Pricing Perspectives

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Pricing Perspectives

Marketing and Management Implications of New Theories and Applications

Edited by

Sandra Rothenberger and Florian Siems

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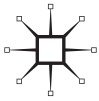

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Sandra Rothenberger
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Innsbruck/New York/Salzburg, 2008

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Introduction

Pricing is perhaps the most important, most talked about, but least understood of the "4Ps" in the marketing mix. Many executives and marketers have moved pricing to the top of their agendas in order to understand the key element that produces revenue – there is no bigger leverage for profit and revenue than pricing.

Over the past decade, the world of pricing has been changing rapidly. There has been a development of new dynamic pricing strategies, an explosion of new pricing tools and techniques, and a focus on smarter buyers. The implementation of consumption and value-based pricing strategies that occurred in the past few years are indicative of these changes. The field of strategic and tactical pricing is developing fast and you simply cannot keep up with everything!

Considering these dynamics, knowledge exchange and discussions among pricing experts across the world have become increasingly important and necessary. Therefore in 2005, during the Fordham Pricing Conference at Fordham University in New York the idea of a European pricing conference was born.

Two years later, the 1st European Pricing and Marketing Conference (PRIMA) was finally realized. In cooperation with the Innsbruck University School of Management (Austria) and the Salzburg University of Applied Sciences (Austria), PRIMA 2007 took place in September in Innsbruck. Scientists and pricing experts from all over the world, especially Austria, Germany, Switzerland, Portugal, Italy, Australia and the US, presented much of their knowledge, research and experience to the audience of the PRIMA 2007 conference.

"Pricing Perspectives – Marketing and Management Implications of New Theories and Applications" highlights many of the new perspectives and developments in pricing that were presented and discussed during the conference, including the importance of selling more value to the customer than the price. This book scrutinizes pricing strategies and tactics from both theoretical and applied contexts, with a substantial focus on two aspects: (1) the creation, communication, capture and sustainability of value through pricing; and (2) the sociodemographic and psychological aspects of the consumer's price acceptance behavior and an honest willingness to pay.

The traditional economic perspective on product and service pricing is therefore combined with a value-based perspective to provide a more realistic understanding of how consumers respond to a firm's pricing strategy. An additional focus is on pricing dynamics and the reaction by competitors to a company initiating various pricing practices and tactics. Overall, this book provides the work of leading pricing scholars and pricing experts as they debate current and emerging issues, thereby facilitating the assessment required of executives in making managerial pricing decisions for the future.

That is, we hope that this compendium of new perspectives on pricing history and tactics, price psychology, value-based and consumption-based pricing, price transparency and price fairness issues as well as sectoral pricing and marketing takes the theory and practice one step further to close the gap between the neglected instrument of pricing in practice and a new way of including new pricing perspectives in science.

Sandra Rothenberger
Florian Siems
Innsbruck/New York/Salzburg, January 2008

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Part I
Historical and New Pricing Perspectives

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1

Putting Pricing Experience in Perspective: A Satirical View from Victorian America

Alfred C. Holden

Introduction

Price is an interesting element in the marketing mix. As researchers indicate (for example, Monroe, 2003; Nagle and Holden, 2002; Schindler and Yalch, 2006; Schindler, 2000), various words are used routinely in transactions between buyers and sellers. This chapter examines the concept of price in this macro sense – sometimes as a tax burden, often as a factor facilitating a transaction, perhaps as a point where there is a dynamic change in supply and demand, frequently as an outlay by (or for) political or governmental authorities, typically as a cost of production, occasionally as a measure of social well-being or status, as an indicator of international competitiveness, and notably as a classic means to achieve monopoly profits.

And to show how these concepts are hardly new to the marketing literature, this chapter focuses on assessing the diversity of the pricing experience as that process appears in two important satirical American publications during the Victorian period. That is, *Puck* and *Judge* generated an extraordinary outpouring of color cartoons critiquing a truly transformative era when many households are increasingly targeting their purchasing activity and so identifying themselves as consumers, when many businesses are consolidating and pricing their brands for a national and eventually global marketplace, and when Washington is setting many policies that directly affect the pocketbooks of virtually all households and the profitability of established businesses. This paper finds the results to be interesting and amusing as well as a clue to further research in pricing practices.

The US in perspective (1870–1910)

The end of the US. Civil War in 1865 marks the start of a landmark era for some of these developments, and the end of "Reconstruction" (the military occupation of the southern states) in 1877 is notable as another convenient point of reference to measure the onset of this situation. However, because some official data regarding the US is linked to the decennial census, it is convenient to start tracking national changes in 1870. That allows researchers to trace an upsurge in economic and social activity during the period 1870–1910 and thus to clarify how the US was dramatically transformed.

For example, the US population surged between the census of 1870 and that of 1910 (US Bureau of the Census, 1975). Only five years after the Civil War ended, the country had 39.9 million citizens (74.4 percent of whom lived in rural America). By 1890, the respective figures are 63.1 million (64.9 percent rural), and four years before the European Great Powers went to war in 1914, the US population stood at 92.4 million (54.3 percent rural). Thus, the US, which was barely larger than France or Germany in 1870, and some one-fifth larger than the UK, was by 1910 nearly 10 percent larger than the UK and France combined and was almost 50 percent larger than Germany (Maddison, 2003). Clearly, immigration was a powerful additive; for example, 5.6 million Americans were foreign-born in 1870, and by 1910 this figure had ballooned to 13.5 million. Meanwhile, the relative and the absolute magnitudes of the shift from rural to urban areas reflect historic social changes.

US gross domestic product (GDP) and per capita output also surged during those 40 years, albeit the annual increase was hardly steady. In general, episodic economic downturns in each decade were setbacks (US Bureau of the Census) as the GDP climbed from $7.4 billion (current dollars) in 1870 to $35.3 billion in 1910; in constant (1958 prices), the climb was from $23.1 billion to $120.1 billion. Per capita GDP figures reflect this strong advance: from $170 (current dollars) in 1870 to $382 in 1910. These latter indicators of wealth (in 1958 prices) are $531 and $1,299, respectively.

Maddison puts these numbers into an international perspective by showing US GDP (in 1990 dollars), surpassing that of France and of Germany in the 1860s, and the UK in 1872. Such "real" output figures were not available in the Victorian age when national income statistics were still to be developed, but the gradual rise in wealth of the US was clearly apparent to observers both in the US and abroad. In terms of Maddison's GDP per capita calculations (1990 dollars), the US had

comfortably outpaced France and Germany by 1850, but the UK only in the first decade of the twentieth century.

A few components of the US gross output figures (US Bureau of the Census) provide a glimpse at what was powering America. For example, an index of manufacturing production climbed fourfold between 1870 and 1900 and rose another 72 percent during the period 1900–10. Much of this was attributable to an amazing tenfold increase (in both real and 1958 dollars) in purchases of manufacturing structures and equipment during the period 1870–1910. And in terms of output of finished commodities and construction materials, the value (current producers' prices) climbed from $3.19 billion in 1869 to $14.71 billion in 1910.

The input of labor in this equation obviously cannot be overlooked. The largely small-scale, artisan, and farm labor force of 1870 of just 10.7 million is transformed into a growing industrial giant of 19.3 million by 1890, and it tops 30.1 million by 1910. The distribution of this force also changes radically between 1870 and 1910. Those employed in agriculture, forestry, and mining climbed from 7.1 million to 12.6 million, while manufacturing and construction employment jumped from 2.8 million to 10.5 million. The number of people employed in the services also rose dramatically during this period: from 3.1 million in 1870 to 13.0 million in 1910. A large part of this service sector labor force is accounted for by the number of industries that were seeking to meet expanding consumer demand for goods and services. Retail sales boomed as department stores made an appearance during the 1880s, and consumers responded to the success of large firms (or trusts) seeking to generate brand identity and, eventually, brand loyalty.

The rapid growth of railroads is clearly another factor assisting the marketing activities of companies located outside the large urban areas of northeast and north central America. The transcontinental railroad, completed in 1869, would be only the first iron rail to link the entire country from the Atlantic to the Pacific Ocean and to dwarf the systems of Western Europe. From just 44,614 miles of road operated by the railroads in 1871, the figure would climb to over 158,000 miles by 1890. When important mineral discoveries or new croplands or manufacturers followed the mix of resources, the resultant products could readily become part of GDP activity.

In sum, this was an era of strong economic growth, industrial concentration, product diversification, and rapid urbanization, as Kirkland (1961) elaborates. One interesting consequence is Victorian America could claim to be when many householders first experienced modern consumerism – that is, earning salaries or wages and enjoying

unprecedented choice in their subsequent purchasing patterns. Playing a role in this transformation of purchasing activity is the rise of publishers offering subscriptions to magazines that could deliver news, advice, entertainment, and humor to family members around the country as well as publicize (via classified advertising) brands, price, distribution, and product information about competing goods and services.

This chapter focuses on two such popular publications, both published in New York, which came into existence as satirical magazines, with humorous cartoons and lively repartee their chief assets. Both began life during this historic period of national transition from a rural/small-town America to an urbanized giant – when the foibles and successes of consumers, businesses, and politicians were bigger than life and definitely excellent subjects for satirizing.

Puck and *Judge* in perspective

Puck was launched as a weekly magazine in New York, with its first issue published on March 14, 1877. As a very successful pioneer in US cartoon journalism, *Puck* will deliver pages of humor and satire that particularly target the epidemic of national and local political corruption (for example, bribery and scandals), the considerable inequalities of monopolist power (for example, the unequal bargaining position of capital and labor), a largely Republican push for high tariffs and infant-industry protection (for example, hurting consumers and farmers), and evident international political tensions largely within Europe. The magazine, with an estimated subscriber circulation of about 90,000 at its peak, would transform into a largely fashion magazine by about 1915. Dennis (1974) and Dennis and (1979) have nicely reviewed this type of cartoon magazine and *Puck* in particular.

The Judge was launched as a weekly magazine in New York, with the first issue published on October 29, 1881 (and its name was later shortened to *Judge*, starting with the issue of January 16, 1886). As a second successful pioneer in US cartoon journalism, *Judge* (as this chapter refers to all issues) is also full of humor and satire that target the same national and local political corruption, evident excesses of power (for example, by capital and by organized labor), several wrong-headed, largely Democratic domestic platforms (for example, free silver) and politicians (such as Bryan's several presidential campaigns), and unrealistic international views. The magazine, with an estimated subscriber circulation of about 60,000 at its peak, lost its satirical edge about the same time as *Puck*, but was published well beyond World War I into the 1940s.

Overall, these two influential magazines would strive continuously to tear apart newsworthy political, economic, social, and business issues in order to generate color cartoons on the front and rear covers and on a large centerfold, as well as to deliver musings and other satire between the covers. While the competitive nature of the two magazines and their differing political orientations were often evident in the subject matter of the color cartoons, each weekly issue depicts America's changing and challenging environment in a particularly interesting manner, as Holden and Holden (2005, 2007) have demonstrated to marketing historians.

Objective and methodology

Even a preliminary observation of these two magazines makes it clear that each has a sharp eye for humor in contemporary, largely domestic issues affecting readers, and the author was not surprised to find that various aspects of "price" appear both directly and by inference in many of the over 300 original color cartoons (in total) prepared by these two magazines each year during the Victorian era. While this is long before the start of what most researchers identify as the "4Ps" of the modern marketing era, price is a surprisingly important topic during the period 1870–1910, one that commands newspaper headlines and elicits strong responses along the social, political, and economic spectrum of America. In particular, price considerations are newsworthy because: (i) household members are managing daily living outlays, bargaining with employers, and being assessed for taxes; (ii) businesses are calculating earnings for end-products, paying for consolidation, and negotiating wages with workers; (iii) politicians are setting tariff rates, voting for infrastructure projects and transfer payments, and publicizing their dollar levels of corruptibility; and (iv) monopolists and other very wealthy citizens are experiencing unique purchasing opportunities for consumption, for investment, and for disposing of their fortune.

The author's objective is to assess some of these everyday pricing situations experienced by Americans in the Victorian era. The methodology chosen is to evaluate a cross-section of such color cartoons in *Puck* and *Judge* and to develop categories of price experiences that confront such groups as low-income households, laborers, middle-class taxpayers, nonprofits, farmers, exporters, politicians, and the very rich. Ideally, such an objective could enhance today's descriptions of price and its applicability. While there is no pretense by the author that the humorous cartoons are precise indicators of each group's perception of price, the satirical look at

life in Victorian America given by *Puck* and *Judge* provides some fascinating insights about how price was important to all citizens . . . and even indirectly to those abroad involved in international commerce.

The following 12 categories of pricing experiences were chosen as having special interest in this evaluation process.

Costing the birth of infant industries

The post-1865 US industrial revolution will see the emergence of a new breed of firms. Credit or blame (depending upon the satirist's perspective) for birthing and then nurturing two generations of rapidly-expanding, protected infants can be attributed to a combination of such external economic, competitive, and political factors as the use of coal and oil as new power sources for industry, a continental rail network, business concern about fluctuating prices and irregular bouts of demand, and a more organized labor force. There is also a policy in Washington that fosters a consolidation of heretofore small manufacturers, protects these children from overseas competition, and largely ignores domestic pleas for the liberalization of the "war tariff," a measure initially intended to retire the 1861–65 war debt. Satirical coverage of developments in the 1880s and 1890s would be continuous in terms of allowing subscribers to assess the birthing process and the costs to a major segment of the population.

Nearly two decades before the *Judge* front cover of March 11, 1899, boldly proclaims the nation's "new motto" is "in trusts we trust," the country could witness the political power of Washington being intertwined closely with a handful of major industrialists. Four of the best of the dramatic and early satirical centerfold offerings of *Puck* include: that of February 23, 1881 (with Jay Gould and William Vanderbilt consolidating a long-standing monopolistic hold on key sectors) [1] amid Uncle Sam's displeasure at being tied to telegraph lines; that of two weeks earlier [2], when *Puck* seeks Uncle Sam's help in killing a huge monopolistic snake now enfolding the White House and threatening Miss Liberty; that of January 25, 1882 [3], when a giant "monster monopoly" whale of Messrs Gould, Vanderbilt, and Cyrus Field is gobbling up railroads, the press, telegraph, and other enterprises; and that of four weeks later [4], when Uncle Sam is now suffering as a "modern Prometheus," with his life bound by "defective laws" and with no recourse to stop life ebbing away as a monopolistic eagle pulls out his heart and a poisonous congressional snake "used by monopolists" is fending off any rescuers. *Judge*, just a few months old, also expresses concern about the anti-competitive situation.

Its centerfold of December 10, 1881 [5] warns that the monopolistic acquisitions of communication media by Field and Gould "undermine the people's [free press] light-house," while Vanderbilt demonstrates in a series of scenes within a centerfold of February 4, 1882 [6] how to be the "unknown friend," who can personally bribe state (and national) legislators into signing over very favorable railroad charters to one man. That magazine's bold centerfold of October 31, 1885 [7] shows how this latter monopolist's "scourge" of power is exercised. Standing atop a Union Pacific Railroad locomotive and with the force of land grants, US appropriations, and US Army troops, he essentially displaces the miner, mechanic, merchant, farmer, small manufacturer, and even justice.

A *Puck* centerfold of September 20, 1882 [8] features Washington's direct role in this process by highlighting the merriment of a Louis XV-style party bringing together key politicians with such heavyweight industrialists as Vanderbilt, Gould, Field, Sage, and Roach. Few readers of the day could forget, too, that former President Ulysses S. Grant (1869–77) was and is a favorite "pet" of these men (depicted on *Puck*'s rear cover of March 30, 1881 [9]) as he seeks to win the Republican nomination in 1880 (for a possible third term) and again in 1884. It is no surprise, then, that the "monopoly gang" of Gould, Vanderbilt, Roach, Sage, Field, and others, on a tough street in America, can routinely defy any attempt to be policed, as illustrated by *Puck* on July 18, 1883 [10]. In a succinct manner, *Puck*'s centerfold of just three weeks earlier [11] summarizes how ordinary citizens feel the adverse direct impact of the ongoing consolidation. Not only are basic "infant industries" such as cotton, swine, salt, iron, shipbuilding, beef, silver mining, and wood pulp being actively protected, but the magazine's centerfold of August 8 [12] concludes that Republicans make no apology for a mustering under a new flag and "training their [protective tariff] guns" on the country's workers. *Judge*'s huge centerfold of a resplendent "king monopoly" on October 10, 1885 [13] understandably frightens many readers, with that "ruler of the republic" controlling an industrial and financial empire of banks, telegraph, railroads, pipelines, Congress, and the White House.

Two *Judge* centerfolds of 1882 put one result in stark perspective. That of February 11 [14] shows the "dread alternative" (that is, as a cocktail-lounge girl) for a young woman who cannot survive at Workemtodeatheim and Co. Shirt Makers for a 10-hour day and pay of just 45 cents for each dozen shirts sewn. That of April 22 [15] shows a male "white slave" at a 14-hour day in the Trade Mill Factory earning $1.65/day, paying rent of $8/month for a "death trap" room, and leaving a starving widow after not too many years at the job – a life that *Judge*

Figure 1.1 "The Garden Party of the Monopolists – Louis XV Style" (*Puck*, September 20 1882)

considers to be worse than in the slavery system of the old South. In following up these scenes, *Puck*'s centerfold of January 2, 1884 [16] highlights how eight or nine major monopolists carefully coordinate their bidding so that $7 per week or $359 per year become the going wage for shackled US laborers; the latter have little choice but to accept, with a clear reference also to pre-Civil War servitude. The rear cover of February 7, 1883 [17] thus ridicules the Vanderbilt/Gould/Field/Sage quartet as "protectors" of US industry since the four are sitting on a huge raft carried by thousands of workers from the iron industry (earning $7/week), cloth ($9), linen ($11), lumber ($6), leather ($7), paper ($6), and so forth.

By the time *Puck*'s centerfold of May 2, 1883 [18] wonders which Democratic presidential candidate (for 1884) "can ride the [tariff reform] mule" in an attempt to lessen the tightening supply net of monopolists, there is no doubt *Puck* is beginning to grow very uneasy about its front cover of October 12, 1881 [19]. Faced then with a Hobson's choice between two evils – monopolists or pro-Tammany Democrats – the former had been reluctantly chosen. For it was clear to *Puck* that, when the formidable James G. Blaine resigns as Secretary of State in the Garfield–Arthur Administration of 1881–85, he would be opening his push for the Republican presidential nomination in 1884 by explicitly favoring

domestic protection via alliances with monopolists. In contrast, *Judge*'s front cover of December 24, 1881 [20] welcomes the opportunity to "see you [Blaine] in '84."

After an 1884 presidential campaign by (a) Democrats that focused on Blaine's many financial indiscretions and (b) Republican use of the "bloody shirt" claim that a Cleveland victory would give southern Democrats a measure of revenge, the *Puck* centerfold of June 17, 1885 [21] welcomes the victory in November of New York Governor Cleveland in capturing both the White House and, with it, the Republican "fleet" of anti-tariff-reform ships. Although Cleveland enters office with a determination to reduce the tariff and to implement civil service reform, this first post-Civil War Democratic president could only move slowly with a goal to liberalize the existing war tariff. For his party is bitterly divided on that issue along a spectrum from "free trade" to "high tariffs," a dilemma captured well on *Puck*'s centerfold of January 30, 1884 [22]. After a long political struggle, a compromise tariff reform bill would pass (162 to 149) in the House of Representatives on July 21, 1888. Despite the intention to "benefit the condition and increase the wages of the laboring class," the tariff modifications of the Mills initiative being sent to the Senate are quite modest for basic commodities required by ordinary citizens, and the average duty on overall imports is to be reduced from 47.10 percent to 42.49 percent. In light of how bitter the 1888 presidential campaign would become (see below), it is useful to note that the bill moving on to the Senate would reduce the duty on cotton from $39.99/$100 to only $39.07, earthenware from $59.55 to $52.17, sugar from $78.15 to $62.31, and paper from $23.13 to $22.06. Both sides agree to let voters cast presidential ballots before seeking Senate consideration in 1889 of this tightly fought liberalization. A dramatic *Puck* centerfold of September 19, 1888 [23] satirizes the situation with a large monopolist giraffe munching profits from a tall, war-tariff, palm tree while Cleveland declares trusts to be "the national offspring" of an "artificially restricted" market.

