.442
2024	.239	.417
2025	.218	.394