CHAPTER 13

Emerging Issues in Revenue Management

Revenue management is a dynamic field. As new products and services emerge and new business models are created, revenue management techniques develop to meet these challenges. In this chapter, we consider several of these: the sharing economy, mobile retailing, and new financial reporting standards for revenue recognition.

The Sharing Economy

One emerging concept in recent years is the notion of the *sharing economy*. A sharing economy focuses on access to resources—products and services—rather than direct ownership or control of those resources. Some forms of nonownership have long existed. People rent their living quarters rather than own them, or lease their vehicles rather than buy them. There is not much sharing here, as single users have the resource for lengthy periods. Greater sharing of resources has also long existed, in the form of hotels, car rentals, equipment rental, tuxedo rentals, and the like. Traditionally, the providers are well-established businesses who provide use of resources on a broad scale. The more recent sharing economy differs in that there are many more providers, often individuals, who have goods or services they are willing to share with others. Social media and mobile communications facilitate exchange of information, and middlemen have emerged to handle the linkage between providers and users, and to bring some sort of order to the market. This trend, which seems to be accelerating, has implications for traditional providers of goods and services and their revenue management.

In 2011, *Time Magazine* recognized "sharing" as one of its "10 Ideas That Will Change the World."[1] Companies like Napster, Netflix, and

Zipcar were the initial leaders, but these were still large-scale organizations. eBay and similar sites allowed anyone to become a retailer. Soon the sharing movement extended to individuals, aided by facilitators such as Airbnb, which allowed people to rent living space to travelers; SnapGoods, which focused on renting goods such as power tools; and Uber, which facilitates ride sharing. Many of these function in localized communities, where the supplier and user are in close proximity.

There are many motivations for the emergence of the sharing economy. Many of one's possessions are used only rarely. For items that are expensive to purchase and have lengthy periods of idle time, an alternative to buy and own can become popular. As ownership of goods expands, storage space becomes a problem, especially in large communities where large living spaces are very expensive. If there were a convenient way to have access to something on the few occasions one needs it, that would save money, save space, and perhaps also contribute to the environment. From a provider's viewpoint, it is a chance to earn some extra income. The Internet, social media, and mobile communications helped make sharing a reality.

Several elements are needed for a sharing economy to function. Good information flow is needed, so that suppliers and users can readily identify each other. Ease of access is needed so that the exchange is quick and convenient. A matchmaking service helps to vet suppliers and customers, adding an element of trust to the system via ratings and reviews. The matchmaker may also enable a trustworthy payment system.

In the past several years, sharing has expanded rapidly. Short-term living accommodations and autos or rides have been two big markets, but sharing has expanded to many other areas as well: pet watching, boats and recreational vehicles, bicycles, power tools, outdoor gear, party supplies, musical instruments, and many others.[2] Almost anything can be shared. And sharing is not limited to physical goods. Sharing has entered the lending market via crowdfunding sites such as Kickstarter. Labor sharing is also increasing, as individuals delegate work to others via organizations such as TaskRabbit and as employers increasingly utilize temporary workers via such sites as Wonolo.[3]

Initially, the sharing economy poses a revenue threat for traditional businesses, whether sellers or renters of goods and services. Virtually any

individual could now be a competitor, and matchmakers emerged to bring together these new suppliers and customers. While each new competitor was small, in the aggregate they could cause a significant drain on revenues. But these new business models are not without their problems and concerns. Issues of regulation have impacted the sharing of living space and of rides, as laws regarding occupancy and taxi service have often interfered. Issues of legal liability and insurance coverage also confront individuals offering to share goods and services.

Slowly, the sharing economy may change from being a threat to traditional providers to becoming an opportunity for increased revenue. For example, Zipcar, the hourly car-rental service, acquired a stake in Wheelz, a peer-rental firm, and in turn Zipcar was acquired by Avis, a traditional car-rental organization. Similarly, General Motors' affiliate GM Ventures invested in RelayRides, another peer-rental company, and facilitated access via its Onstar system, so that cars could be unlocked, started, and locked without keys, using an Onstar app.[4] If such trends continue, peer-to-peer sharing may become just another way traditional companies can provide their goods and services.

The Mobile Retailer

Initially, traditional "brick-and-mortar" retailers were confronted with online retailers, which brought about major change in retailing. A good percentage of retail sales is now conducted online. "Brick-and-mortar" retailers have had to contend with the "showrooming" phenomenon, whereby customers would come to stores to examine and compare goods, and perhaps get technical advice, and then leave to make their purchase online, usually at a lower price.

Retail businesses where a significant element of service is involved have been much less affected by online sales. An emerging trend here is the use of mobile locations; food trucks have been a major example. This enables the retailer to easily change locations to where customers might be at a given time, such as events and festivals. Again, this development may pose a threat to the extent that new competitors emerge, or an opportunity if a traditional retailer adds this form of delivery.