The situation for monopolists is much enhanced after the 1888 election, and the Mills initiative faces death in the new Congress. *Puck*'s centerfold of January 11, 1888 [24], which predicts that the probable Republican nominee (Blaine) would ride the "high-tariff and big-monopoly juggernaut" to victory, and the rear cover of a month later [25], showing Blaine fostering a huge "infant industries" baby, are only slightly off target. The politician from Maine (who lost the 1884 run for the White House) would take himself out of the presidential race before mid-1888, but he accepts an offer to become President Benjamin Harrison's supremely powerful Secretary of State. In that position,

he has modest success in finding export outlets for large US industries otherwise trapped in a choked-up highly-protected market; key initiatives include negotiating bilateral reciprocal trade ties with Latin America, as satirized on the *Puck* centerfold of October 30, 1889 [26], and opening up pork markets in Europe, as celebrated on the centerfold in November 1891 [27]. Such efforts complement the picture given in the *Judge* centerfold of October 18, 1890 [28], when Uncle Sam hails the success of Senator William McKinley (to become President McKinley in 1897–1901) to tighten up the US import regime and thereby to guarantee a firm tariff law for protection to American industries. During the 1888 election campaign both sides had recognized correctly that even the modest modifications proposed in the Mills bill would have affected the size and scope of the 11 US infant trusts (oil, coal, copper, steel, gas, lead, sugar, rubber, iron, salt, and envelopes) cleverly presented on *Puck*'s colorful "hydra" centerfold of March 7, 1888 [29].

The onrush of external political developments in the 1880s provides a green light for business leaders to transform existing vertical monopolies and trusts into holding companies, which, in essence, became operating companies under a single manager. In this transformation permitted under New Jersey law in 1889, production could be rationalized and a horizontal integration developed, typically assuring comprehensive distribution and pricing power.

Rewarding war heroes (and others)

The US Civil War of 1861–65 had many direct costs, including the loss of hundreds of thousands of lives, the disruption of households, the devastation of the economy and infrastructure of southern states, and budgetary affairs being pushed into record deficits. But soon afterward a congressional compromise allowed the election of President Rutherford B. Hayes in 1876 and brought a formal end to "Reconstruction," Americans could see a new fiscal outlay on the horizon. That is, pension payments for victorious Yankee veterans began to grow annually, and *Puck*, in particular, makes it clear in a centerfold of December 7, 1881 [30] that there is potential for a "swindle." The satirical follow-up by that magazine's rear cover of March 22, 1882 [31] is a classic. Instead of just wounded heroes who served in the armed forces of the Union, the "raid" on the US Treasury now seems to include a bevy of such other beneficiaries as camp followers, ex-Army nurses, bounty-jumpers, "we hired substitutes," shoddy contractors, Confederate brigadiers, special artists and correspondents, chaplains, and old war horses.

By December 20, 1882 [32], *Puck*'s front cover pictures an "insatiable glutton" – an army of "veterans" with hands in the trough of the US Treasury. This situation reflects the understandably strong bargaining position of the Grand Army of the Republic (GAR) as a powerful voting bloc during the James Garfield–Chester Arthur Administration of 1881–85. And before turning over the reins of government, Arthur will also have to bear the satiric barb of *Puck*'s rear cover of January 7, 1885 [33], which pictures those people still lining up for Mexican War (1846–48) pensions: widowers of Mexican War widows, deserters, babies who were kissed by the visiting Lafayette in 1824–25, descendants of George Washington's servants and nurses, and Army mules. However, even during the Democratic regime of President Grover Cleveland (1885–89), the price for feeding the veterans will grow inexorably, and *Puck*'s front cover

Figure 1.2 "The insatiable Glutton" (*Puck*, December 20, 1882)

of July 21, 1886 [34] suggests that one potential Republican candidate in 1888 (General Logan) might use Cleveland's "heartless pension vetoes" to gather votes. In particular, Logan could arouse sympathy by including in his entourage such people as a wife whose husband died from a cold caught running away at Bull Run, a woman who was once engaged to a soldier, a veteran whose eyesight was damaged trying to see a battle from 10 miles away, and men suffering from chronic catarrh or chronic diarrhea contracted in the army.

To be sure, the *Judge* centerfold of October 1, 1887 [35] rightly predicts a solid anti-Cleveland vote of GAR veterans in the forthcoming presidential election after the incumbent shuns their parade in St Louis in favor of mollifying the Democratic Party in southern states. This apparent death blow to Cleveland's re-election prospects follows *Judge*'s front cover of June 23 [36], when the President is depicted "excommunicating" a GAR veteran. No matter that, late in the 1888 presidential campaign, *Puck*'s rear cover will document (March 14, 1888) [37] an amazing growth (to an annual outlay of $80 million) in the bloated "pension pig." One week after that [38], a superb *Puck* front cover has a beleaguered Uncle Sam with a naked eagle auctioning off the country "by order of the pension demagogues" so that Washington can meet the demands of the "pension-grabbers." But a rear cover of *Puck* of July 20, 1887 [39] had also made it clear that "pension sharks" were well known to both parties in Washington, and the *Puck* centerfold of April 25, 1888 [40] rightly shows how, in a heated election campaign, Republicans and Democrats compete aggressively in an auction for GAR votes.

It comes as no surprise that the Republican winner in 1888, Benjamin Harrison (a brigadier general in the Civil War), will now preside over a huge upsurge in the number of claims. In particular, James Tanner, the new Commissioner at the Pension Bureau, emerges as a potent bargainer for his GAR friends, and unscrupulous agents proliferate, according to *Puck* in its dramatic centerfold of July 10, 1889 [41]. Men from the North who never saw a battle are now also being steered to the Treasury for a giveaway. The contrast between the patriotism of citizens in 1861 and that of 1889 is particularly bitter to many Americans, since 1889 is being celebrated throughout the country as the centennial of George Washington's inauguration as the first President. *Puck*'s centerfold of August 28, 1889 [42] also makes it clear that veterans being given an "infallible elixir of life" (cash payment) by Tanner are being joined by dependents and descendents of veterans. One wonders about the situation when *Judge*'s centerfold of September 7 [43] claims this type of portrait is "painted

from a Democratic point of view," but then that magazine's front cover of September 28 [44] shows the "claim agent" – not the deserving veteran – is in fact getting the lion's share of the pension payments via fees and commissions. In such out-of-control circumstances, *Puck*'s centerfold of October 16 [45] pleads for the fighting men of 1861 to "save the Treasury from the pension bummers of 1889." For *Puck*'s front cover of October 2, 1889 [46] has no doubt that the "Grand Army wolf" is otherwise capable of taking away the fiscal surplus being carried by "little Republican red riding hood [Harrison]." And by November 20 [47], that magazine pictures this "Tanner scandal" as just one of several examples of how the Republican Party "holds its own."

With the post-Civil War generation reaching maturity and veterans increasingly pictured by *Puck* and *Judge* as graying citizens, the 1890s see no let-up in the fiscal price being paid by the country in supporting its aging GAR heroes (and others), as shown by: (a) the $160 million being eaten by the pension "white elephant" on the *Puck* front cover in September 1893 [48]; and (b) the very pleased fraudulent claimant (with his pocket full of dollars) on *Puck*'s front cover on May 23, 1894 [49]. But demographic forces and a strong economic recovery during the McKinley Administration from 1897 onward would diminish the relative fiscal burden of veteran pensions. Meanwhile, *Puck* and *Judge* trace an evolving North–South reconciliation in annual centerfolds of the nation's Memorial Day services and find mounting evidence of ordinary soldiers on both sides shaking hands (for example, at the Gettysburg memorial in July 1887). Judge's Memorial Day rear cover of May 30, 1891 [50] highlights well this reconciliation by showing ex-Confederates and GAR men "ending sectionalism" in a dramatic joint decoration of General (and President during 1869–77) Grant's tomb, in honor of that leader's famous plea to all America: "let us have peace." However, it will be the Spanish–American War of 1898 that seals a wholesale and patriotic embrace between elderly surviving veterans of the North and South and ends major legislation benefiting only the victorious side.

On September 14, 1901, a truly united America would pass the presidential torch (after McKinley's assassination at the Pan American Exposition in Buffalo) to Theodore Roosevelt, Vice-President in McKinley's short-lived second presidential term. Roosevelt, a Spanish–American War hero, had been born just before the Civil War and so was at least a full generation removed from each of the post-Civil-War-era presidents, all of whom had been either officers in the Union Army or politicians during that bloody conflict.

Charity isn't free or painless

Satirical views of America's propensity to contribute to worthy (and other) causes are also an integral part of the *Puck* and *Judge* subject matter. For Victorian-era society and the distribution of people and income are changing rapidly amid such forces as substantial immigration from eastern and southern Europe, the rise of big business within a nation of traditionally small businesses and small farmers, the conflict between organized labor and the trusts, and a burgeoning urbanization within a country largely composed (philosophically and in practice) since independence of rural and small-town residents.

In terms of focusing on one major category of charitable institutions, *Puck*'s rear cover of May 28, 1879 [51] finds it "inconsistent" that, in an age of immigration, the door of St Patrick's in New York posts a list of prices for entry well beyond the pocketbook of most new Catholic citizens (e.g., stalls are $5.00, family circle, $3.00, and gallery, $1.00). And the centerfold of July 16th [52] satirizes donations being given to institutions for what will become "religious colonization" efforts in such forested US rural communities as "the Papal Farm" and "The New Judea." By 1881, *Puck*'s centerfold of June 15 [53] also understandably wonders about the cost to Protestant congregations of supporting pastors who are electing to spend summers traveling around the globe and largely choosing to save attractive female souls in exotic bars, nightclubs, dance floors, and the like. Two weeks later [54], that magazine's rear cover hints, not too subtly, that Messrs. Vanderbilt, Gould, and Field should consider starting some type of "unobjectionable monopoly," such as funding boating excursions on the Hudson River for the many poor urban children of New York. *Judge*'s centerfold of January 21, 1882 [55] would applaud such a targeted endeavor since it believes much of the "indiscriminate charity" handed out on the streets goes directly to "bucket shop rum," and so it recommends establishment of "self-supporting, tramp-reforming, charity work-shops."

In the face of such examples of charity at work, *Puck*'s rear cover by April 6, 1881 [56] finds it interesting that religious and other non-profits have professionalized their organization to maximize fundraising. Since ordinary citizens now seem unable to evade the long arm of these aggressive and innovative "charity fiends" – although some businesses may well consider adopting very-tall, "anti-fiend" office chairs to tower above these aggressive fundraisers, as suggested by *Puck*'s amusing rear cover of April 14, 1886 [57] – it is not surprising that an "open purse goodhearted" donor may indeed be "charity-broke," as depicted on *Puck*'s front cover

of January 20, 1892 [58]. Clearly, that gentleman had ignored the magazine's centerfold of December 18, 1889 [59], which provided a sensible warning to the "long-suffering public." That is, "discrimination between worthy and unworthy objects" is essential. *Judge*'s centerfold of April 10, 1886 [60] is indeed pointedly satirical in this regard when it highlights the complaints of Fijians about US missionaries being sent out from a country of lottery swindles, violent sports, corrupt politicians, bloody treatment of minorities, and clergy caught in Wall Street manipulations.

In the meantime, accidents and weather-related catastrophes provide opportunities for Americans to open their purses for victims. For example, *Puck*'s centerfold of January 17, 1883 [61] applauds this country's rapid response to pleas from flood-ravaged Germany, and aid from many states around the US is being quickly loaded aboard ships headed

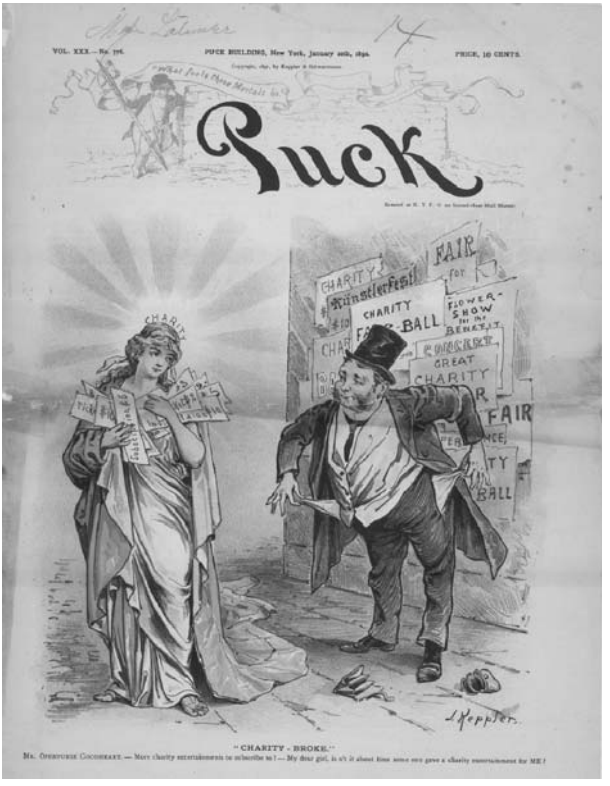

Figure 1.3 "Charity – Broke" (*Puck*, January 20, 1892)

for North Sea ports. Interestingly, the *Puck* centerfold of June 12, 1888 [62] claims the "charity of the whole [U.S.] nation" sustains the suffering of flood victims in Conemaugh. Nonetheless, there are decidedly mixed reactions about causes that might exacerbate an explosive Irish nationalism in its struggle against the British crown. Among many cartoons in *Puck* that stereotype the reason for such an ambiguity of US feelings are: the front cover of April 14, 1880 (showing that the "lion's share" of American charity given to the Irish goes directly to Pope Leo) [63]; that of October 19, 1881 (satirizing repeated expeditions to the US for funding Irish independence) [64]; and that of March 19, 1884 (illustrating "gorilla warfare" against England conducted under the protection of the US flag) [65]. Given this generosity of Americans to overseas causes, it is significant that *Judge*, in March 1882 [66], reminds all subscribers about 50,000 overlooked US citizens in the South who are hard-hit by flooding of the Mississippi river, but who have no hyphenated Americans to look after them. In contrast, that magazine's centerfold of June 22, 1889 [67] praises the national response to help survivors of the massive Johnstown (Pennsylvania) flood.

As fortunes accrue to a relative handful of captains of industry and commerce, satirical views of their charitable spirit also proliferate over the decades. For example, the trio of Gould, Vanderbilt, and Field are not only refusing to contribute to the Michigan (fire) sufferers in *Puck*'s rear cover of September 28, 1881 [68], but each of the three "philanthropists" insists upon a multi-million dollar advertising or "notoriety" fund being established before any of their money goes to a non-profit charity. John Wanamaker's position of Postmaster General in the Harrison Administration and his long-standing, religious orientation make him a wonderful target a decade later as *Puck*'s front cover of July 8, 1891 [69] highlights. The man who apparently paid $400,000 for his cabinet post is professing how the "truly good" within that administration will emerge successfully and how other non-stellar individuals in the public and private sector may go to jail. The larger dilemma for charity decision making of the rich is neatly expressed by *Puck*'s centerfold of August 7, 1901 [70], when a "crabbed millionaire" is painfully forced to choose in dispersing his fortune between the grasping hands of expectant but hated relatives and the equally strong expectations of church and universities, in which he has "no interest."

Judge, in fact, does provide a variety of lessons for monopolists who wish to shed the "robber baron" label (popularized by *Puck* and other commentators) and instead to gain esteem within America. For example, the front cover of April 13, 1901 [71] and the centerfold of July 25,

1903 [72] are directed at rich men perhaps also seeking a modicum of salvation by following the example of Andrew Carnegie, who is giving $100 million for the "public good." Success in this quest seems to be occurring when John Rockefeller opens both his Standard Oil safe and "his heart" to the tune of $32 million for education.

Both magazines publicize and applaud the rising stream of well-publicized donations to educational facilities from such donors as Carnegie, Rockefeller, and Mrs. Sage, and it is possible to conclude that a continuing tide of philanthropy should ideally follow from several other well-endowed elite families who benefited most from the nation's industrial revolution.

Demand can outrace supply

In a rapidly industrializing and urbanizing economy, there are bound to be times when shortages of supply cause an escalation in price and/or delay in receiving the service. Satirical views of these occasions might seem especially humorous to readers of *Puck* and *Judge* but not so to those subscribers when they are victimized. For example, the servant issue is the subject of *Puck*'s centerfold of December 5, 1883 [73], when the mistress of the home is given 13 ways to "keep a girl" including: raise her wages each week; promise anything; give her the best bed; be blind and deaf; answer the door yourself; play the piano for her Irish callers; wait on her at dinner-time; and give her the whole day to shop. That magazine's rear cover the next month [74] unsurprisingly shows how the former pauper is soon a "potentate of the kitchen." Perhaps worse still, the centerfold of March 6, 1901 [75] confirms that locating and then keeping "help" remain severe problems in the new century; that is, two decades on, a family must continue to tolerate an Irish maid who is now a "kitchen tyrant" and so exploiting a demand situation she found upon arrival in America when many households aggressively bid and begged for her services. In turn, she receives "more in a month than she could have earned in a year at home." *Puck* thus suggests satirically what could become popular in many large cities – a "family apartment house" which promises tenants that there will be "no more wrangling with servants." A *Judge* centerfold will take this even further by showing that the Irish household servant is indeed forcing her rich employers to leave the home periodically and to become instead "hotel and club people" in order to have some peace and quiet. Such hotels post marketing-oriented notices that promise guests a respite to being held hostage by dictatorial servants.

Another example of a shortfall in supply (albeit temporary) is the subject of *Puck*'s rear cover of February 11, 1885 [76]. In satirizing the publishing industry suddenly sensing a strong public interest in Civil War biographies (with General Grant's famous memoirs about to be completed), *Puck* neatly captures the nearly instant line-up of veterans and wannabes seeking attractive contracts for their stories. Among the characters waiting in line and hoping to collect a $1,000 check from *Century Magazine* (as Grant is shown receiving) are a bevy of amusing military misfits proposing such articles as: "Five Years on Furlough" by a general; "Rebellion and Lager-Bier" by a German-American soldier; "The Dark Side of the War" by a black orderly; "How I Led the Retreat at Bull Run" by a deserter; "Secret History of the Late War" by a mysterious soldier; and "Foraging for the Old Flag" by a perfectly cast forager.

Rental issues are always going to occur as populations in cities expand faster than apartments can be built. The crunch occurs early in New York, and *Puck*'s rear cover of August 6, 1879 [77] highlights a family's evident discomfort in a very small living space encompassing bedroom, kitchen, lavatory, entry hall, and banqueting hall. Such "French flats" are often the best that a middle-income family could command. A *Puck* rear cover two years later (August 10) [78] satirizes another side of the excess demand, with the poor crowded into tenements while the upper middle class are across the street in a nearly equally-packed "Hotel Elite." An interesting paradox amid this crunch is posed by the *Puck* centerfold of April 6, 1881 [79]; the capitalist, while conceding the overflow of housing demand, explains to *Puck* that there is little demand from households for low-income rental properties located outside the crowded central city. *Puck*'s remarkably clever centerfold of May 4, 1887 [80] also highlights how some creative citizens could elect to confront the city's excess demand for housing; two families inhabit nicely furnished quarters on the back of their camels strolling along the streets, while two other less creative families opt for horse-drawn covered wagons used in crossing the country for decades but now deployed in urban America.

