



Figure 11.2. Products and customers utility reduction modeling.

deterministic valuations (see Talluri [502] for extension to stochastic private valuations). To keep things even simpler, the disutilities w_{jk} 's can be taken as the sum of the reductions along each basis between j and k . Figure 11.2 shows the graphic of the customer utility model.

If *all* the customers have the same deterministic valuation v (equivalently, there is a single segment), RM is not really necessary; the firm would just sell a single unrestricted product at a price v . This is because of the nature of RM products—customers will very likely have a disutility of zero for purchasing a less restrictive product, and the firm is better off not reducing the valuations by imposing restrictions.

So to justify designing multiple products the market should have multiple segments with different valuations and different disutilities (w 's) for the restrictions. We can define segments as groups of customers who have identical valuations for their ideal products and identical disutility functions.⁵ The firm can then use the multiple products to separate

⁵It would be more appropriate to model the valuations (for each segment) as random variables (from the firm's point of view), in which case the distinct segments will be groups with distinct