Mobile retailing also offers an opportunity for retailers to bring their goods and services to small communities, where a permanent location may not be justified. One could envision a jewelry store or a men's wear store, for example, visiting a small community periodically, where it could not sustain a full-time location. At one time, public libraries brought "bookmobiles" to outlying communities. Beyond the emergence of food trucks, however, mobile retailing may be an opportunity waiting to happen.

The Impact of Financial Reporting on Revenue Management

External financial reporting is a powerful driver of managerial action. Management is rightfully concerned about how its actions and decisions will impact its financial reports to investors and creditors.

The International Accounting Standards Board (IASB), which governs financial reporting in much of the world, and the Financial Accounting Standards Board (FASB), which governs financial reporting in the United States, recently issued a comprehensive new standard for revenue reporting. This standard replaces a variety of informal practices and special-industry standards that had accumulated over the years.[5]

The new standard is approaching implementation as this chapter is written. We discuss some of the possible effects of the new standard on revenue management. The actual effects will unfold over the next several years.

Highlights of the New Standard

The new standard identifies a five-step process to guide the recognition of revenue:

1. Identify the contract with the customer.
2. Identify the performance obligations contained in the contract.
3. Determine the transaction price.
4. Allocate the transaction price to the performance obligations.
5. Recognize revenue when each performance obligation is satisfied.

There are two key concepts here: the notion of *contracts* with customers, and the idea of *performance obligations* under those contracts.

Identifying Contracts

There are five conditions to the existence of a contract:

1. The contract is expected to change the risk and timing of the parties' future cash flows.
2. The parties have approved the contract and commit to satisfying their obligations under it.
3. Rights regarding goods and services to be transferred can be identified.
4. Payment terms can be identified.
5. The customer's intention and ability to pay make it probable that the seller will collect what it is entitled to.

A contract need not be written; it can be verbal, or even implied by customary business practices. Most business transactions should fit this broad definition of a contract.

Performance Obligations and Revenue Management

Performance obligations are promises to transfer a distinct good or service, or a series of essentially similar goods or services. Performance obligations may be explicitly stated in a contract, or may be implied as a result of customary business practices or vendor policies. Performance obligations involve only the provisions of goods and services to the customer; they do not include internal business processes of the seller, such as billing.

One challenge is to identify when there are multiple performance obligations. Multiple obligations exist if the customer can benefit from each good or service on its own, and the vendor's promises are separately identifiable in the contract. For example, a contract to sell and install equipment usually involves two performance obligations, if the equipment could be purchased without installation or the installation could be performed by other than the equipment vendor.

The existence of multiple performance obligations requires that the transaction price be allocated, and each portion of the revenue be recognized as that performance obligation is satisfied. In the aforementioned example, part of the contract revenue would be recognized when the equipment is delivered, and part when installation is complete. But if the sale and installation are deemed to be a single performance obligation, no revenue would be recognized until installation is completed.

The focus on tying revenue recognition to the completion of each performance obligation has implications for the issue of bundling versus unbundling of goods and services. The more the goods and services are bundled into a single contract, the greater the challenge in allocating the recognition of revenue. Since most companies desire to recognize revenues as soon as possible, this may act as a disincentive to bundling.

Transaction Price and Revenue Management

The third step in the aforementioned revenue recognition process is determination of the transaction price. This may initially appear straightforward, but it may not be. The transaction price is defined as the consideration the seller expects to receive, without regard to the customer's credit risk. That is, bad debts do not enter into the determination of the transaction price.

However, the existence of "variable consideration" does impact the determination of the transaction price. Variable elements of the transaction price include revenue management staples such as:

- Discounts
- Rebates
- Incentives
- Bonuses or penalties
- Price concessions
- Refunds and credits

Each of these should be considered in estimating the transaction price—the consideration the seller expects to receive. Some of these elements of variable consideration may be subject to change as circumstances

evolve. For example, a contract containing bonuses or penalties for achieving or not achieving performance targets may use an expected value method or a most-likely method to estimate the transaction price. When multiple performance obligations are also involved, requiring the allocation of variable consideration to performance obligations, the process may indeed become difficult.

The Future of Revenue Management

Revenue management is still in its early years as a separate discipline. It first emerged about 30 years ago, in the 1980s, as American Airlines sought to combat the threat of low-cost, low-price competitors. It succeeded in its initial limited goal. Revenue management then continued to be used as a means to maximize revenue on a short-term, service unit basis. The goal was to add paying passengers to each flight, ideally in ways that did not infringe on normal-price business. After a few years of aggressively applying these techniques, the chief executive officer (CEO) of American Airlines stated, "Yield management is the single most important technical development in transportation management since we entered the era of airline deregulation .... We estimate that yield management has generated $1.4 billion in incremental revenue in the last three years alone."[6]

Revenue management concepts then spread to other businesses with similar characteristics—perishable and substantially fixed service capacity, a heavily fixed cost structure, varying and uncertain demand, and some ability to forecast. Hotels, restaurants, golf courses, car-rental agencies, and other similarly positioned businesses soon began to apply these concepts. Much of the literature for the first 20 years or so focused on these industries.