Vacation time in the heat of summer ideally involves a great escape to the countryside by many middle-income city dwellers, and this gives farmers a wonderful opportunity for a rental windfall. *Puck* satirizes this on such occasions as the rear cover of August 16, 1882 [81], when the farm family literally turns most of its home over to lots of city folk. In other cases, the cramped barn or shed is brought into the supply equation, and the farmer may move comfortably into a city residence, as demonstrated on *Judge*'s rear cover of July 23, 1887 [82]. However, the

Figure 1.4 "The American Mania for Moving: If It Keeps on Growing We Shall Soon Be a Nation of Nomads." (*Puck*, May 4, 1887)

Judge centerfold of July 20, 1889 [83] promises that an "ambush" could be in store for the frugal worker who saves his wages for his first vacation in the countryside; the dangers in his path include porters, waitresses, a guide, livery-stable owner, mothers with marriageable daughters, as well as the greedy farmer. No wonder *Puck*'s rear cover of June 8, 1887 [84] shows the farmer carefully seeding the city's residential areas with brochures describing the idyllic rural retreat and then raking the arriving guests into rough quarters.

At the more wealthy end of the spectrum, that magazine's centerfold of July 15, 1891 [85] shows how guests choosing to vacation at a resort in the US must be prepared to "run the gauntlet" of early-guest ("24-trunk boarder") disapproval if the late arrivals are bringing only one trunk. Beyond this certainty of being ridiculed when entering the facility, there is the need for all to follow the "fashion decree" posted at many such resorts that experience an excess demand by vacationers. *Puck*'s centerfold of February 12, 1895 [86] makes it clear that, for a start, ladies "wear at least three different costumes a day" (and no duplication during the visit), with "large diamonds and jewelry [being] indispensable." But with this emphasis on "style first [and] comfort afterwards," it seems that such hotels are finally beginning to suffer diminished demand in relation to

the alternative – fast liners to Europe where wealthy customers can be a bit more relaxed. Of course, the unfortunate proprietor of several such hotels had already suffered a dearth of guests during the Paris Exposition (and Eiffel Tower introduction), as he laments on *Judge*'s centerfold of May 25, 1889 [87].

Interesting, too, is the rise in a nearly obligatory payment for ancillary services within urban society. *Judge*'s rear cover of October 1, 1887 [88] and *Puck*'s centerfold of May 8, 1889 [89] document this transition. The 1887 cartoon shows how a clever farmer, seeking to dine in a city restaurant, waves a possible $1 tip in order to get served by bored waiters, but he then cleverly pockets the coin as he departs after eating the meal. However, by 1889, the skilled hand is inexorably out for a 50-cent tip by no less than 16 service-providers, from maid, post-man, barber, and sexton to sleeping-car porter, cash girl, usher, and the organ-grinder's monkey. The janitor in a large apartment is also in a powerful position, capable of exploiting his control of the crucial gateway entrance that must be crossed by tenants, delivery-men, employees, the owner, and

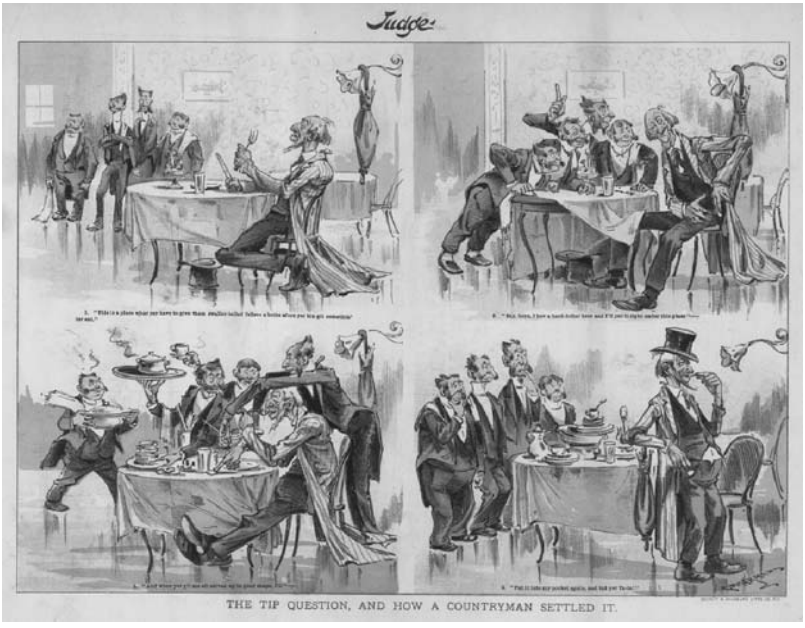

Figure 1.5 "The Tip Question and How a Countryman Settled It." (*Judge*, October 1, 1887)

even Santa claus. *Puck*'s centerfold for May 6, 1891 [90] cleverly illustrates how this command of crucial terrain translates into a pile of booty.

By the 1890s, virtually all service providers in the city view the customer-interaction aspect of their work as a means for supplementing their wages – that is, by taking advantage of the opportunity presented by excess demand.

When prices hit home

Puck and *Judge* provide many examples of situations where the price paid for a good or service can cause impoverishment or even worse pain for the unfortunate victim. The goal is straightforward: to use satire to impart a lesson to citizens who could be victimized by the promise of unrealistic returns. For example, the well-publicized US Louisiana lottery is shown on several occasions over the decades (for example, *Puck*'s rear cover of August 27, 1879 [91] and *Judge*'s front cover of June 7, 1890 [92]) to be a one-way street to poverty – except for those who run the scheme. Likewise, citizens with savings in banks are likely to continue to be vandalized by institutions whose directors are unable (or unwilling) to provide proper oversight, a situation satirized on *Puck*'s angry centerfold (demanding arrest of the directors) of November 9, 1881 [93]. *Judge*'s front cover ten days later [94] is equally distressed by directors who will not see systematic embezzlement, and that magazine's rear cover on November 14, 1885 [95] and front cover a month later [96] are just two of many cartoons which applaud the victory of Lady Justice in sending a message by putting convicted senior financiers in New York's Sing Sing prison. *Puck*'s rear cover for Decoration Day distribution in 1884 [97] vigorously supports such action as appropriate and overdue. Unfortunately, the centerfold of October 6, 1886 [98] reminds subscribers that, all too often, the president of a failed bank – who had "immense" schemes and a board of directors no better than dogs, sheep, and cows – can escape justice by making a very fast, permanent exit to Canada. The centerfold of September 7, 1881 [99] also reminds readers that there will always be lambs willing to be sheared by such Wall Street insiders as Messrs. Vanderbilt and Gould. This recurring theme is nicely summarized on *Judge*'s front cover on the day after Christmas in 1885 [100], when that magazine sees no reason for a successful manipulator (like Gould) to retire as long as lambs line up for a hopeless chance to profit.

Even more dangerous is "medical" treatment afforded citizens. For example, *Puck*'s depiction of very fast and very cheap lessons for surgeons at the "Philadelphia Physicians Factory" in the April 14, 1880

[101] centerfold is frightening to anyone who thinks about walking into a "doctor's" office. Otherwise, such fast cures as Indian herbs, magnetic applications, a sulfur or water bath, amputations, and patent medicines of every variety are shown being pedaled by "death's head" quacks around the country in that magazine's centerfold of August 3, 1881 [102]. Children spending a few cents at the confectionery store are also hardly immune from early visits to the doctor and sexton; the *Puck* front cover of January 7, 1885 [103] shows the colored bit of candy could well incorporate chrome green, chrome yellow, chalk, red lead, arsenic, verdigris, vermillion, and glucose! *Judge*'s centerfold near the end of that decade [104] highlights the long-lasting nature of the search for remedies from quacks, and it pictures men undergoing such ingenious "crazes" as the electric bath, the blue ray, villainous water massage, astrological signs, a mysterious elixir, faith, galvanic battery, and the final scene, death. And in the new century, *Puck*'s centerfold of February 28, 1900 [105] demonstrates how Dr. Fakem's "anti-horribilis" medicine is flying off the shelf into the hands of well-dressed customers terrified by the latest microbe just discovered by Fakem's partner, Professor Scarem.

In an equally popular view of tragedy, the painful loss of a farmer's property to foreclosure from high taxes is worsened in the *Puck* centerfold of August 1, 1888 [106] by the farmer being told by a visiting "protectionist orator" that the nation's magnificent rural prosperity flows directly from the protective tariff. Two years later, when the *Puck* centerfold of April 2 [107] finds another farmer and his family facing a similar foreclosure sale, the visiting oratory this time is from the protectionist trio of Harrison, McKinley, and Speaker of the House Reed. Equally traumatic and final is the picture of Noose [New] Jersey painted on *Puck*'s rear cover of June 18, 1879 [108], whereby major bribes alone can provide hope for those accused of a crime or for seeking a re-trial, especially if the final penalty is hanging.

Less catastrophic is a jump in food prices that can be traced to a far-distant disruption in the supply chain. Particularly sad is the fate of hard-working "common people" falling victim to a struggle among cattle raisers, beef packers, beef shippers, and wholesale dealers that suddenly pushes up beef prices by 10 percent, a situation *Judge* depicts in its centerfold of June 29, 1907 [109]. In a broader sense, *Puck* can illustrate a "double hold-up," whereby a "food speculator" buys low from the beleaguered and threatened farmer and then stores that produce until the moment when the consumer must pay an exorbitant price. In any case, *Judge*'s centerfold points out on June 15, 1889 [110] the farmer's lot "certainly is not a happy one." Not only is he set upon repeatedly

by handouts from pesky salesmen for such products as insurance, rapid-growing seeds, lightening-rods, green goods, patent medicines, books, and lottery tickets, but he must also police his fields and stream against such interlopers as quail shooters, trout fishermen, fox hunters, the bill-posting brigand, tramps, and the uninvited city relatives. And when the farmer visits the city, his pocket is picked by high-priced hotels, restaurants, street sharpies, and travel agents, as *Judge*'s rear cover of June 12, 1886 [111] shows.

Perhaps less sympathetic to many American laborers is the constant willingness of middle-class and small business investors to gamble in a variety of circumstances. A *Puck* rear cover of March 31, 1880 [112], for example, shows "ducks" filing into the stock sale office of the wonderfully publicized Little-Big-Fraud Mining Company and coming out plucked – in yet another wild-cat mining swindle. *Puck*'s centerfold of May 31, 1893 [113] shows a more sophisticated approach being utilized by "bunco steerers" who have found a wealthy farmer visiting Chicago during the World's Fair; with some proper steering, he seems to be a perfect candidate to invest in some "gilt edge securities." *Judge*'s centerfold of July 27, 1889 [114] introduces another "dupe," one taken in by bookmakers and others who are making boxing, wrestling, football, and steeplechase more and more brutal in order to attract "the betting idiot." And by the end of the century, the time is ripe again for a speculative boom and manipulation by the Wall Street bull. *Judge*'s centerfold of February 18, 1899 [115] beautifully captures the situation, and a centerfold in the next year illustrates how the eager herd of lambs is skillfully sheared by bull and bear brokers, with the poor victims eventually consigned to the "pasture of consolation." J.P. Morgan's capacity to generate bubbles of "inflated values" also never fails to bring in dollars from a trail of middle-income and business-class investors, as satirized in *Puck*'s centerfolds of May 22, 1901 [116] and September 17, 1902 [117].

In the sphere of consumer transactions, the urban dweller must remain alert to the temptations of installment purchases of various big-ticket appliances and conveniences. Clearly, consumers relish an opportunity to obtain such new pricey items as a stove, living room furniture, a sewing machine, a fancy bed, or a baby carriage when needed, and the clever salesman can structure the repayment burden into seemingly easy payments linked to weekly wages. But as the *Puck* centerfold of September 12, 1883 [118] makes clear, miscalculations about an incoming supply of household money often occur, and repossessors employed by the retailer are typically quick and brutally unforgiving in their

thoroughness, whether or not a householder is cooking a meal, sitting on the sofa, sewing a dress, sleeping, or walking the baby. *Judge*'s rear cover in October 1885 [119] issues a similar warning to those who use the credit system to obtain "loans on salaries" and soon find imprisonment or legal troubles to be inevitable. But that magazine's amusing rear cover of January 16, 1886 [120] warns of the opposite problem – the desire to furnish an apartment economically must recognize that inexpensive beds, extension tables, baby chairs, hall stands, and hat-racks can fall apart. A middle course is given in that magazine's rear cover of mid-year [121]; young couples may elect to "furnish cheaply" by allowing their lights, rugs, chairs, and other furniture to carry bold advertising information – in effect, turning their living quarters into billboards.

All in all, price can move unexpectedly, and there is no doubt that, for a range of new products (including financial, medical, and public services) tempting households in Victorian America, there is a need to be reminded of a basic adage. "Let the buyer beware" can truly be a bitter lesson for a first generation of middle-income urban householders experiencing the advent of modern consumerism, as the husband discovers when facing a deluge of bills from milliner, dressmaker, plumber, supplier of a variety of dry goods, and even from Santa Claus in the *Judge* rear cover of December 5, 1885 [122]. Four months later [123], *Judge* pictures another man flooded by bills from the plumber, gas company, butcher, doctor, ice-man, grocer, coal deliverer, dress-maker, and the corrupt alderman.

Strike or work: weighing the price

Before the rise of organized labor in the Victorian era, there were only scattered attempts by skilled American workers to exploit their relative shortage in many sectors of the economy. But an industrial labor organization within large-scale industries is inevitable given the spectacle highlighted on the *Puck* centerfold of June 21, 1882 [124]: beleaguered workers of the new Knights of Labor futilely trying to climb the greased pole to achieve a basic living standard while such well-known monopolists as Messrs. Vanderbilt, Field, Sage, Gould, and Roach watch that otherwise amusing event from their carriage. With most workers perhaps oblivious to the warning about the cost of strikes given on *Puck*'s rear cover as early as March 3, 1880 [125], the situation will became tense by the middle of the decade when a variety of heretofore alien "isms" are apparent in the shouts and slogans of militant labor leaders. The *Puck* centerfold of April 14, 1886 [126] summarizes this momentum toward

worker radicalism, and the *Judge* centerfold of May 28, 1887 [127] warns that the moderate Knights of Labor must prune off such killer vines as communism, socialism, boycotts, and anarchy if it is to flourish.

The formal strike will soon emerge as an effective weapon to raise wages in some industrial firms, but the damage can be formidable, with accidents and arson adding to the disruption of labor supply. The *Puck* centerfold of September 24, 1890 [128] highlights the cost to managers but also to workers of bitter strikes in this era as well as the existence of an informal channel for business management to bring its workers back to the factory floor; illustrated is an intermediary or well turned-out "walking delegate" who presumably carries labor demands into the firm's owner and, of course, has his hand out for "a few thousand dollars" for brokering an agreement between the parties. Most owners can only hope their firm's wage-earners are "getting sensible" about the cost of strikes and so are putting the walking delegate out of business, as apparently happened to one such unlucky delegate on *Puck*'s front cover of February 23, 1887 [129].

However, amid a year (1886) of great labor unrest, the likelihood of such a hope seems low if one reviews the story on the front cover of *Puck* on October 6 [130]. That is, when the walking delegate's well-turned-out wife is questioned about her attire by Mrs Hardpan (a workingman's wife), Mrs Flush indignantly responds she "ain't a working man's wife!" As she promenades down the street with her two well-dressed kids and small dog, she announces that instead her "husband is a walking delegate." And the rear cover of *Puck* in mid-February the next year [131] shows Mrs Flush remaining in her elevated state, since most workers will likely continue to have to carry her husband as well as such other burdens as assessments, hardship, distress, and poverty.

A variety of cartoons of the era highlights pressures upon workers (especially those with families) to avoid the strike or boycott option. The front cover of *Puck* of September 6, 1893 [132] shows how widespread is the arm of anarchistic disrupters and their spread of alien or poisonous agitation. But that cover also indicates how a strong-minded worker can continue to counter an anarchist agitator: dismissing as absurd the latter's claim that American families "are starving," even as the laborer's family is being served a beef dinner by their Irish maid. *Puck*'s rear cover of November 30, 1887 [133] applauds the worker (in this case Uncle Sam), who literally kills that serpent.

It is also instructive to absorb the message of the *Judge* centerfold of October 26, 1887 [134], which pictures a bleak outlook for workers tempted to enter the cave of organized unionism with a future of

essentially indentured servitude now due to their labor leaders. This disaster scenario would be a far cry from the satirical picture portrayed for the "future" American laborer on the rear cover of *Puck* of February 2nd of that year [135]. That is, labor agitators will soon have improved work hours and wage conditions so much that each worker can expect to elect himself to Congress, to be warmly welcomed in fashionable society, to travel abroad to view primitive European conditions, to write learned essays about his condition, and to allocate a lot of time for exercise after a work-week of only two hours a day and three holidays a week.

Meanwhile, realism increasingly enters the labor–management arena. While *Puck*'s centerfold of September 28, 1892 [136] will still show laborers (controlled by McKinley's "war tariff" whip) rowing the "Republican galley" of protected monopolists, there are also breakthroughs in relations. For example, *Judge*'s centerfold of May 22, 1886 [137] is one of many signaling that organized labor and capital fully recognize the risks of alien "isms," and each side exhibits a willingness to negotiate now that they are jointly stepping on anarchists. Equally impressive is the message of *Puck*'s centerfold of May 2, 1888 [138] that "King Boycott" is taken down as a weapon after two years of threats and actions. As is clear in numerous cartoons, it is time for both sides to climb down from their "high horses" and to choose the route of arbitration to resolve differences. *Puck* and *Judge* will provide many successful instances of this method into the new century, often under the theme of a full dinner pail amid post-1897 economic prosperity.

All in all, the "strike or work" equation to be assessed by American workers and capitalists has matured considerably since the amusing but harmless *Puck* centerfold of April 7, 1880 [139], when middle- and upper-middle-class families could be thrown into a tizzy by the "fearful consequences" of a strike by their tailors, furniture makers, blacksmiths, streetcar drivers, police, or coal heavers. This satirical view is paralleled in the *Judge* rear cover of April 15, 1882 [140], when such families also face a crisis if their cooks, the children's nurse, the maid, and the boot-black suddenly organize a walk-out.

What price a title?

Americans generally exhibit a strong nationalism in the Victorian era, but that reality in no way discourages some wealthy citizens from aping a British lifestyle. A satirical attack on such a perceived affront to US democratic institutions was particularly evident around the 100th anniversary celebrations of George Washington taking the oath in

New York City in April 1789 as first president of the new nation. Both *Puck* and *Judge* thoroughly ridicule the "Anglo-maniacs" of the day who worship at the altar of UK nobility, and *Judge*'s centerfold of May 4, 1889 [141] skillfully captures both the adoration of British aristocracy by the "400 families" of New York and the disgust of George Washington. The latter is pushed well to the background and left muttering about the apparent victory of his enemy – an "Anglo-American aristocracy" – even as a huge centennial celebration in and around Manhattan features parades, bands, a new naval cruiser in the harbor, and a patriotic display of flags everywhere.

A particularly virulent form of Anglomania is also increasingly in evidence, one picked up for satirical treatment first in a *Puck* front cover of February 23, 1881 [142]; this scene calls attention to young British society ladies aghast at the sight of their ennobled male counterparts seeking American brides (and receiving $60 million for the effort). By the mid-1880s this type of transatlantic commercial transaction is a well-established fact among wealthy US families, whose ancestors are cruelly satirized on several occasions by *Puck*. If we can take as a guide one of the very best of the amusing depictions of the resultant meat-market attended by millionaire American families, UK titles are not necessarily

Figure 1.6 "American Millions and Foreign Nobility – The Market Where Our Girls Buy – and Get Sold." (Puck, February 27, 1884)

more expensive than those of France, Germany, Italy, or Spain. That is, the *Puck* centerfold of February 27, 1884 [143] shows Mother busy studying Burke's Peerage, Dad prepared to write a big check, and Daughter posed to choose among such possible mates on the podium as Viscount Smallcash ($15,000), Marquis de Vinordinaire ($10,000), Baron von Zweibier ($20,000), Count di Maccaroni ("a bargain"), Laird of MacParritch ("haughty but cheap"), and Don Hardup ($20,000). Lesser lights from overseas are also on display for the less well-endowed family eager to move up the US social ladder.

