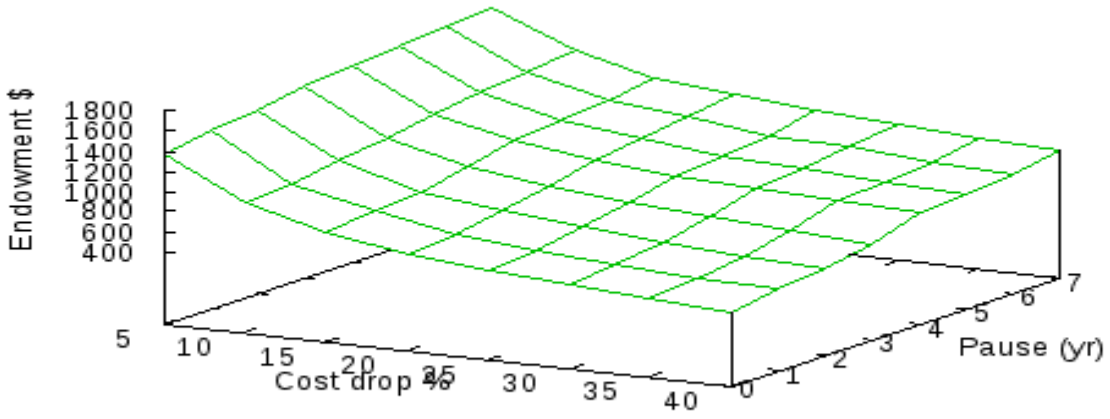
Sample Output of the Economic Model

The recent floods in Thailand mean that disk prices are currently rising rapidly, which violates most people's assumptions about storage costs. One of the test cases used in the early development of the economic model was a spike like this in disk costs. Unfortunately, it revealed that buried deep in an obscure part of the model was the assumption that storage prices never increased! So for now the best the model can do is to explore a period when disk prices fail to decrease as they have through history.

Assumptions are that interest rates reflect the history of the last 20 years, that the service life of disks is 4 years, that the planning horizon is 7 years, that the disk cost is 2/3 of the 3-year cost of ownership, and that the initial cost of the unit of storage is $100.



The graph plots the endowment required to have a 98% probability of surviving 100 years (z-axis) against the length of the initial pause in disk cost decrease in years (y-axis), and the percentage annual decrease in disk cost thereafter (x-axis).

As expected, the faster the disk price drops and the shorter the pause before it does, the lower the endowment needed. In this simulation the endowment needed ranges from 4.2 to 17.6 times the initial cost of storage, but these numbers should be taken with a grain of salt. It is early days and the model has many known deficiencies.

http://blog.dshr.org/2011/11/progress-on-economic-model-of-storage.html