tions. Our approach is to identify a set of things in hospitals that are commonly considered "health care technologies" and can be identified in survey data. In some cases we measure the presence of specific infrastructure items like MRI scanners. In other cases we use the presence of certain types of services, which may represent organizational innovations and are likely to signal the presence of other advanced infrastructure items.

We develop a measure of technology availability that summarizes the range of measurable technologies available in a given hospital in one index value. We hope that this will be useful for studying technology growth rates broadly and will provide valid summary information about the effects of managed care on technology growth. The index we examine is a weighted sum of the number of technologies and services from a predetermined list available in a hospital, with the weights being the percent of hospitals in the United States that do not possess the technology or service.[3] Spetz (1996) terms this index a "Saidin Index." Rare technologies—rare because they are new, expensive, or difficult to implement—receive higher weights in this measure. Common technologies, such as operating rooms, receive low weights.

More specifically, to create an index for hospital i in year t, we begin with a list of technologies available in that year, which we index by $k = 1, \ldots, K$. For each technology, we assign a weight $a_{k,t}$, where

$$a_{k,t} = 1 - \left(\frac{1}{N_t}\right) \sum_{i=1}^{N_t} \tau_{i,k,t}.$$

N_t is the total number of hospitals in the United States and $\tau_{i,k,t}$ takes the value 1 if hospital i has technology k in year t and 0 otherwise. We then use these weights to compute the index $s_{i,t}$ for hospital i in year t:

$$s_{i,t} = \sum_{k=1}^{K} a_{k,t}\tau_{i,k,t}.$$

That is, the index for each hospital is the sum across all of the technologies the hospital has of the percent of hospitals in the United States that do not have that technology.

To be useful for analyses, the index should have two properties. First, it should accurately reflect the degree of technology advancement across hospitals at a single point in time. That is, in any given