Interestingly, the recently-elected President Benjamin Harrison is shown on the *Judge* centerfold of March 30, 1889 [144] as trying to prevent the entry of such fortune-hunters, who are wont to publicize their pedigrees and their prices even as they pass through customs. But this foreign tide cannot be held out of a country where Mother is capable of buying a husband for her daughter with a relatively small outlay and so becoming the envy of her American social circle. For the marriage then allows Mother to visit the new countess, duchess, or princess in England (or the Continent) and to be entertained in the refurbished castle while mingling with other nobility. The *Puck* front cover of May 10, 1893 [145] illustrates that, under these circumstances, the price of a title for a daughter can be priceless.

Daughters, too, seem to be proactive in this search for titles. The *Puck* centerfold of November 20, 1889 [146] thus warns attractive American girls to view with a magnifying glass the highly-indebted transatlantic visitors and to consider instead the "honest American man" as truly "a nobler prince." A centerfold of October 2, 1895 [147] emphasizes that our snobbish society will bow down and worship title, no matter how tainted; in turn, many a wealthy girl will ignore the eligible pool of American men who possess talent and genius. Such centerfolds make it clear that the masculinity, brainpower, and honor of these ennobled visitors from Europe typically fall well below that of eligible US counterparts, and who knows what (beyond lots of dollars) motivates men with a long trail of debts and probable disgrace.

While rich families pay the price for a daughter's title and these transactions indeed give rise to a US balance-of-payments outflow, it is little noted – until a diplomatic crisis breaks – that such social investments could conceivably pay an international political dividend. The *Puck* centerfold of April 24, 1895 [148], for example, highlights "fool Americans" of two kinds (anti-English jingoes and Anglo-maniacs), but that magazine's centerfold of December 12, 1895 [149] also shows that America's daughters in the UK are not shy about pulling the strings of

their husbands from a balcony in the House of Lords. Such control by the puppeteer makes it inconceivable that Parliament would authorize any hostile actions against the US during the contentious Venezuelan crisis of 1895–96. An amicable settlement of that dispute (with US–UK summit negotiations conducted under the influence of "common sense tobacco," as pictured in the *Puck* centerfold of February 22, 1896 [150]) certainly goes some way to offset the impact of the claim in *Judge*'s centerfold of June 12, 1897 [151] that $30 million of US gold reserves flow overseas annually for "titled personages."

In sum, it is clear that a wealthy family's decision to buy an ennobled husband for their daughter could be a win–win situation, especially for Mother and for those lucky men whose credit and castles are otherwise collapsing.

Prices for the rich

The rich live lavishly in Victorian America, and the life of New York's "400 families" are replete with opportunities to spend. The *Puck* centerfold of April 4, 1883 [152], for example, highlights unique items for formal costume parties or for embellishment of the home. Price tags on items at the top end include a woman's velvet cloak for $10,000 (and accompanying earrings for $6,000), a diamond tiara for $10,000, a gentleman's Elizabethan cloak for $8,000 (with accompanying ring for $9,000), a painting for $100,000, a genuine Roman stone engraving for $30,000, a special fireplace for $100,000 (accompanied by an unusual mantel clock for $20,000), and a "very old" curtain for $200,000. Of course, there is also a selection of coupons for $500,000 or a selection of bonds for $200,000 for the older woman who has virtually everything else.

There are some men who aspire to an even more interesting purchase: the presidential chair. Without a doubt, this is an age when political corruption at the local, state, and congressional level is endemic and an unending subject for satire in *Puck* and *Judge* from their first issues. A *Puck* centerfold highlights the prize by warning that only "millionaires need apply" for a place on the quadrennial auction floor for chief executive. Among the 16 men pictured in the audience who are actively bidding are Messrs. Gould, Field, Huntington, Morton, Stanford, Sage, and Wanamaker. It is logical that, for those who are unwilling to make the top bid, the highly appropriate auctioneer (Senator Matthew S. Quay of Pennsylvania) would then direct bidders to the next prize (the vice-presidential chair). After that position is sold, there will still be the

Cabinet posts (State, War, Navy, Treasury, Postmaster General, Attorney General, and Agriculture) to be raffled off. For the record, Levi Morton wins the auction to become the Vice-President nominee on the Harrison ticket in 1888, and John Wanamaker wins the Postmaster General job after the Harrison–Morton team is elected.

Puck's front cover of early 1884 [153] finds it easier for all to recognize that "it costs money to fix things." The greatest efficiency is thus achieved when congressmen "display their prices prominently," such as $5,000 to $20,000 for more senior members and as little as $50 to $1,000 for second-tier members. But in terms of securing a major business concession, the winner is shown on a pair of *Puck* covers in 1888 (the front on May 30 [154] and the rear on August 8 [155]) which celebrate, respectively, Andrew Carnegie's huge $1.5 million donation to James Blaine (seeking the Republican nomination for President again) and the royal reception due the former as "uncrowned king" of the Grand Old [Republican] Party. Carnegie rides his royal steed in review before the faithful and in the shadow of his castle, his factory, and the shacks of his workers.

Puck and *Judge* provide a variety of views of dalliance of the rich, with the subscriber left to calculate the expense. For example, annual Christmas issues of *Puck* illustrate lavishly furnished homes, a formal dance for adolescents, tables heavy with fancy food, and a plethora of imported and domestic toys for the children from a visiting Santa Claus. However, by Christmas season in 1887, Santa (on December 21st [156]) realizes that these homes are "too extravagant" and he might leave and "go where I'm more needed." Moreover, *Puck*'s rear cover of February 10, 1886 [157] suggests that the rich will soon demand plate-glass conversation boxes at the opera so theatre-parties can continue to socialize without disturbing other patrons. Meanwhile, formal dinner parties at home abound, with only an occasional embarrassing interruption of the festivities – such as when *Judge* proposes that a poor country relation (in clodhoppers and with family and dog) could burst into the room. Also in frequent focus are scenes where the rich are showing off their fashionable clothes at horse shows (for example, *Puck*'s rear cover of November 18, 1891 [158]), losing their money learning how to ride properly (as on *Judge*'s rear cover of September 7, 1889 [159]), traveling on well-equipped transatlantic lines (*Puck*'s rear cover of February 26, 1906 [160]), capturing the beautiful young lady (*Judge*'s rear cover of September 14, 1888 [161]), and, for the most sporting of gentlemen, participating in the prestigious America Cup yacht races (as shown on *Judge*'s front cover of September 28, 1901 [162]).

Not every rich family marries its daughter to European nobility. Because *Puck*'s rear cover of January 19, 1881 [163] is appropriately

satirical about $100,000 American marriage ceremonies that resemble those for royalty, it positions this issue simply as "it was" (Adam and Eve) and as "it is" (the extravagant ceremony) and as "it should be" (couples going to City Hall). Such young married couples will undoubtedly be ready to join their elders in another ritual after the 1890 McKinley Tariff begins to bite. That is, *Puck*'s rear cover of September 23, 1891 [164] illustrates how women of all ages returning from annual vacations in Europe boldly wear their recently purchased French clothes and new jewelry ashore in an attempt to disguise such imports from the customs inspector looking for dutiable items. *Judge*'s rear cover of February 20, 1886 [165] reports how these ladies can go one better when the fashion of the day includes a big hat, suspenders for evening wear, a well-dressed small dog, and a bustle with extra space for storing imported goods not for the inspector's eyes. More blatant, but longer-standing and undoubtedly equally effective, is for the returning gentleman to work the "custom-house code" (illustrated in its multi-variations in *Puck*'s centerfold of October 14, 1885 [166]) of putting a $5 or $10 bill for the inspector to find as he opens the returnee's trunk filled with foreign purchases or in items being carried ashore. And after such wealthy couples return to America from Europe, our young, fin de siècle ladies may elect to enjoy a fashionable "dog party" with their friends (after sending their children to the park with the governess) on *Puck*'s rear cover of March 8, 1893 [167], or to promenade with their small pooches, as on *Puck*'s front cover of January 8, 1913 [168]. Overall, the behavior being exhibited in the *Judge* centerfold of December 12, 1885 [169], where a rich young lady is driving her team of horses ("extravagance" and "dissipation") rapidly down the road to bankruptcy, disgrace, and ruin in the name of "fashion" – despite entreaties from her helpless husband – is apparently not a path being followed by most wealthy families as the decades progress.

Not surprisingly, there will also be times when the rich will elect to pay a high price for participation. A notable case is the 1893 Columbian World's Fair in Chicago, which *Puck*, *Judge*, and most other influential publications had assumed would be held in New York City in 1892. After Chicago, instead, wins the nod from Congress in early 1890, the *Judge* centerfold of May 30, 1891 [170] condemns a now spiteful delay in "rich, old, miserly" New York in funding a big exposition site on the grounds of the fair. This theme is taken up by the *Puck* centerfold of December 16, 1891 [171], when rich Father Knickerbocker (New York) and New England are still apparently refusing to crack open their treasure chests to pay for major buildings at this event. But New York State will eventually

fund a very large participation, confirming that the rich indeed will pay a high price to be seen at an event where major US and European industrialists and even visiting royalty will be present. In a similar vein, Theodore Roosevelt returns from his African and other international adventures during the administration of his hand-picked successor (Howard Taft) and finds the lure of a third term as the third-party "Bull Moose" candidate to be irresistible in 1912. *Puck*'s front cover of September 12 [172] pinpoints how a rich backer elects to spend considerable amounts to get Teddy into a position to defeat Taft's attempt to serve a second term, even as this effort splits the Republican vote enough to elect Woodrow Wilson to his first term as President (1913–17).

In sum, the rich in Victorian America are different, and their extravagant consumption habits readily lend themselves to satire.

Rejecting the cheapness of John Bull

The bitter 1888 presidential campaign is all about price: of labor, of goods, and of American dependence or independence. In the sharply drawn political battle lines, the satirical offerings of *Judge* and *Puck* would never be more dramatic. The character who commands the most attention for the ultimately successful Republican ticket is an overweening John Bull, which *Judge* repeatedly uses to great advantage. Incumbent President Cleveland counters by ridiculing Republican promises to "protect" workers and to offer families tax-free whiskey and tobacco. The White House also expects citizens to see that the US fiscal surplus would be better used if it were not transferred to the huge "tariff monster" now sitting before Congress, as *Puck*'s centerfold of December 7, 1887 [173] boldly details.

The Cleveland Administration's modest success in trying to liberalize the war tariff becomes personalized by John Bull and his nation's free trade policy as 1888 approaches. In an early inkling of how the strategy of demonizing any US consideration of copying the UK model would play with voters, *Puck*'s visually active centerfold of May 5, 1886 [174] features a major monopolist standing in the street in front of his factory and claiming to protect his workers from the "free trade bugaboo." But simultaneously, he is secretly encouraging Republican manipulators of that fierce dragon to move the jaws "to keep the working-man frightened" and happy with his 12-hour day and low wages. For there is a serious concern among many citizens about Cleveland's pledge to reform the traditional protectionist tariff, with the possibility that free trade

might allow pauper labor from abroad to flood the US with cheap goods. The *Judge* front cover of February 20, 1886 [175], in fact, feeds that concern by highlighting how UK free trade had apparently triggered recent riots in London and left the workers there ragged and starving, with an American worker observing the sad state of his English counterpart. The bold *Judge* centerfold of July 28, 1888 [176] will capture how this scary situation could be used during the presidential campaign; that is, a Democratic victory promises a free lunch to ragged starving workers from Italy, Germany, Mexico, Russia, Canada, and England, who are aggressively snatching the well-paid US worker's bread and cheese meal from the dinner table.

That magazine's centerfold of June 5, 1886 [177] (satirically "dedicated to the free trade theorists") anticipates the Democratic argument in 1888 that Cleveland's tariff-reform policies (an emerging Mills bill) would mean "goods will be much cheaper." But a Mills bill would open the "protection dam" and wreck US firms, associated jobs, and capital by allowing in a flood of imports. This complements the *Judge* centerfold of July 14, 1888 [178] further positioning free trade as an opportunity for Cleveland to auction skilled US industrial workers into John Bull's clutches, with an evident link to pre-1861 slave sales. No wonder the American working man is quite reluctant in *Judge*'s rear cover of June 30 [179] to accept "Doctor Mills" and his legislation, which would provide a transfusion of healthy blood into the emaciated "English industries" patient. As the strong American worker sagely explains his refusal to be weakened in any such "proposed dangerous [transfusion] experiment" – despite the entreaties of Mills, Cleveland, and John Bull – "self preservation is the first law of Nature!" Overall, the Republican campaign not only promises a very testy situation for workers if John Bull and his philosophy win the day, but the result would be an abrupt check to the US industrial transformation so evident to Americans in the post-1865 decades and a risky dependence upon the supply whims of formidable international merchants in London. The *Judge* centerfold in the July 7 "Independence Day" special issue [180] of the magazine skillfully summarizes the latter threat as a "declaration of dependence" signed before the victorious British by the subservient and kneeling Cleveland Administration. This highly insulting slap comes a week after *Judge*'s front cover [181] treats readers to John Bull conducting a "Great Democratic English Circus," with Cleveland being the prize US pig that can spell "free trade."

Cleveland tries vainly to convince a majority of American voters that a liberalized tariff would generate a higher standard of living for

urban families of modest means and for farmers. Among the best of the contributions of *Puck* is the front cover of April 11, 1888 [182] promoting a "Mills anti-fat tariff reducer" for the huge "infant industries" baby living on war-tariff protection. More to the point and to the pocketbook, the front cover of August 22 [183] shows the wise worker refusing to buy a "war tariff suit" for $25 at the "Benjamin [Harrison] and Levi [Morton] National Clothing House" when he can instead purchase a comparable suit for $3.50 at the "Cleveland Free-Wool Emporium." A similarly structured message appears on that magazine's rear cover of September 26 [184] when the workingman is suddenly hugged by an older woman ("widow war tariff" who is owner of the "High Priced Clothing [Store] for Workingmen") looking to use "political leap year" to obtain a husband to support her four children (soap trust, salt trust, sugar trust, and rubber shoe trust); her immediate task is to prevent the worker from patronizing the young woman around the corner whose "tariff reform store" carries "cheap and good clothing at fair prices." Meanwhile, *Puck*'s front cover of October 10 [185] reiterates the message that Republican promises of "free" (of tax) tobacco and whiskey offer little in the way of "home comforts" to families of American workers.

Despite the *Puck* centerfold of January 18, 1888 [186], which shows the Cleveland Administration holding the lion's tail and so preventing the UK from further dominating US international commerce, the rapacious John Bull character reflects the true emotional heat of "price" in the presidential campaign. An outstanding cartoon summarizing the final electoral result is *Judge*'s centerfold of November 10, 1888 [187], when (in one of the closest US presidential races) the "verdict" of voters is to eject "Cheap John" and to reject his cheap goods. Not surprisingly, the Congress, also elected in November 1888, ignores the tortuously designed compromises of the Mills initiative and instead begins to set the ground for the formidable McKinley Tariff legislation; the front cover of Judge in September 1889 [188] summarizes this path by pointing to the Republican scheme to avoid a repeat in America of the cripplingly low hourly wage (9 cents) and irregular work of English laborers under John Bull's adherence to the "Cobden Club Free Trade" philosophy. McKinley's bill passes in the Senate on September 30, 1890, and is sent on to President Harrison for his signature. *Puck*'s satirical reaction to this highly protective measure is a centerfold [189] showing Republican Senator John Sherman endorsing that legislation because he believes US manufacturers will use the opportunity "judiciously . . . and will give the benefit . . . to the [American] people in cheaper production." However, this cartoon makes it clear that the manufacturer, monopolist, and trust

intend to utilize the legislation to squeeze laborers and farmers "for all it's worth."

While Cleveland has been condescendingly endorsed by John Bull in the *Judge* front cover of June 9, 1888 [190] as "England's candidate" in that bitter election, America's choice is the grandson of President William H. Harrison, who had died in office within weeks of being inaugurated on March 4, 1841. Benjamin Harrison surprises no one in largely supporting monopolies and raising the protective tariff.

Two-ocean national security: priceless

Soon after the discovery of gold in California in 1848, American industry realized the economic advantages of a faster route for ships to the US West Coast than traveling around the southern tip of South America. The perception of political vulnerability on the Pacific frontier of the country would also grow as several international developments emerged in the 1890s: (a) after a civil war in Chile on the west coast of South America; (b) in a tense dispute with London about sealing rights in the Bering Sea; and (c) after the Sino-Japanese War in East Asia. Since these events directly impact on US national interests, they do receive the attention of *Puck* and *Judge*. US interests also encompass the very attractive mid-Pacific Hawaiian Islands where Uncle Sam, as the defender of the "Monroe Doctrine" principle, warns off John Bull on the *Puck* rear cover of August 10, 1887 [191] and, as the big hound, plays the "dog in the manger" role on *Puck*'s front cover of May 13, 1893 [192]; on the latter occasion, small dogs from the UK, Germany, France, Italy, Japan, and China eye the island kingdom covetously while Washington tantalizingly hesitates to annex it, but wants no other country to take possession.

The ambitious, but ultimately unsuccessful efforts of France's Count de Lesseps to build a sea-level canal across Panama during 1881–88 would thus be watched closely by Washington. After all, *Puck*'s centerfold of February 11, 1880 [193] shows US Navy (USN) warships to be incapable of commanding even the nation's territorial waters off the Atlantic, Gulf, and Pacific coasts. In fact, the first modern US cruisers are not authorized until 1883 and are completed only by the end of that decade. After Washington generally follows a cautious foreign policy for many years, things change abruptly after the battleship *Maine* blows up in Havana harbor in mid-February of 1898. The Spanish–American War, the victorious US acquisition in the Pacific of the Philippines and Guam, the annexation of Hawaii, and a full seat at the "great-power" table by the summer of 1898 make it very clear that the continent-sized US will

indeed seek to build and to control an isthmian canal in order to allow an expanding battleship-led USN to be able to provide two-ocean security, as well as to cut the time and cost of commercial shipping routes.

While *Judge*'s front covers of January 26, 1889 [194], November 11, 1899 [195], and April 6, 1901 [196] vividly testify to a US "Monroe Doctrine" determination to secure sole political rights to a Nicaraguan or a Panamanian route for linking the two major oceans, the ideal opportunity only comes in late 1903. President Theodore (Teddy) Roosevelt will follow up a failed US–Colombian treaty (signed in January 1903) to obtain rights to a canal zone by moving swiftly after a revolution in Panama on November 3 means secession from Colombia. The new nation's claim of independence is recognized by Washington on November 6, and *Judge*'s front cover of December 12 [197] welcomes the US hand in rocking the cradle of the new republic. While *Puck*'s centerfold of December 23 [198] considers the $10 million given to young Panama for a canal zone to be a fine Christmas gift, Colombia, Nicaragua, and other Latin American countries remain notably outside the reach of Uncle Sam in his Santa Claus disguise. Meanwhile, the magazine warns other revolutionaries in Central America to put away their weapons even as *Puck*'s centerfold of January 20, 1904 [199] applauds Uncle Sam's decision to ignore domestic business and congressional critics of the Panamanian route, several of whom support the much longer and tortuous Nicaraguan effort.

Japan's overwhelming naval and land victories in the Russo-Japanese War of 1904–05 are neatly summarized in the *Judge* centerfold of July 15, 1905 [200], showing the Russian navy devastated by Admiral Togo's fleet and Russia's army in the Far East defeated by General Oyama's forces. The formal emergence of this new great power puts an urgency into getting Congress aboard to fund Uncle Sam building the canal in the acquired zone rather than going through an additional time-consuming assessment of a competing route through Nicaragua. At the same time, Roosevelt uses his formidable mandate after his 1904 re-election to push ahead with a rapid expansion of the USN, including keeping some new capital ships in the Pacific Ocean following a concentration of several armored vessels during the Philippine Insurrection and Boxer rebellion. And in a master stroke of publicizing the USN, promoting U.S. diplomacy in East Asia, and highlighting the potential gains of the Panama Canal, he dispatches the Great White Fleet on December 16, 1907, to steam south and then around South America into California and finally to Pacific harbors in Hawaii, the Antipodes, Japan, China, Philippines, and Ceylon, before the 16 battleships return via Suez and Mediterranean

Europe to the Chesapeake Bay in the U.S. on February 22, 1909. On many occasions, *Puck* (e.g., May 6, 1908 [201]) and *Judge* (e.g., January 11, 1908 [202]) hail this remarkable and historic international projection of power and, simultaneously, of goodwill.