Another movement, not initially identified as revenue management but having similar characteristics, arose in the aggressive pricing and promotion techniques of the automotive industry. *Rebates*, along with low-cost financing, became common elements of pricing in this industry, again designed to sell as much as possible of the output of a largely fixed-capacity industry. In a humorous takeoff on the rebate technique, a pizza shop in my neighborhood once sported a sign proclaiming, "Large cheese and pepperoni pizza, $209.99; $200 rebate."

The two flagship industries, airlines and automotive, despite being aggressive users of some form of revenue management, were not known for their overall success. Although they may have succeeded in growing revenue, they often could not do so profitably. The low prices designed to add extra customers to an existing base soon became the norm, and on an overall basis these prices were not profitable. This outcome was an early lesson that marginal-cost pricing might work at the margin, for a few extra sales, but it was not a viable approach for broad-scale pricing.

Despite these early cases of *winning the battle but losing the war*, revenue management is still with us over 30 years later. It has expanded well beyond its initial uses and emerged in a broader scale of applications, though it is still a developing field. Various writers proclaim that, despite its early limitations, the field has a bright future.

Example of Evolution: The Hotel Industry

Robert Cross was one of the early writers to popularize the term *revenue management.* The cover of his 1997 book on the topic has a review excerpt from the *Wall Street Journal*: "Forget downsizing. As companies focus again on real growth, one emerging business strategy is 'POISED TO EXPLODE.'"[7] Twelve years later, Cross, Higbie, and Cross stated that "the era has ended when revenue management can stand alone as a tactical approach to room management."[8] Their article on a renaissance of revenue management talks of a rebirth of *profitable* revenue management (emphasis added). They report the results of interviews with 16 revenue management leaders from the hospitality industry.

A first point made is that revenue management can no longer be just a tactical approach to managing the room inventory. Initially, specialized pricing was based on the assumption that it could be limited to a small subset of customers, by establishing *rate fences.* But this attempt at limitation has not worked; especially in the Internet age, price information is readily and broadly available. Now revenue management has to consider the interaction of all the revenue streams in a hotel: rooms, food and beverage, meeting facilities, gift shops, parking, and so forth.[9] Consulting firms have arisen to offer revenue management guidance. For example,

IDeaS Revenue Solutions offers pricing and revenue management software, services, and consulting to the hospitality and travel industries.

Trends and Directions

At the Second Annual Revenue Management and Price Optimization Conference in 2006, experts from more than 30 companies presented their views on the then-current state of revenue management. Some of the views, as reported by Garrow et al., included the following:[10]

- Some organizations are centralizing their pricing decisions and seek to align their sales incentives with their revenue and profit goals. In some cases, sales staff still has some pricing discretion, but sales incentives reflect margin as well as volume.
- In industries ranging from cruise lines to symphony orchestras, the emphasis is on defining and pricing an "experience," sometimes allowing customers to design their own package. This tactic aims to reduce the customers' focus on price alone and to make comparison shopping more difficult.
- Increased bundling of goods and services at a single price, again reducing the focus on price alone.
- Greater pricing parity across varying distribution channels, as the Internet has significantly increased the transparency of prices.

A subsequent conference focused on the transition from intuitive approaches to revenue management to analytical-based decisions.[11] Modeling techniques that were once employed primarily by airlines and hotels have become more widespread, and an increasingly broad range of companies have come to formalize the revenue management function in their organizations. An executive of Winn-Dixie supermarkets stated that, prior to 2005, the company "really had no formal strategy with respect to pricing, didn't really have a formal category management, didn't necessarily put the right types of items on sale, and so forth."[12] Now they and others are seeking to determine for which items discounting drives higher volumes of sales and for which items it does not.

Conclusion

The field has grown from its initial rather narrow focus of *yield management*, seeking to fill a fixed, perishable capacity on a short-term basis to a richer, more broadly applicable discipline of *revenue management*, featuring an expanded range of techniques in much broader contexts.

The field continues to grow. It is suggested that the next iteration may be *demand management*, adding the creation and direction of demand to the present revenue management focus of managing current demand.[13] Demand management adds consideration of distribution channels, market segments, and customer relationships to the current concern with price management.

Whatever the future direction, it is clear that revenue management is here to stay. It is applicable across all types of organizations, and it merits inclusion as a focus of top management.