Not surprisingly, *Puck* and *Judge* also highlight the intensive digging and related engineering activity in Panama. Especially welcome is their enthusiasm following Roosevelt's visit to the site in November 1906 and the historic photo opportunity of him seated at the controls of a giant dredger. Among the best centerfolds are when Teddy is shown in *Puck* leading the construction crew in a re-play of his famous 1898 change up Cuba's San Juan Hill (as a colonel in the "Rough Riders") and when *Judge* of March 30, 1907 [203] captures the renewed burst of activity brought to the isthmus after Roosevelt puts Secretary of War Howard Taft (who would be elected to succeed Roosevelt as President during 1909–13) in charge of the now US Army-led project. The bottom line is that Judge's dynamic centerfold of September 8, 1906 [204] has Uncle Sam correctly proclaiming "the Republican Party does things." In this case, the power of Roosevelt and also of the Republican steam-shovel have truly overcome "Democratic opposition," "railroad obstructionists," and "political criticism" to get the proper management, labor, and machinery in place to see the multi-lock project through by the target date of 1914.

In sum, both magazines support several decades of bi-partisan Congressional attempts to guarantee two-ocean security. *Puck* and *Judge* had ridiculed the obsolete post-1865 US Navy in the 1880s, and both recognized the commercial and political importance in the post-1898-era of building a canal to allow modern US warships to operate in a world where rapid trans-oceanic movement of a fleet will carry significant diplomatic and military clout. *Judge*'s centerfold of January 16, 1909 [205] for one puts this project in national perspective when giving President-elect Taft a list of priorities for completion after his inauguration on March 4; finishing the canal is at the top of the list. Without a doubt, *Puck* and *Judge* agree that the more than $375 million construction project in Panama – to be completed and opened to traffic as European armies are literally mobilizing for world war in August 1914 – does more than link two oceans and two coast lines. It will also provide a priceless degree of US security.

Who pays for international shipping subsidies?

The US merchant shipping industry is a case study of inconsistent attention being paid to costs of subsidies versus balance-of-payments costs

when American exports and imports are carried on foreign bottoms. The front cover of *Puck* on the 150th anniversary of George Washington's birth in 1732 [206] puts the issues involved in explicit focus. Uncle Sam, riding a log (representing the US Navy) in New York harbor, hails John Bull, aboard one of his many cargo vessels with US goods bound for foreign markets. This pathetic sight reflects the reality of the dominant UK worldwide carrying trade based on a mighty commercial fleet (protected by the world's strongest navy). In turn, America has a small ocean-going cargo fleet and not one functioning ship-of-the-line that could protect overseas interests. It is noteworthy that, of the waterborne US merchandise exports of $738 million in 1882, just $97 million (13 percent) are carried in US-flagged vessels, and the situation is only somewhat less lopsided for waterborne US merchandise imports of $702 million; that is, only $130 million (almost 19 percent) are carried from foreign ports by US flags (US Bureau of the Census). For the US suppliers and importers, this situation represents a commercially risky and financially costly dependence upon the UK and other foreign fleets, as well as encouraging Washington to keep political disputes with London off the table.

This essentially UK commercial monopoly is not, however, the sole reason why the US export picture is generally uneven during the 1880s. Overall exports of manufacturers (finished, semi-finished, and processed food) increased during the period 1880–90, and *Puck*'s front cover of July 30, 1879 [207] shows that America's wheat-producing regions could also expect to get their growing output for export to ports by train. But *Puck*'s centerfold of January 26, 1887 [208] identifies another cause for the lack of U.S.-flagged ships at major ports; that is, the combination of high tariffs on imported materials and machinery and the high cost of US labor prevent shipbuilders from being internationally competitive, especially in the face of liberal subsidies given by several European countries to their flag-carriers. *Puck*'s clever centerfold on Washington's birthday in 1888 [209] provides another reason; Uncle Sam, with his old musket and an anachronistic desire to protect himself "against trade," is frankly decades behind in recognizing how to foster an international marketing orientation. In contrast, John Bull is fully aware of the opportunity to capture America's carrying trade. The *Judge* centerfold of August 10, 1889 [210], for example, should be modified to note that the UK not only provides considerable revenues to the royal family but also to its worldwide commercial fleet.

Legislation is passed late in the Harrison Administration – when only $81 million of America's total 1892 waterborne merchandise exports

of $997 million are transported aboard US flags and the corresponding figure for US waterborne merchandise imports of $788 million is just $139 million. This bill would finally offer federal subsidies to US-owned firms that purchase large (at least 8,000 tons), fast (at least 20 knots) foreign vessels that could be US-flagged if the firm would also build an equal number of vessels domestically. The ships also had to be convertible to auxiliary cruisers for the US Navy during a war. A bold *Puck* centerfold of July 24, 1895 [211] highlights the entry into service of *St Louis*, the first of the American Line and, ideally, the start of a trend that will shake the complacency of John Bull and his near monopoly on carrying US international merchandise. But in a shrewd analysis of the new Cleveland Administration, the *Judge* rear cover of April 29, 1893 [212] had hypothesized that Washington would not mind hauling down the flag on the US merchant fleet (or Hawaii), and so the *Judge* centerfold of May 8, 1897 [213] finds Uncle Sam still searching for "our flag" in such US seaports as New York that handle a large shame of US international transactions. No less than 20 foreign-flagged vessels (12 from Europe, four from Latin America, and two each from the Far East and from the Middle East) eclipse any view of the stars and stripes, and this is not far out of line with the just $80 million (8 percent) of US products carried in 1897 on US bottoms (out of $986 million in total waterborne shipments abroad) or the mere $109 million (15 percent) of foreign goods brought into the country on US flags (of the total US waterborne import bill of $729 million).

The shipping industry greets the US becoming the world's largest merchandise exporter in 1901 by redoubling its efforts to get an enhanced subsidy, pointing to an even worse record registered by US-flagged vessels that year: a minuscule $84 million (6 percent) of exports carried out of the record $1,376 million total waterborne US sales abroad and just $93 million (12 percent) of the $776 million waterborne imported goods by America during that year. After all, the Roosevelt Administration (1901–09) also understands the role that fast US auxiliary cruisers played in the Spanish–American War and recognizes the stress that the Philippine Insurrection puts upon the logistic responsibilities of the US transport fleet. But the subsidy issue is not readily resolved, in part because expenditures to enhance the US Navy, to protect the Philippines, and to deal with a variety of anti-competitive forces in a "big stick" manner command a higher priority. Then, too, no real emergency exists.

Another part of the equation is the role of Majority Leader "Uncle Joe" Cannon in holding back new congressional subsidization legislation despite Uncle Sam's plea for Cannon to stop rewarding subsidized UK,

German, and French international carriers of our merchandise. This dilemma is wonderfully satirized in the *Judge* centerfold of April 28, 1906 [214], when owners of shipping lines in those three countries willingly cooperate with Cannon! In *Puck*'s assessment of Washington's desire to support yet another industrial sector, the front cover of March 6, 1907 [215] concludes that the U.S. infant-industry ship-owner "won't be happy until he gets it [the subsidy]".

In terms of perspective, it will take US entry into the world war in April 1917 and the direct submarine threat to transatlantic troop transport and supply routes to Europe to provide the emergency that generates the Federal subsidy to build a record amount of US-flagged mercantile tonnage.

Earning the world exporter title

Both *Puck* and *Judge* share the pride of most Americans when the US becomes the foremost global exporter of merchandise in 1901 ($1.585 billion). This provides the underpinning for a then record surplus on goods and services of $438 million and for a sixth consecutive year of a net increase in official reserve assets after four years (1892–95) of large decreases. As the *Puck* centerfold of March 13, 1901 [216] confirms, temporarily forgotten in the new century and amid its prosperity are the battles of the 1880s and 1890s about who pays the price for the high US tariff on most imports and for the emergence of protected monopolists. Not surprisingly, an outpouring of bold cartoons hails the result of America's international marketing supremacy. There is only an occasional reminder of the downside to the standard of living to domestic victims of the tariff policy, as exemplified by *Puck*'s centerfold of May 1, 1901 [217]. This cartoon notes satirically the "blessings of protection," which force US companies to pay $35/ton for steel rails while John Bull's companies can import them for a very competitive price of just $24/ton. This kind of price discrimination by monopolists against US customers and the resultant ability to win foreign customers had been noted by that magazine on several other occasions over the years.

Far more typical and upbeat are the classic centerfolds of *Puck* of November 27, 1901 [218], *Judge* of April 19, 1902 [219], and *Puck* a month later [220], when spectacular US export success is being portrayed as inevitable. *Puck*'s November 27 celebration (after the 1901 trade figures are released in Washington) has a triumphant Uncle Sam raising his glass and hailing the Thanksgiving dinner turkey of US "commercial supremacy" before the sullen leaders of the UK, Germany, France, Russia,

Italy, Austria, and Japan sitting around the table. *Judge* then depicts 12 mighty trusts (steel, tobacco, leather, railroads, sugar, coal, machinery, whiskey, rubber, beef, flour, and beer), clad in Roman armor, aggressively crossing the Atlantic in military precision and readily scattering the small European monopolies: a classic case of protected industries in a huge US market being able to use their discriminatory pricing and effective distribution clout to overwhelm foreign competitors. And *Puck*'s contribution of May 21 nicely personalizes the "commercial might" of such trusts in the form of a larger-than-life J.P. Morgan carrying an armload of diverse US manufactured goods to meet demand overseas despite the weak protests of two small "divine right" rulers, Kaiser Wilhelm of Germany and King Edward of the UK.

This theme of the inevitability of American merchandise to flood European markets is a popular one. *Judge*'s centerfold of April 6, 1901 [221] satirizes the futile efforts of European monarchs seeking to hold back the tide, and that publication's centerfold two months later (June 15) [222] succinctly captures the European manufacturer's evident distress as an endless and animated diversity of competitively-priced US products arrive; pictured are such technologically-intensive capital goods as locomotives, bridges, and sewing machines and such representative consumer items as rubber goods, brass, and cutlery. "European Partingtons" who try to sweep back this incoming tide in *Puck*'s centerfold of September 3, 1902 [223] are doomed to futility.

In case any readers of the era believe that European nations could suddenly forge an impenetrable tariff or quota wall at their Atlantic Ocean shoreline, *Puck*'s centerfold of July 24, 1901 [224] puts paid to any possible threat. That is, "our British watch-dog" is a voracious consumer of a diversity of American products, and that fierce beast clearly has no interest in supporting any latent "European combination" that contemplates choking off US supplies to European citizens (including the UK). Not only does the front cover of *Judge* of November 14, 1903 [225] suggest John Bull is heading toward international bankruptcy if he continues to play the free-trade cards in relation to Uncle Sam's "protection" cards and growing stack of poker chips, but the *Puck* centerfold of July 8, 1903 [226] shows that the UK lion (adorned in a "free trade" coat) could soon have that coat shorn by the Colonial Secretary (Joseph Chamberlain). *Judge*'s front cover of November 7, 1903 [227] puts the message even more succinctly when Joe Chamberlain tells John Bull to "brace up" and to become "a worthy follower" traveling down the "protection road," a route now being embraced by a triumvirate of Uncle Sam, a prosperous US worker, and Kaiser Wilhelm.

By early in the new century, depictions of US merchandise exports have certainly changed. For example, the *Puck* rear cover of August 15, 1883 [228] has Uncle Sam's export problem pictured as Chancellor Bismarck directly stopping our swine products from entering Germany, but Uncle Sam boldly retaliating against German white wine bottles destined for US consumers. Only 15 years later, the very clever *Puck* centerfold of August 17, 1898 [229] has Uncle Sam demonstrating forcefully to six awe-struck European rulers how a powerful US commercial "battleship" is now constructed of huge bundles of export products, including such major items as cotton, wheat, corn, flour, oats, and mineral oil. This historic and ongoing diversification of US overseas sales from a relative handful of agricultural products to a rising total of processed foodstuffs and manufactures is also shown well in viewing: (a) the *Judge* centerfold of November 11, 1899 [230], which still puts farm items foremost in our "Niagara Falls of trade;" and (b) the *Puck* centerfold of November 29, 1899 [231], which shows eager foreign customers purchasing from shelf-loads of manufactures in the "greatest department store on earth." Two years later, these results are magnified by Uncle Sam presiding as *maitre d'* over "the most popular restaurant in the world" (*Puck*'s centerfold of August 21, 1901 [232]) and as proprietor of "the world's great department store" (Judge's centerfold of May 25, 1901 [233]).

The title of the "world largest exporter" – celebrated by Americans in a wave of patriotic pride in 1901 – would indeed be held by the U.S. for the rest of the twentieth century. And the gains in export earnings and the good wages of men in exporting firms would generally remain major factors in Victorian-era political arguments by those who would justify the need for high U.S. tariffs as the best guarantee for assuring powerful industrial corporations.

Conclusions

While there are other categories of price experiences in Victorian America in addition to the 12 assessed here, the following conclusions appear to apply across several categories.

First, the dawn of the modern age of consumerism is particularly evident, and price becomes a major factor as the newly empowered householder chooses among an array of goods and services, all conveniently available. Although this shopper experiences an unprecedented opportunity to satisfy a need to furnish a house, to take a vacation, to show one's status in society, or to donate to charity, he is often depicted as vulnerable to miscalculating the price to pay for such an indulgence.

Second, tariffs on everyday commodities raise domestic prices and, in particular, hit the laborer's family and the farmer. While this tariff raises fiscal revenue, it also enables domestic suppliers in many industries to become protected infants. A major interest of these beneficiaries is to have Washington then permit the movement toward a mature monopoly or trust, with such consolidated firms possessing a formidable power to meet profit objectives, including a major resort to discriminatory pricing against domestic customers.

Third, the price of American labor can be kept very low in these circumstances, and that enables the skilled worker to produce considerable amounts of low-cost output. However, the global supply for cheaper labor can also be tapped as major companies import foreign workers while reaping the benefit of the protective tariff – a measure otherwise championed in election campaigns as shielding American workers from a flood of cheaply produced foreign goods.

Fourth, excess demand can persist and keep prices high in even unprotected markets. While an increase in prices caused by strong demand ideally generates a signal to investors to consider an expansion of supply, this response need not be automatic or rapid in practice. Too often the signal is unnoticed or an intensity of demand overwhelms the situation, and for many goods and services the supply increase requires considerable time to emerge.

Fifth, the national credit is seldom considered within the pricing equation, but when this issue arises American business, labor, farmers, and Washington take notice. The price of re-establishing financial stability can include reassessing the gold–silver relationship of the currency, peddling US bonds with Europe as necessary, absorbing a sharp downturn in economic activity, and mounting a bipartisan political front against debt repudiation. Such actions assume a high profile in the mid-1890s and so spill over into the 1896 and later presidential campaigns when there is a coalition of forces that is not necessarily concerned about national credit.

Sixth, speculative activity within capital markets can bid up prices, and clearly this is not welcomed if it leads to behavior by Wall Street insiders who can fleece the public. Meanwhile, speculative fever can induce middle-class householders to take out loans, and they are generally in a poor position to calculate the risk. It seems that a range of individuals, from bank presidents to church-fund custodians, also end up on the wrong side of the bet . . . and in jail or in Canada.

Finally, the issue of "fairness" in pricing emerges constantly in Victorian America and evolves steadily as the decades progress. Monopolist pricing for goods and labor becomes increasingly politicized, in

part after serious labor–capital confrontations in 1886. While the move toward arbitration provides a means to ease the perception of unfairness regarding low wages, it will be the onset of national prosperity after 1897 and efforts of President (Teddy) Roosevelt to rein back the excesses of the trust that bring some perceived fairness to prices of goods.

References

Dennis, E. E. (1974) "The Regeneration of Political Cartooning," *Journalism Quarterly*, Vol. 51, No. 4, pp. 664–9.

Dennis, E. and C. A. Dennis (1979) "Puck, the Comic Weekly," *Journalism History*, Vol. 6, No. 1, pp. 2 ff.

Holden, A. C. and L. Holden (2005) "Feeding Families or Feeding the Trusts: Satirizing the Two-Edged Nature of America's Climb to International Marketing Supremacy," Presented at the 2005 Marketing History Conference (CHARM), Long Beach, California.

Holden, A. C. and L. Holden (2007) "Reactions from New York Satirists When the Marketing Prize Is Lost: New York's Loss of the World's Fair Mandate to Chicago," Presented at the 2007 Marketing History Conference (CHARM), Duke University, Durham: North Carolina.

Kirkland, E. C. (1961) "Industry Comes of Age: Business, Labor, and Public Policy 1860–1897", Volume VI in *The Economic History of the United States* (New York: Holt, Rinehart and Winston).

Maddison, A. (2003) *The World Economy: Historical Statistics* (Paris: Organization for Economic Cooperation and Development).

Monroe, K. B. (2003) *Pricing: Making Profitable Decisions*, 3rd edn (New York: McGraw Hill Publishing Company).

Nagle, T. and R. Holden (2002) *The Strategy and Tactics of Pricing* (Upper Saddle River, NJ: Prentice Hall).

Schindler, R. M. (2000) "The 99 Price Ending as a Signal of a Low-Price Appeal," *Journal of Retailing*, Vol. 82, No. 1, pp. 71–7.

Schindler, R. M. and R. F. Yalch (2006) "It Seems Factual, But Is It? Effects of Using Sharp versus Round Numbers in Advertising Claims," *Advances in Consumer Research*, Vol. 33, pp. 586–90.

US Bureau of the Census (1975) *Historical Statistics of the United States: Colonial Times to 1970* (Washington: US Department of Commerce).

Cartoons from the text

1. *Puck* centerfold of February 23, 1881, entitled "The Philanthropists: 'Don't Fret Uncle Sam, We [Jay Gould and William H. Vanderbilt] Only Want to Make a Bigger Man of You!' "
2. *Puck* centerfold of February 9, 1881, entitled "In Danger: Puck to Uncle Sam – 'What are you going to do about it?' "

3. *Puck* centerfold of January 25, 1882, entitled "The Monster Monopoly."
4. *Puck* centerfold of February 22, 1882, entitled "The Modern Prometheus."
5. *Judge* centerfold of December 10, 1881, entitled "The Press in Danger: Monopolists [Cyrus Field and Gould] Undermining the People's Light-House."
6. *Judge* centerfold of February 4, 1882, entitled "How to 'Work' a State Assembly."
7. *Judge* centerfold of October 31, 1885, entitled "The Scourge of the West."
8. *Puck* centerfold of September 20, 1882, entitled "The Garden Party of the Monopolists – Louis XV Style: While the Court 'Beauties' Are Wooed, the People are Discontented and Threatening."
9. *Puck*'s rear cover of March 30, 1881, entitled, "The Pet [Grant] of the Monopolists."
10. *Puck* centerfold of July 18, 1883, entitled, "The New Policeman on the Beat – The Monopoly Gang Defies Him!' "
11. *Puck* centerfold of June 23, 1883, entitled "Nursing Our Infant Industries."
12. *Puck* centerfold of August 8, 1883, entitled "The Allies under the New Flag – The Republicans and the Monopolists Train Their Guns on the Workingmen."
13. *Judge* centerfold of October 10, 1885, entitled "Ruler of the Republic."
14. *Judge* centerfold of February 11, 1884, entitled "The Dread Alternative [for Young Ladies]."
15. *Judge* centerfold of April 22, 1882, entitled "A Contrast [between Slaves of 1860 and 1882]."
16. *Puck* centerfold of January 2, 1884, entitled "The Slave Market of Today: Going-Going-Going-Lower."
17. *Puck* rear cover of February 7, 1883, entitled "The Protectors of Our Industries."
18. *Puck* centerfold of May 2, 1883, entitled "The Greatest Show on Earth – Who Can Ride the [Tariff Question] Mule?"
19. *Puck* front cover of October 12, 1881, entitled "Puck's Perplexing Position – between Two Evils: Puck – 'Well, I want to be an anti-monopolist; but not if that [Tammany] is one.' "
20. *Judge* front cover of December 24, 1881, entitled "Uncle Sam – 'Well done, Blaine of Maine; come again!' Blaine – 'I'll see you in '84.' "
21. *Puck* centerfold of June 17, 1885, entitled "Gulliver-Cleveland Takes Possession of the Enemy's Fleet and Deprives Them of Their Strength."
22. *Puck* centerfold of January 30, 1884, entitled "Too Many [Democratic] Leaders."
23. *Puck* centerfold of September 19, 1888, entitled "For the Favored Few: 'These trusts are the national offspring of a market artificially restricted' – Grover Cleveland."
24. *Puck* centerfold of January 11, 1888, entitled "The High-Tariff-and-Big-Monopoly Juggernaut."
25. *Puck* rear cover of February 15, 1888, entitled "A Peculiar Case of Protracted Infancy."
26. *Puck* centerfold of October 30, 1889, entitled "The Biggest Sell of the Season."
27. *Puck* centerfold of November 4, 1891, entitled "See, the Conquering Poker Comes!"

28. *Judge* centerfold of October 18, 1890, entitled "After a Great Run of Ten Months 'TARIFF REFORM' Is Taken off the Stage: That Modest Author and Manager, Mr. McKinley, Thanks the People for Their Confidence in His Company and Promises to Produce New Attractions for Their Benefit Next Season."
29. *Puck* centerfold of March 7, 1888, entitled "The Hydra [War Tariff and Major Trusts] That Must Be Crushed – And the Sooner the Better."
30. *Puck* centerfold of December 7, 1881, entitled "The Pension Swindle."
31. *Puck* rear cover of March 22, 1882, entitled "The Raid on the Treasury."
32. *Puck* front cover of December 20, 1882, entitled "The Insatiable Glutton."
33. *Puck* rear cover of January 7, 1885, "After the Mexican War Veterans Are Pensioned: There Are a Few Other Humble Claimants Who Are Quite Ready to March on the Treasury."
34. *Puck* front cover of July 21, 1886, entitled "Logan's Probable Tactics for the Next Presidential Campaign: He Will Carry Around with Him the Victims of President Cleveland's Heartless Pension Vetoes to Arouse Public Sympathy."
35. *Judge* centerfold of October 1, 1887, entitled "St. Louis, September 28th, 1887: Cleveland – 'Ah! I've lost the votes of all those [GAR] men!' Solid South – 'Yes, but by snubbing them you have made me "solid" for you!' "
36. *Judge* front cover of June 23, 1887, entitled "Excommunicated!"
37. *Puck* rear cover of March 14, 1888, entitled "The Amazing Growth of the Pension Pig."
38. *Puck* front cover of March 21, 1888, entitled "We Are Coming to It: The United States Will Have to be Put Up at Public Auction to Meet the Demands of the Pension-Grabbers."
39. *Puck* rear cover of July 20, 1887, entitled "Desecration: How Long Shall the Pension Sharks Be Allowed to Trade on the Sacred Memories of the Past, Foster Sectional Hatred, and Disgrace the Cause of Veterans Whom They Pretend to Serve?"
40. *Puck* centerfold of April 25, 1888, entitled "Bidding for His [GAR] Vote."
41. *Puck* centerfold of July 10, 1889, entitled "The Pension Gambrinus: 'Tanner suits Tanner, suits the President, and suits the Secretary of the Interior' – Secretary Noble. Chorus of Swindlers – 'And he suits us, too!' "
42. *Puck* centerfold of August 28, 1889, entitled "It Beats Brown-Sequard – Tanner's Infallible Elixir of Life, for Pension-Grabbers Only."
43. *Judge* centerfold of September 7, 1889, entitled "A Portrait of Commissioner Tanner Painted from a Democratic Point of View: Chorus of [Democratic] Critics – 'How wonderfully true to life it [the portrait] is!' Corp. Tanner says 'I believe that no deserving veteran should suffer want.' "
44. *Judge* front cover of September 28, 1889, entitled "Who Gets the Lion's Share? Not the Deserving Veteran, but the Grasping Claim Agent."
45. *Puck* centerfold of October 16, 1889, entitled "For the Honor of True Veterans: Let the Men Who Did the Fighting and Saved the Union in 1861, Save the Treasury from the Pension Bummers in 1889!"
46. *Puck* front cover of October 2, 1889, entitled "The Little Republican Red Riding Hood [Harrison] and the Grand Army Wolf: 'What have you in the basket, my dear?' "
47. *Puck* rear cover of November 20, 1889, entitled "The Republican Party Holds Her Own."

48. *Puck* front cover of September 20, 1893, entitled "It Doesn't Look Much Like It: 'Has the moth of avarice, the canker of greed, so eaten into the hearts of this generation that they are unmindful of these [GAR] men? God forbid!' – Benjamin Harrison."
49. *Puck* front cover of May 23, 1894, entitled "I'm the Man [Pension Fraudster] That Broke the Bank of Uncle Sam."
50. *Judge* rear cover of May 30, 1891, entitled "The End of Sectionalism – May 30, 1891. Old ex-Confederates and the Grand Army Men Will Unite in Decorating the Tomb of General U.S. Grant."
51. *Puck* rear cover of May 28, 1879, entitled "Inconsistent Christianity: 'Ho, every one that thirsteth . . . and he that hath no money . . . come without money and without prize' – Isaiah Chap. I.V."
52. *Puck* centerfold of July 16, 1879, entitled "The Craze for Religious Colonization."
53. *Puck* centerfold of June 15, 1881, entitled "Summer Wanderings – The Shepherds and the Sheep."
54. *Puck* rear cover of June 29, 1881, entitled "A Hint for an Unobjectionable Monopoly."
55. *Judge* centerfold of January 21, 1882, entitled "Indiscriminate Charity Is No Charity at All."
56. *Puck* rear cover of April 6, 1881, entitled "The Charity Fiend."
57. *Puck* rear cover of April 14, 1886, entitled "The 'Anti-Fiend' Office Furniture – Recommended to Bothered Business-Men."
58. *Puck* front cover of January 20, 1892, entitled "Charity-Broke: Mr. Openpurse Goodheart: 'More charity entertainment to subscribe to! – My dear girl, isn't it about time someone gave a charity entertainment for ME?' "
59. *Puck* centerfold of December 18, 1889, entitled "Charity – False and True: Let the Long-Suffering Public Discriminate between Worthy and Unworthy Objects, and Not Let the Worthy Lack Support."
60. *Judge* centerfold of April 10, 1886, entitled "The Heathen Enlightened: Fijians (paralyzed) – 'Is this the nation [U.S.] that sends missionaries to us?' "
61. *Puck* centerfold of January 17, 1883, entitled "The Great Floods of 1883 – Germany's Need and America's Aid."
62. *Puck* centerfold of June 12, 1889, entitled "The Silver Lining to the Storm-Cloud – The Charity of the Whole Nation [U.S.] Sustains the Loss of the Conemaugh Sufferers."
63. *Puck* front cover of April 14, 1880, entitled "The Lion's Share."
64. *Puck* front cover of October 19, 1881, entitled "More Money Wanted – O'Connor's Charity Craft: 'Wonst more, me byes, for Ould Oirland – the land of divilment and distriss.' "
65. *Puck* front cover of March 19, 1884, entitled "Gorilla Warfare under the Protection of the American Flag."
66. *Judge* rear cover of March 25, 1882, entitled "Charity Should Begin at Home: Southern Sufferers – 'Oh, if we too were Russian refugees!' "
67. *Judge* centerfold of June 22, 1889, entitled "Helping a Striken Sister – Johnstown, 1889."
68. *Puck* rear cover of September 28, 1881, entitled "A Forgotten Fund: Chorus of Philanthropists – 'Can't do it, Miss Charity. No advertising, no money! We give on strictly business principles.' "

69. *Puck* front cover of July 8, 1891, entitled "the Righteous Man [Wanamaker] Has No Fear: Behold, Bretheren, the Reward of True Goodness . . ."
70. *Puck* centerfold of August 7, 1901, entitled "The Crabbed Millionaire's Puzzle: 'If I had begun earlier I might have had some fun in giving it [my fortune] away. Now I must leave it either to relatives whom I hate or to churches and colleges in which I have no interest.' "
71. *Judge* front cover of April 13, 1901, entitled "The New Breed."
72. *Judge* centerfold of July 25, 1903, entitled "Two Examples for the Rising Generation."
73. *Puck* centerfold of December 5, 1883, entitled "How to Keep a Girl."
74. *Puck* rear cover of January 30, 1884, entitled "Our Self-Made 'Cooks' – From Paupers to Potentates."
75. *Puck* centerfold of March 6, 1901, entitled "The Rise of the Kitchen Tyrant – and How She May Fall."
76. *Puck* rear cover of February 11, 1885, entitled "The Pen Pays Better Than the Sword: If the Century Magazine Keeps on Giving $1,000 Apiece for Its War Articles, This Is the Way the Editor's Ante-room Will Look, before Long."
77. *Puck* rear cover of August 6, 1879, entitled "'French Flats' in New York."
78. *Puck* rear cover of August 10, 1881, entitled "Extremes Meet."
79. *Puck* centerfold of April 6, 1881, entitled "The Rent Question: Puck to Capitalist – 'Why not build little $1000 cottages and let them to our laboring classes at $12 a month, so they may breathe pure air – it would be a paying investment?' Capitalist – 'My dear fellow – they wouldn't live in them if I did. Even if they have to lodge over a stable or a gin mill, they won't leave the city!' "
80. *Puck* centerfold of May 4, 1887, entitled "The American Mania for Moving: If It Keeps on Growing We Shall Soon Be a Nation of Nomads."
81. *Puck* rear cover of August 16, 1882, entitled "Country Thrift – Making Money While the Sun Shines."
82. *Judge* rear cover of July 23, 1887, entitled "Summer Comforts: The Countryman Comes to the City, and the City Man Goes to the Country."
83. *Judge* centerfold of July 20, 1889, entitled "The Dangers in the Path of the Summer Tourist [Who Saves His Annual Salary]: The Brigands of the Country Lie in Ambush for Him and His Possessions."
84. *Puck* rear cover of June 8, 1887, entitled "A Crop [of Summer Boarders] That Never Fails."
85. *Puck* centerfold of July 15, 1891, entitled "Running the Gauntlet: Chorus of 24-Trunk Boarders – 'Goodness gracious! They've only got one trunk!' "
86. *Puck* centerfold of July 17, 1895, entitled "Cause and Effect: Dame Fashion's Foolish and Expensive Rules Are Responsible for the Increasing Exodus to Europe and the Empty Summer Hotels in America."
87. *Judge* centerfold of May 25, 1889, entitled "The Lament of the Sea-Side Hotel Proprietor: Talk about Patriotism and Love of Country! Here's the Whole [Wealthy] Population Going to Europe, and I Am Left to Starve."
88. *Judge* rear cover of October 1, 1887, entitled "The Tip Question and How a Countryman Settled It."
89. *Puck* centerfold of May 8, 1889, entitled "The Growth of the 'Tipping' System in America: Grand Chorus – 'Fifty cents all 'round, please.' "

90. *Puck* centerfold of May 6, 1891, entitled "The King of the Flat – A Great Modern Nuisance."
91. *Puck* rear cover of August 27, 1879, entitled "4.II.44 – Our Lottery System."
92. *Judge* front cover of June 7, 1890, entitled "Size Saves Him: The Big Chief [of the Louisiana Lottery] Can't Be Reached."
93. *Puck* centerfold of November 9, 1881, entitled "Broken Banks – Defaulting Cashiers – Negligent Directors – Who Is Responsible? Puck to Representative of the Law – 'You have got this thief [cashier] – Now take the men [directors] who let him steal the money of the trusting depositors.' "
94. *Judge* front cover of November 19, 1881, entitled "None So Blind as Those Who Won't See: A Chorus of Bank Directors – 'Examine your books, Mr. Baldy! Never Sir. To question your honesty would be a reflection upon our fossified respectability. Besides, your hand-writing is so hard to read, you know.' "
95. *Judge* rear cover of November 14, 1885, entitled "Justice in Wall Street: Next."
96. *Judge* front cover of December 12, 1885, entitled "A New Stage Line in Wall Street: Always Room for Several More."
97. *Puck* rear cover of May 28, 1884, entitled "On to the Horse-Pond – A Decoration Day Procession [of Convicted Stock Market Dealers, Swindlers, Gamblers, and Muddlers] That the People Would Hail with Delight."
98. *Puck* centerfold of October 6, 1886, entitled "The Guardians of Our Investments: President to Board of Directors – 'Gentlemen, my schemes are immense – I can't explain them to you now – but you must take my word for it.' (He is now in Canada). Chorus of Directors – 'Wow wow wow! Ba ba! Moo moo! Yah!' "
99. *Puck* centerfold of September 7, 1881, entitled "Cut-Throat Business in Wall Street – How the Inexperienced Lose Their Heads."
100. *Judge* front cover of December 26, 1885, entitled "'Jay Gould Is Going to Retire Permanently From Wall Street' – Daily Paper. 'Yes, When He Has Finished This [Lamb Shearing] Job' – The Judge."
101. *Puck* centerfold of April 14, 1880, entitled "The Philadelphia Physician-Factory."
102. *Puck* centerfold of August 3, 1881, entitled "Death-Head Doctors – Many Paths to the Grave."
103. *Puck* front cover of January 7, 1885, entitled "Our Mutual Friend."
104. *Judge* centerfold of September 21, 1889, entitled "The 'Cure' Craze."
105. *Puck* centerfold of February 28, 1900, entitled "Partners in the Bogie Business."
106. *Puck* centerfold of August 1, 1888, entitled "High-Protectionist Humbug versus the Cold Truth: Protectionist Orator – 'Look around you, my friend, and reflect that you owe the magnificent prosperity which you enjoy to our glorious protective tariff.' Disgusted Farmer – 'Johnny, get your gun, get your gun!' "
107. *Puck* centerfold of April 2, 1890, entitled "Getting His [Farmer] Eyes Open."
108. *Puck* rear cover of June 18, 1879, entitled "Your Money or Your Life: Jersey Justice – 'I don't know whether ye're guilty or not; but if ye hain't got the stamps, ye've got to hang.' "
109. *Judge* centerfold of June 29, 1907, entitled "The Fight Goes on [among Cattle Raisers, Beef Packers, Beef Shippers, and Wholesalers] and Beef Goes Up!"

110. *Judge* centerfold of June 15, 1889, entitled "The Farmer's Lot Is Not a Happy One."
111. *Judge* rear cover of June 12, 1886, entitled "What Is Sauce for the Country Goose Is Sauce for the City Gander: When the Farmer Comes to the City in Winter He Is Systematically Robbed by Everyone, and yet When the City Man Goes to the Country to Board in Summer, He Complains Bitterly of the Farmer's Extortion."
112. *Puck* rear cover of March 31, 1880, entitled "The Wild-Cat Mining Scandal."
113. *Puck* centerfold of May 31, 1893, entitled "Bunco Steerers All the Same."
114. *Puck* centerfold of July 27, 1889, entitled "The Degradation of Sport: It Is Made Brutal to Suit the Bookmaker and His Dupe, the Betting Idiot."
115. *Judge* centerfold of February 18, 1899, entitled "Up in a Balloon, Boys: The Great Speculative Boom of 1899."
116. *Puck* centerfold of May 22, 1901, entitled "Wall Street Bubbles – Always the Same."
117. *Puck* centerfold of September 17, 1902, entitled "Following the Pipe: His [J. P. Morgan] Music Enchants the World."
118. *Puck* centerfold of September 12, 1883, entitled "Beauties of the Installment Plan."
119. *Judge* rear cover of October 10, 1885, entitled "The Credit System."
120. *Judge* rear cover of January 16, 1886, entitled "The Economy of Cheap Furniture."
121. *Judge* rear cover of June 26, 1886, entitled "Making Use of the Present Mode of Advertising: Or the Art of Furnishing Cheaply – suggested to Young Married Couples."
122. *Judge* rear cover of December 5, 1885, entitled "Hold up Your Hands, Pater Familias."
123. *Judge* rear cover of April 3, 1886, entitled "An Everyday Robbery of Our Over-Patient Citizen."
124. *Puck* centerfold of June 21, 1882, entitled "First Annual Picnic of the 'Knights of Labor' – More Fun for the [Monopolist] Spectators than for the Performers."
125. *Puck* rear cover of March 3, 1880, entitled "The Story of a 'Strike' Showing How the Hammer Can't Hit the Anvil without Hurting Itself."
126. *Puck* centerfold of April 14, 1886, entitled "The Latter-Day Lord of Misrule: Have Our Forefathers Thrown off the Yoke of King George only that We May Bow Down before King Boycott?"
127. *Judge* centerfold of May 28, 1887, entitled "The Unhealthy Condition of the Tree of Labor: Columbia – 'Look here, Mr. Gardener, you must clean that tree [Knights of Labor] or it will die in your hands!' "
128. *Puck* centerfold of September 24, 1890, entitled "The Walking-Delegate and the Work: Labor-Disturber – 'All this trouble might have been saved if you [big business] had put a few thousand dollars where it would do the most good.' "
129. *Puck* front cover of February 23, 1887, entitled "The Defeat of the Walking Delegate: 'Confound those working men! They're getting sensible. If this sort of thing keeps on, I shall have to go to work myself!' "
130. *Puck* front cover of October 6, 1886, entitled "He [Walking Delegate] Is in a Profitable Business: Mrs. Hardpan – 'Ain't you dressed pretty fine for a

working man's wife?' Mrs. Flush –'I ain't a working man's wife! My husband is a walking delegate!' "

131. *Puck* rear cover of February 16, 1887, entitled "The Walking Delegate."
132. *Puck* front cover of September 6, 1893, entitled "No Rioters Need Apply! Honest Laborer (to Anarchist Agitator) – 'Help you to destroy law and order? – Not much! – And your stories that we are starving are all false!' "
133. *Puck* rear cover of November 30, 1887, entitled "The Countryman and the [Anarchist] Snake."
134. *Puck* centerfold of October 26, 1887, entitled "Between Slavery and Starvation."
135. *Puck* rear cover of February 2, 1887, entitled "The American Workingman of the Future: When the Labor Agitators Have 'Improved His Condition' until He Is Perfectly Satisfied with It."
136. *Puck* centerfold of September 28, 1892, entitled "The Republican Galley: It Is a Pleasant Progress for the Protected Monopolists; but the Hard-Working People Have to Sweat for It."
137. *Judge* centerfold of May 22, 1886, entitled "The Two Flags: On This Issue [Anti-Anarchy] the Interests of Capital and Labor Are One."
138. *Puck* centerfold of May 2, 1888, entitled "The Collapse of King Boycott – April, 1886 – April, 1888: Puck – 'I told you so!' "
139. *Puck* centerfold of April 7, 1880, entitled "Fearful Consequences of a General Strike."
140. *Judge* rear cover of April 15, 1882, entitled "Strikes."
141. *Judge* centerfold of May 4, 1889, entitled "Labor in Vain: George Washington – 'This was just what I fought against – Anglo-American Aristocracy.' "
142. *Puck* front cover of February 23, 1881, entitled "America's Revenge: Puck to English Society – 'Well, what do you think of foreign fortune-hunters?' "
143. *Puck* centerfold of February 27, 1884, entitled "American Millions and Foreign Nobility – The Market Where Our Girls Buy – and Get Sold."
144. *Judge* centerfold of March 30, 1889, entitled "President Harrison Recommends Restriction of Immigration: Uncle Sam –'If we must draw the line, let us draw it at these [ennobled] immigrants!' "
145. *Puck* front cover of May 10, 1893, entitled "The Triumph of the Title-Hunting, Money-Bag Mama."
146. *Puck* centerfold of November 20, 1889, entitled "The Proper [Common Sense] Glass to See Him Through: Puck – 'Remember, girls, any honest American is a nobler prince than such a one as this!' "
147. *Puck* centerfold of October 2, 1895, entitled "The European Svengali and the Trilbys of the 'Four Hundred' – He Hypnotizes 'Em Every Time!"
148. *Puck* centerfold of April 24, 1895, entitled "Two Kinds of Fool Americans."
149. *Puck* centerfold of December 18, 1895, entitled "Our American Girls Are Capturing the House of Lords: A Sure Guarantee of Peace between America and England."
150. *Puck* centerfold of February 22, 1896, entitled "Let Us Have Peace."
151. *Judge* centerfold of June 12, 1897, entitled "The Way Gold Leaves U.S.: Birds of Passage – 'Bye bye, uncle! You make excellent picking.' Eagle Sam – 'If this continues, I shan't have a dollar left.' "
152. *Puck* centerfold of April 4, 1883, entitled "The Great Advertising Ball of the Season."

153. *Puck* front cover of January 9, 1884, entitled "It Costs Money to Fix Things: As It Is Plain That Most of Our Congressmen Are for Sale, They Might as Well Display Their Prices Prominently."
154. *Puck* front cover of May 30, 1888, entitled "'Triumphant Democracy' to the Rescue: The Old Blaine [High Protection Campaign] Mill Will Start Again and Carnegie Will Furnish the Grist."
155. *Puck* rear cover of August 8, 1888, entitled "Puck Suggests a Suitable Tableau for the Procession in Honor of the Uncrowned King [Carnegie] of the G.O.P."
156. *Puck* centerfold of December 21, 1887, entitled "Santa Claus – 'This is getting to be too extravagant for me! I guess I'll go where I'm more needed.' "
157. *Puck* rear cover of February 10, 1886, entitled "Plate-Glass Conversation Boxes – Every Opera-House Needs One: They Would Enable Noisy Theater-Patrons to Enjoy Themselves without Disturbing the Audience."
158. *Puck* rear cover of November 18, 1891, entitled "Fashion's Fillies – A Fancy for Horse-Show Week."
159. *Judge* rear cover of September 7, 1889, entitled "A Fool and His Money: At the Beginning of the Season the Racing Amateur Has All the Money and No Experience. At the End of the Season the Situation Is Emphatically Reversed."
160. *Puck* rear cover of December 26, 1906, entitled "Motor-Deck for Ocean Liners: They Are Equipped with Everything Else. Why Not This? "
161. *Judge* rear cover of September 14, 1889, entitled "The Close of the Season: Or, the Victory of Midas."
162. *Judge* front cover of September 28, 1901, entitled "Find the Cup: Uncle Sam (to John Bull) – 'Well, John, there is one good thing about the yacht races – whichever wins, we have the Cup between us!' "
163. *Puck* rear cover of January 19, 1881, entitled "The Marriage Ceremony."
164. *Puck* rear cover of September 23, 1891, entitled "McKinley and the Fashions: A Few Possible Consequences of the Recent Seizures under the McKinley Bill."
165. *Judge* rear cover of February 20, 1886, entitled "The [Rich] Woman of the Period and Her Make-up."
166. *Puck* centerfold of October 14, 1885, entitled "The Custom-House Code of Morals under Our Beautiful Tariff System."
167. *Puck* rear cover of March 8, 1893, entitled "The Dog Party: The Fin de Siècle Woman and Her Pets – with the Children 'Not in It.' "
168. *Puck* front cover of January 8, 1913, entitled "The Chain-Gang."
169. *Judge* centerfold of December 12, 1885, entitled "Broad Is the Road –"
170. *Judge* centerfold of May 30, 1891, entitled "The Rich Old Miser: Judge – 'I am ashamed of you. The grentest and richest, and yet the meanest of states, and the last to give its appropriation for the World's Fair.' "
171. *Puck* centerfold of December 16, 1891, entitled "Time to Take a Hand: The Voice of the West – 'Come old folks, [New York and New England], everybody else is coming to the front – wake up and let us hear from you!' "
172. *Puck* front cover of September 18, 1912, entitled "The Angel [Financier] of the [Bull Moose] Show."
173. *Puck* centerfold of December 7, 1887, entitled "The Opening of the Congressional Session: Tariff Monster – 'Here I am again! What are you going to do with me?' "
174. *Puck* centerfold of May 5, 1886, entitled "The Free Trade Bugaloo: Protection Monopolist – 'Come here, my poor [worker] friends – I'll protect you

from the [free-trade] monster.' (Aside to congressional allies working the monster) – 'Whoop it up boys; make the jaws go – we've got to keep the working-man frightened.' "

175. *Judge* front cover of February 20, 1886, entitled "The Lesson of the London Riots: Starving English Workman (to American Workman) – 'This is what free trade has brought me too!' "
176. *Judge* centerfold of July 28, 1888, entitled "Free (Trade) Lunch: Grover Cleveland Proposes to Make Free Lunch of the American Workingman's Bread and Cheese, for the Benefit of European Pauper Laborers."
177. *Judge* centerfold of June 5, 1886, entitled "How Free Trade Would Work: Dedicated to the Free Trade Theorists Who Would Like to Try the Experiment."
178. *Judge* centerfold of July 14, 1888, entitled "The Red Emblem of Democracy and What It Promises for the Workingmen."
179. *Judge* rear cover of June 30, 1888, entitled "The Transfusion of Blood – A Proposed Dangerous Experiment: The Doctors (to American Workingman) – 'It may save the [English] patient, but it is bound to weaken you, and if the experiment is a failure you are a dead man.' American Workingman –'Then, gentlemen, I won't try it. Self-preservation is the first law of Nature!' "
180. *Judge* centerfold of July 7, 1888, entitled, "The Declaration of Dependence, July 4th, 1888: The Unconditional Surrender of the Anglo-Maniac to John Bull."
181. *Judge* front cover of June 30, 1888, entitled "The Learned P – Resident: Professor John Bull's Very Apt Pupil."
182. *Puck* front cover of April 11, 1888, entitled "Dr. Mills Has a Good Remedy for an Aggravated Case of Obesity."
183. *Puck* front cover of August 22, 1888, entitled "The Political Baxter Street: Ben and Levi – 'You can haf dose clodings sheap, and we treat you mit a drink und a cigar!' Workingman – 'Bah! You've been using these old togs for a sign for over 25 years. I'm going down to Cleveland's Free-Wool Emporium!' "
184. *Puck* rear cover of September 26, 1888, entitled "Political Leap-Year – An Attack on the Workingman: But He Had Better Look Out, for She [Widow War Tariff] Is a Clinger, and She Has a Large and Growing Family [of Trusts] to Support. What's the Matter with the Little Girl around the Corner?"
185. *Puck* front cover of October 10, 1888, entitled "Home Comforts for the Laborer and His Family – If Harrison and Protected Monopoly Are Victorious."
186. *Puck* centerfold of January 18, 1888, entitled "At Last! A Determined Effort [by Cleveland] to Break England's Hold on the Commerce of the World and Give America a Chance."
187. *Judge* centerfold of November 10, 1888, entitled "The Verdict of the American People: Cheap John [Bull] Is Not Wanted, Anyway. Both Parties Agree to This."
188. *Judge* front cover of September 14, 1889, entitled "The Lesson of the Great London Strike: American Workingman (to Mugwump Curtis) – 'A nice box you [Curtis] and the Democracy would have got me into, you little anglo-maniac free-trade idiot!' "
189. *Puck* centerfold of October 15, 1889, entitled "Who Cares?"
190. *Judge* front cover of June 9, 1888, entitled "England's Candidate for the American Presidency: 'President Cleveland is the most popular American with the England people' – London Correspondence."

191. *Puck* rear cover of August 10, 1887, entitled "An Eye-Opener."
192. *Judge* front cover of May 13, 1893, entitled "Uncle Sam as 'The Dog in the Manger': Uncle Sam – 'I don't want it [Hawaii]; but you [six countries] shan't have it!' "
193. *Puck* centerfold of February 11, 1880, entitled "Our [Decrepit] Navy."
194. *Judge* front cover of January 26, 1889, entitled "The Panama Canal – The Lion [Monroe Doctrine] in the Path: Uncle Sam (waking up) – 'Halt! I had no objection to its being constructed by private enterprise [de Lesseps], but no European government shall take a hand in it!' "
195. *Judge* front cover of November 11, 1899, entitled "The Wedding of the Oceans."
196. *Judge* front cover of April 6, 1901, entitled "America for Americans: As Long as This Dog [Monroe Doctrine] Lives, John Bull or Any Other European Nation Will Be Wise to Keep off the Premises."
197. *Judge* front cover of December 12, 1903, entitled "The Hand That Rocks the Cradle Is the Hand That Rules the World."
198. *Puck* centerfold of December 23, 1903, entitled "Christmas on the Isthmus."
199. *Puck* centerfold of January 20, 1904, entitled "[Hoar] Still Scolding."
200. *Judge* centerfold of July 15, 1905, entitled "Stung [by Togo and Oyama]."
201. *Puck* front cover of May 6, 1908, entitled "Magnified Security: Why Not Look at It [USN] with the Naked Eye?"
202. *Judge* centerfold of January 11, 1908, entitled "Pacific? 'For a Frolic or a Fight' – [Admiral] Bob Evans."
203. Judge centerfold of March 30, 1907, entitled "Charge of the Light Brigade."
204. *Judge* centerfold of September 8, 1906, entitled "The Panama Canal Will Be Dug, No Matter Who Digs It. That Question Is Settled."
205. *Judge* centerfold of January 16, 1909, entitled "Judge's Advice [to President-Elect Taft]."
206. *Puck* front cover of February 22, 1882, entitled "Shipwrecked Patriotism: Uncle Sam at Sea – 'It's Washington's birthday, and I want to decorate, but – ahem – well – just lend me the loan of your mast, will you?' "
207. *Puck* front cover of July 30, 1879, entitled "The Greatest International Match: Agricultural America 'Takes the Stuffing' out of John Bull."
208. *Puck* centerfold of January 26, 1887, entitled "Protected to Their Own Ruin."
209. *Puck* centerfold of February 22, 1888, entitled "Old as the Hills: Bombastic Briton – 'What are you carrying that blasted old-fashioned thing [musket] around for?' Uncle Sam – 'To protect myself!' B.B. – 'Protect yourself against what?' U.S. – 'Why, against trade!' "
210. *Judge* centerfold of August 10, 1889, entitled, "John Bull's Beggars: He Increases the Already Enormous Income of His Royal Paupers and Turns a Deaf Ear to the Appeal of His Poor Wretched Subjects."
211. *Puck* centerfold of July 24, 1895, entitled "A Rival [Uncle Sam] Who Has Come to Stay: John Bull – 'Good 'evins! – Wotever'll become of my ship-building monopoly, if that there Yankee is going to turn out boats like that [St. Louis] right along?' "
212. *Judge* rear cover of April 29, 1893, entitled "A Democratic Version of a Famous Saying: Grover – 'If any man hauls UP the American flag, shot him on the spot.' "

213. *Judge* centerfold of May 8, 1897, entitled "Where, Oh, Where Is OUR Flag? Uncle Sam – 'There must be something very wrong with our navigation laws.' "
214. *Judge* centerfold of April 28, 1906, entitled "Let Her Go, Uncle Joe [Cannon]!"
215. *Puck* front cover of March 6, 1907, entitled "He Won't Be Happy 'till He Gets It [Subsidy]."
216. *Puck* centerfold of March 13, 1901, entitled "Weighed and Not Wanting: Uncle Sam's Balance of Trade Is Now the Largest Favorable Balance Any Nation Has Ever Had in Its Foreign Trade."
217. *Puck* centerfold of May 1, 1901, entitled "The Blessing of 'Protection': The Poor Foreigner Couldn't Get His Rails for Twenty-four Dollars if We Didn't Elect to Pay Thirty-five."
218. *Puck* centerfold of November 27, 1901, entitled "Our International Thanksgiving Dinner: Uncle Sam – 'My Friends, I've raised the biggest and fattest turkey of the year, which makes you my guests. Let us drink to competition.' "
219. *Judge* centerfold of April 19, 1902, entitled "The Trusts Will Fight Uncle Sam's Fight against Europe."
220. *Puck* centerfold of May 21, 1902, entitled "Commercial Might versus Divine Right: The Modern Trust King Brings Dismay to the Old Kings of Europe."
221. *Judge* centerfold of April 6, 1901, entitled "They Cannot Keep Back the Rising Tide of American Competition."
222. *Judge* centerfold of June 15, 1901, entitled "Up against It, and It's No Dream: The European Manufacturer Is Horrified to Find That Europe Is Being Actually Invaded by American Manufactured Goods."
223. *Puck* centerfold of September 3, 1902, entitled "The European Partingtons."
224. *Puck* centerfold of July 24, 1901, entitled "Our British Watch-Dog: There Is No Danger of a European Combination While His Appetite Lasts."
225. *Judge* front cover of November 14, 1903, entitled "Standing Pat: Uncle Sam (with a $400 million balance of trade to the good) – 'It's a great American game, Johnny!' "
226. *Puck* centerfold of July 8, 1903, entitled "Will the Lion Allow Himself to be Shorn of His [Free Trade] Strength?"
227. *Judge* front cover of November 7, 1903, entitled "Follow Your Leader: Joe Chamberlain – 'Brace Up, John Bull! You will make a worthy follower.' "
228. *Puck* rear cover of August 15, 1883, entitled "Tit for Tat: Uncle Sam to Bismarck – 'If you hit my swine, I'll have a crack at your wine!' "
229. *Puck* centerfold of August 17, 1898, entitled "Another Revelation of Strength: Uncle Sam – 'Here is a ship more powerful than my strongest ship of war. You cannot resist it!' "
230. *Judge* centerfold of November 11, 1899, entitled "America's Latest and Greatest Wonder: The Niagara Falls of Trade and Manufacture."
231. *Puck* centerfold of November 29, 1899, entitled "The Greatest Department Store on Earth – And Every Day a Bargain Day."
232. *Puck* centerfold of August 21, 1901, entitled "The Most Popular Restaurant in the World."
233. *Judge* centerfold of May 25, 1901, entitled "Uncle Sam's Great Department Store: The Latest Edition to Which Is the Banking Department, and It Is Doing a Rushing Business."

2

Reflections and Emerging Perspectives on the Strategic Implications of a Multi-dimensional Pricing Environment

Hooman Estelami

Introduction

For decades, the majority of research studies conducted on consumer price perceptions have adopted a uni-dimensional view of price, in which price was assumed to consist of a single number (for example, $19.99). However, since the mid-1990s a growing volume of consumer research studies have recognized that prices can often be far more complex than a single number, and may systematically consist of multiple dimensions. The recognition of this fact, triggered by early studies of the topic (for example, Estelami, 1996, 1997; Gourville, 1998; Morwitz, Greenleaf and Johnson, 1998), has opened new channels for researching the ways in which the complexities of price may inhibit the human brain from an objective evaluation of price offers (for example, Gendall et al., 2006; Kim and Kramer, 2006; Varki, Sabherwal, Della Bitta and Moore, 2006). The significance of this line of inquiry has further increased during the past decade, which has witnessed an explosive growth in the markets for consumer and financial services, where multi-dimensional prices are used frequently.

In this chapter we will examine the potential impact that multi-dimensional prices may have on consumers. Extending an earlier inquiry on the topic (Estelami, 2003), past pricing research will be reviewed to uncover empirical evidence on consumer difficulty in evaluating complex prices. We will then examine the strategic impact of such consumer difficulties on the pricing practices of marketers. There is also some discussion of the strategic implications of consumer protection policies and price deception analysis. Moreover, the impact of a multi-dimensional price environment on existing research findings in pricing is discussed and future areas for research are identified.

Multi-dimensional pricing

The traditional view in pricing research has been that prices are often communicated to consumers as one set of numbers (for example, $1.99). Extensive research has been carried out to try and understand simple consumer reactions to price information. For example, research has examined how well consumers can remember prices (for example, Dickson and Sawyer, 1990), consumers' attitudes toward product bundles (for example, Yadav, 1994), consumers' perceptions of price communications which include the product's past price or competing prices (for example, Compeau and Grewal, 1999), and quality inferences made based on price (Rao and Monroe, 1989). In most of this research, price has been studied as a uni-dimensional construct.

However, a growing volume of price offers presented in the marketplace are multi-dimensional in nature. These prices are communicated to consumers using more than one set of numbers, and therefore often require the consumer to carry out specific arithmetic tasks in order to determine the net price to be paid. For example, a payment plan, such as a lease communicated as $249 a month for 24 months, requires the consumer to conduct multiplication (in this instance, $\$249 \times 24$) in order to estimate the total cash payments. As will be discussed in this chapter, a significant proportion of prices being communicated in the marketplace would involve similar – or even higher – levels of arithmetic complexity. Lack of recognition for the cognitive effects of these numeric tasks may have therefore limited our current understanding of consumers' reaction to price (Monroe, 2003; Monroe and Lee, 1999).

A price is multi-dimensional when it consists of more than a single number, and the consumer is required to combine the numeric information in order to compute its net value. The term "multi-dimensional" pricing was first coined by Estelami (1996, 1999), and refers to a practice which can be found in a variety of forms in the marketplace. While the level of cognitive difficulty may vary, multi-dimensional pricing always requires consumers to conduct some form of arithmetic in order to determine the product's net price. For example, even in a simple discount communicated as "$139 original price, discounted by $20," the consumer is required to conduct subtraction (that is, $\$139 - \$20$), and in a lease price such as $249 a month for 24 months the consumer is required to carry out multiplication (that is, $\$249 \times 24$).

More complex prices can easily result from simple changes in how a multi-dimensional price is presented. For example, a price communicated as $139 original price, 15 percent off would require the consumer

to carry out subtraction ($1 - 0.15 = 0.85$) as well as multiplication (that is, $\$139 \times 0.85$) to estimate the amount to be paid. Alternatively, when surcharges are applied in a price, as in \$139 plus an 8 percent sales tax, or \$139 price, plus a \$45 delivery charge, the consumer may be required to carry out multiplication and addition tasks. Other price forms such as automobile leases (for example, \$249 a month for 24 months) or packaged goods prices (for example, \$2.49 for a 16 oz can of tuna) may require the consumer to carry out multiplication or division. Higher levels of computational complexity may also arise from attaching additional price dimensions, for example by adding a down-payment to an automobile lease price, or by communicating prices using difficult-to-process forms (e.g., \$196 vs \$200).

In this examination of multi-dimensional prices the common characteristic is that a consumer, in attempting to understand the offer being presented, would be required to carry out specific arithmetic tasks. While the required arithmetic can be carried out using a computer, a calculator, or even pencil and paper, such tools are often unavailable to the unsuspecting consumer who is being selectively targeted through media advertising or sales efforts, especially in the early stages of the decision-making process. As a result, much of the computational effort would have to be carried out mentally, and this reliance on mental computation is likely to result in consumer inaccuracy as well as cognitive stress.

Research in mental arithmetic has established that carrying out arithmetic tasks can result in significant increase in blood pressure and a heightening of physiological stress levels (Turner and Caroll, 1985; Seraganian, Hanley, Hollander, and Smilgaet, 1985). This research stream has also established that increases in the complexity of arithmetic tasks have an exponential impact upon physiological stress and that limitations in human short-term memory prohibit many of the basic tasks (for example, multiplication, division) from being conveniently carried out by an average person (Dansereau and Gregg, 1966; Deheane, 1992; Hitch, 1978). Interestingly, these basic cognitive limitations have only recently been recognized in pricing studies, and in the following two sections we will uncover empirical evidence from past studies which hint at the potential impact that multi-dimensional pricing may have on the consumer.

Reflections in the cognitive effects of price complexity

In previous research the consumers' ability to evaluate complex price stimuli has been generally subjected to indirect questioning. Early

research on consumers' responses to price complexity provide reflections relating to how multi-dimensional prices might be perceived by consumers. Research relating to the consumers' limited ability to compute unit prices, their misperceptions of elaborate price presentations, and preference changes resulting from semantic changes in price presentation provide such reflections. Early evidence can be found in the unit pricing literature. When determining unit prices, consumers have to divide the package price by the package size to determine the price per unit. The works of Russo (1977) and Capon and Kuhn (1982) provide clear evidence for consumer limitations in conducting this basic task. Russo (1977) studying consumers' utilization of unit price information in field settings, found that consumers rarely compute unit prices in their mind. Moreover, unless unit prices are made explicitly available to consumers in an easy-to-process format, they are unlikely to utilize them accurately in their purchase decisions.

Capon and Kuhn (1982) have also shown that when a product is offered in various package sizes and price levels, consumers may have difficulty in identifying the "best buy." Moreover, their study showed that the level of consumer accuracy in estimating unit prices is independent of education level and socioeconomic status. Other related evidence can be found in the retail practice of quantity surcharges, which occurs when a large package of a brand is more expensively priced (on a per unit basis) than a smaller package of the same brand (Nason and Della Bitta, 1983; Sprott, Manning, and Miyazaki, 2000; Widrick, 1979). The inability to recognize and respond to this tactic suggests that consumers may have difficulty in conducting the computations required to realize that they may be paying a higher per-unit price for the larger size packages.

Research about the semantics of price is mostly in agreement with the above evidence. Price semantics relate to variations in how the price is expressed, rather than the objective value of the offered price. For example, in communicating a discount applied to a regular price, one could choose to express the discount as the dollar value of the savings, or as a percentage reduction. The research into price semantics has shown that communicating objectively equivalent prices using different semantics may result in varying levels of consumer preferences (Berkowitz and Walton, 1981). Moreover, these preferences may be further affected by the use of comparison prices such as competitors' prices or past prices for the same product (Barnes, 1975; Blair and Landon, 1981). Sinha and Smith (2000) have also shown that consumers' perceptions of promotions may be influenced by simple variations in presentation tactics, such as the framing of a promotion as a "buy one, get one free", compared

with "buy 2, get 50 percent off," which are objectively equivalent. The emerging indirect evidence therefore seems to suggest that consumers may have difficulties in evaluating prices which have been manipulated in their semantics, complexity, and information presentation.

In recent years, several researchers have examined how consumer reactions to price might be influenced by complexities introduced through the communication of multiple price dimensions. For example "pennies-a-day pricing" occurs when prices are framed in terms of the much smaller daily amounts rather than a large lump-sum dollar amount (Gourville, 1998). A typical example is where a charity organization asks for donations, but quotes the required donation in terms of pennies-a-day (for example, "Support a starving third world child for 50 cents a day") and then compares that amount to some small expenditure such as the cost of a cup of coffee. In doing so, the communicated price is more difficult for the consumer to evaluate since the net annual dollar transaction is not expressed. As a result, the consumer would have to carry out mental multiplication (that is, 50 cents a day $\times$ 365 days) in order to determine the total cash layout, a task which many consumers may choose not to carry out. Gourville (1998) demonstrates that in spite of objectively large annual dollar amounts associated with some transactions, pennies-a-day pricing can significantly reduce consumers' price sensitivity.

While Gourville does not probe the computational aspect of pennies-a-day pricing, he suggests that when prices are presented to consumers in complex forms, a simplification process may occur. Based on the concept of the cognitive categorization of stimuli (Mervis and Rosch, 1981) and mental accounting (Thaler, 1985), Gourville establishes that the simplification process involves the comparison of some price dimensions (for instance, 50 cents a day) to typical mental accounts (such as daily ongoing expenses). Since consumers tend to be less price sensitive to small daily expenses than to large one-time cash layouts, Gourville's work demonstrates that pennies-a-day pricing can significantly reduce consumers' price sensitivity.

A similar pattern of consumer response has been detected in the practice of "partitioned pricing" (Morwitz et al., 1998). In a partitioned price, the seller communicates the price in separate components (for example, \$499 washer + \$50 installation fee), rather than a lump-sum amount (for example, \$549 washer, installation included). Examples of partitioned prices occur when the sales tax is charged separately, or when the prices of a mail order catalog exclude the costs of shipping and handling. In a similar manner to pennies-a-day prices, by communicating prices in a

partitioned format the consumer is required to carry out specific mental computations (for example, addition, multiplication, and so on) in order to determine the cost of the presented offer. In addition, similar to pennies-a-day pricing, partitioned prices typically result in decreased price sensitivity and higher levels of consumer spending.

In explaining the effects of partitioned prices, Morwitz, Greenleaf and Johnson (1998) speculate that cognitive simplification strategies may be responsible. When faced with partitioned prices, consumers may choose to not undertake cognitively demanding computational tasks, and instead rely on simplifying heuristics (Kahneman and Tversky, 1979). These simplifying heuristics may, for example, force the consumer to focus on individual dimensions of the price (for example, cost of the mail-order product) and ignore other relevant, but less salient price dimensions (for example, cost of shipping and handling). As such, the consumer may place little or no weight on price dimensions that are perceived to be less relevant. Partitioned pricing typically results in consumers being unable to rationally integrate the presented price information and may cause systematic biases in consumer price perceptions.

The order of magnitude of the effect of pennies-a-day pricing is evident in the work of Morwitz et al. (1998). In one experimental condition involving an auction, partitioned prices were used whereby the buyer's premium (auction fee) is charged separately. Subjects in this condition, on average, bid more than 10 percent higher prices than subjects in the condition where the auction fee was included in the bid price of the item. In another experiment involving a mail-order price of a telephone, both partitioned prices (i.e., $69.95 telephone, $12.95 shipping and handling) and non-partitioned prices (i.e., $83.90 telephone, shipping and handling included) were presented to different groups of consumers, who were then asked to recall the price at a subsequent point in time. It was found that the partitioned price was recalled by consumers as being significantly cheaper (average recalled price of $78.27) than the non-partitioned price (average recalled price of $83.90). The authors also found that when the shipping and handling cost is communicated in a more complex form, as a percentage (rather than an absolute dollar amount), consumers are one-third as likely to carry out mental computations.

Emerging perspectives on multi-dimensional pricing effects

Multi-dimensional pricing occurs when a price is communicated to the consumer using more than just a single number (Estelami, 1996, 1997).

Examples are automobile leases such as $249 a month for 24 months, telephone service contracts such as $29.99 monthly fee, for 200 minutes of call time, and retail discounts such as $129 regular price, discounted by 25 percent. In evaluating the cost associated with such offers, the consumer has to take into consideration not only the raw dollar amounts (for example, $249, $29.99, $129), but also other dimensions of the price (for example, number of monthly payments, amount of call time allowed, percentage discount). Therefore, to determine the net price, arithmetic operations – such as the multiplication of the monthly amount by the number of months, or the subtraction of the discount from the regular price – would need to be carried out. As such, multi-dimensional prices encompass a large array of price presentation options, including pennies-a-day pricing and partitioned pricing, all of which require the consumer to carry out specific computations prior to judging the price.

It has been established that multi-dimensional pricing introduces considerable cognitive effort into the consumer's decision-making process (Estelami, 1999). Considering the limited capacity of human short-term memory, the use of multiple dimensions in a price, requiring mental computations, typically results in an overload in the use of short-term memory, as a result of the required mental arithmetic. This overload results in both inaccuracy and cognitive stress in the judgment and decision-making process (Deheane, 1992; Hitch, 1978). Consider, for example, the influence of an 8 percent sales tax on a $199 item. In order to evaluate this, the consumer would have to mentally compute the sales tax (i.e., $\$199 \times 0.08$), store this amount and all the intermediate steps of this computation in short-term memory, and then add it to the item price of $199. Other multi-dimensional prices involving multiplication (for example, $249 a month for 24 months), division (for example, $2.49 for a 16 oz can of tuna), and subtraction (for example, $139 a month, discounted by 15 percent) would require much heavier use of short-term memory in their computations (Groen and Parkman, 1972; Hitch, 1978).

Research on multi-dimensional pricing has established that the use of multi-dimensional prices typically discourages consumers from combining the price dimensions presented to them (Estelami, 1996). As a result, consumers typically focus on individual price dimensions (for example, monthly payments), ignoring how the total price needs to be computed (for example, multiplication of monthly payments by the number of payments). Complicating multi-dimensional prices by adding additional price dimensions to the price (for example, by adding a downpayment to an automobile lease) further discourages the rational integration of price dimensions (Estelami, 1997). In addition, the arithmetic operation

required to evaluate a multi-dimensional price as well as the numerical simplicity of the individual price dimensions can have a significant influence upon consumer's efforts to evaluate prices (Estelami, 1999).

The order of magnitude of multi-dimensional price effects on the consumer is quite notable. For example, in a study of the length of time required to evaluate multi-dimensional prices, it was found that use of multi-dimensional prices involving multiplication lengthens response times by four times over prices involving addition (Estelami, 1999). Similarly, the response time for multi-dimensional prices utilizing round price dimensions (e.g., $200 a month) was one-third of the response time required for prices not utilizing them (e.g., $167, $195). This effect is attributed to the significant decrease in the number of mental transformations and computations needed to be stored in short-term memory associated with round numbers. The effects of complicating multi-dimensional prices by using odd endings or requiring more complex arithmetic operations extends beyond price evaluation efforts and has also been shown to influence consumer decision accuracy (Estelami, 2004). Prices which utilize complex arithmetic operations (such as discounts quoted in terms of a percentage which require multiplication) result in less accurate consumer choices than prices presented in simpler forms which require simpler arithmetic tasks (for example, dollar discounts which require subtraction).

Recent research evidence suggests that price multi-dimensionality may influence an array of consumer responses. Furthermore, these responses may be affected by consumers' own psychology and information processing characteristics. For example, Kim and Kramer (2006) have demonstrated that consumers' need-for-cognition (Cacioppo and Petty, 1982) can influence their processing strategies for multi-dimensional prices. The authors find that consumers with low levels of need-for-cognition tend to prefer simpler price presentation format, while high need-for-cognition individuals tend to be indifferent towards the complexity of a multi-dimensional price. Gendall et al. (2006) show that for a high-priced item, when the dimension of the price discount it presented in dollar terms consumers show higher levels of preference than when it is presented in a percentage format. However, the effect is reversed when the price level for the product is low.

Multi-dimensional pricing effects can also influence consumers' emotional responses and their perceptions of seller credibility. Kim (2006) has found that in the context of mail-in rebates, the presentation format of the rebate (that is, quoting an after-rebate price versus providing the original price and rebate amount information) can influence consumer

purchase intentions. In conditions where the price is stated in an after-rebate format and the dimensions of rebate amount or rebate conditions are not communicated in a salient format, consumers perceive the seller's practice as deceptive. These effects were however found to be moderated by the level of consumer price knowledge. Kim and Kachesrsky (2006) extend this perspective by providing propositions on how the salience of the dimensions of a multi-dimensional price can influence the consumer. They propose that by changing the salience of specific price dimensions – for example, using visual, semantic, or computational presentation tactics – one is able to help or hinder consumers' ability to objectively process the price information. They propose such effects to influence consumers' price perceptions as well as their ability to recall prices.

Strategic implications of multi-dimensional prices

In this section we will consider the implications of multi-dimensional pricing on three specific areas. First, we will examine strategic issues that arise for price setters, as a result of price multi-dimensionality. We will then examine the regulatory implications for consumer protection entities who are interested in developing a more coherent consumer understanding of prices in the marketplace. We will then conclude with a consideration of the implications of price multi-dimensionality for pricing research.

Strategic implications for price setters

When dealing with multi-dimensional process, several fundamental issues arise from a practical perspective. Practitioners currently using, or considering the use of multi-dimensional prices need not only to consider these issues, but also empirically to examine any potential effects of multi-dimensional prices, based upon objective consumer data. The issues of practical concern to price setters include:

1. *Determining which price dimension is the most important to the buyer*
When utilizing multi-dimensional prices, as evident in the work of Morwitz et al. (1998) and Estelami (1997), consumers tend to focus on individual price dimensions in order to determine the offer value. For example, in evaluating an automobile lease, the consumer may place disproportionate weight on the monthly payments and pay very little attention to the *number* of payments. Considering the variety of multi-dimensional prices present in various markets, sellers need to establish which particular price dimension is of most salience in a

consumer's decision process. Such a determination can only be made based upon empirical data, collected either through qualitative methods such as focus groups, or quantitatively through surveys or conjoint analysis. However, the resulting knowledge will help price setters to optimally present the prices, in order to draw the most favorable consumer reactions.

2. *Determining the proportion of buyers who can compute the multi-dimensional price*

As a price setter, knowledge of the extent of consumers' ability to evaluate a multi-dimensional price is critical. If the majority of buyers are unable or unwilling to carry out the required arithmetic in a multi-dimensional price, they may choose to focus on a single price dimension. This enables the price setter to tactically present the price in the most favorable fashion. On the other hand, if the majority of buyers are willing and able to undertake the required computations, such a tactical move would be of little consequence. Establishing the extent of consumer ability to evaluate a multi-dimensional price offer is primarily an empirical question which could only be determined through consumer research. Moreover, it is likely that product category involvement as well as consumer involvement in the category will moderate this, as higher levels of involvement are likely to be associated with increased cognitive activity, and a higher likelihood for the consumer to engage in elaborate processing of price information.

3. *Price simplification for strategic positioning*

Evidence from consumer surveys suggests that consumers in general prefer simpler price communications to more elaborate ones. For example, a 1995 survey of telephone subscribers indicated that consumers find the variety of long-distance calling plans offered by phone companies confusing, and many prefer to see simpler prices (*Services Marketing Today,* 1995). In recent years, a strategic component of many firms in this industry has become price simplification through flat-rate plans and all-inclusive prices which do not list separate local and long-distance charges. The excessive use of complex multi-dimensional prices may potentially be considered by some consumers as deceptive and may therefore cause negative attributions about the seller to be made. An accurate understanding of the consumer opinions of multi-dimensional prices used in a category is critical for developing successful pricing strategies. In such a context, the simplification of prices as positioning and strategic marketing option should be examined carefully.

4. *Examine the inferences buyers draw from each price dimension*
Complicating price through the use of multiple dimensions may lead consumers to question the seller's intent. Moreover, even in situations where all sellers communicate their prices multi-dimensionally, it is of practical importance to understand specific inferences consumer draw from each individual price dimension. In contrast to a uni-dimensional pricing environment where consumer inferences about key variables such as quality and value are based on a single number, in a multi-dimensional price, each price dimension may serve as a signal of transaction value. For example, in a lease arrangement consisting of monthly payments, number of payments, and a down payment, each individual price dimension may infer different aspects of the transaction. It is therefore critical for price setters to have a practical understanding of what these inferences are. For example, in a multi-dimensional pricing environment, it may be useful to know which price dimension is likely to result in quality inferences (for example, Rao and Monroe, 1989), and which price dimension is likely to convey a point about offer value. Moreover, it is important for price setters to establish the likelihood that consumers might make price-based inferences in a multi-dimensional pricing environment, versus a uni-dimensional pricing environment. A practical and accurate understanding of these questions is crucial to achieving an educated approach to pricing.

Strategic implications for regulators

Considering the cognitive challenges that multi-dimensional prices present to consumers, the practice of multi-dimensional pricing may also be of interest to regulators. While limited legislation and communication guidelines exist for multi-dimensional pricing, there may be a need for regulatory measures intended to protect consumers against misleading pricing practices. Several related issues emerge from this perspective:

1. *Is multi-dimensional price regulation necessary?*
The existing legislation aimed at consumer protection has dealt extensively with uni-dimensional prices. For example, current legislation exists to protect consumers against deceptive pricing practices. Similarly, in the financial markets, where complex pricing schemes may be used to hide the percentage interest rate of a financial product, the Truth in Lending Act protects consumers by requiring sellers to communicate the annual percentage rate (APR) associated with the product. Moreover, the

common practice of providing unit prices on grocery store shelves has helped improve the ability of consumers to identify the lowest priced item. However, other than these tangential measures, no explicit effort is currently underway by regulators to control the complexity – and the resulting confusion – in multi-dimensional prices. This is partially due to the fact that the perceived complexity of a price is often subjective, and very difficult to quantify. Therefore, restrictions aimed at limiting such complexities may be difficult to formally specify and establish by regulators. Moreover, it can be argued that limiting seller's ability to choose from an array of price presentation options may result in a less dynamic market environment, and may therefore limit market growth. Nevertheless, existing research evidence offers strong support for the fact that multi-dimensional prices are difficult for consumers to comprehend, and a basic aim in consumer protection should be to improve this comprehension.

2. *Determine markets most likely to be problematic for consumers*

One related issue to regulating multi-dimensional prices is the scope of such an effort. While measures such as the Truth in Lending Act and the unit pricing of grocery products have helped improve consumers' ability to comprehend specific forms of prices, a determination is needed as to which prices and which markets are more critical for regulatory intervention. For example, markets such as that of automobile leases and telecommunication services, as the result of the complexity of the products and associated prices, often result in a poor level of the consumer understanding of prices. Regulators may therefore need to identify the specific markets that are of higher importance, in order to prioritize their efforts to clarify price communications. The emerging evidence suggests that certain markets are far more likely to be affected by potentially deceptive multi-dimensional pricing practices. For example, it has been shown that in financial services markets, consumers' knowledge and understanding of prices is considerably weaker than is the case for non-financial markets (Estelami, 2005). Furthermore, price processing biases have been found to exist even among investors under high-risk decision scenarios (Varki, Sabherwal, Della Bitta, and Moore, 2006) and in currency exchange scenarios (Guido and Pluso, 2004), thereby heightening the importance of ensuring a consumer-friendly pricing environment in such settings. Clearly, such efforts would be subject to a perceived need for controlling price communications in a given market, and may be vigorously resisted by the industry.

3. *Political will and multi-dimensional price regulation go hand-in-hand*
The political will to control price complexity in the marketplace is determined largely by consumers' demands for such an effort. Legislative efforts to regulate multi-dimensional price communications would have to be initiated by consumers, whose voting power may provide an incentive to activate both regulatory and legislative bodies (such as the Federal Trade Commission) and also law makers. Given the higher priority of focus granted to more pressing issues such as national security and economic development, it is likely that multi-dimensional price regulation would not be at the top of most voters' lists of concerns. This will most likely limit the political power of consumer protection advocates in formalizing mechanisms for improving consumers' ability to deal with multi-dimensional prices.

Strategic implications for consumer researchers

Fundamental issues related to the validity of our current understanding of consumer response to prices also arise, as a result of the use of multi-dimensional prices of one form or another in previous pricing studies. An examination of past studies in pricing indicates that in many cases researchers have in fact used price stimuli that are multi-dimensional in nature. For example, in studying consumers' response to price discounts communicated in the form of a regular price and a discount, some researchers have communicated the discount as an absolute dollar (for example, Lichtenstein, Burton, Karson, 1991; Urbany, Bearden, Weilbaker, 1988), while others have presented it in the form of a percentage (Berkowitz and Walton, 1981). As reviewed earlier in this chapter, simple manipulations such as this, as well as variations in the numeric presentation of the price dimension (for example, $199 vs $200) have been shown to have a significant influence upon consumers' ability to comprehend, calculate, and process the presented price information (Estelami, 1999; Morwitz et al., 1998).

As researchers in this area have noted, ignoring such numerical cognition factors may influence the empirical results of a research study (Estelami, 1999; Kim and Kachersky, 2006; Monroe and Lee, 1999). Our accumulated knowledge over the years in relation to consumers' price responses may therefore be difficult to unify into a single theory because of the wide range of different price stimuli used by various researchers. This combination potentially presents a fundamental threat to both the external and internal validity of many existing studies, as well as our overall understanding of price effects. Therefore, when conducting

future research in pricing, researchers need to pay particular attention to the possible impact of price multi-dimensionality and arithmetic complexity in developing the price stimuli to be used in any empirical investigation. Moreover, a meta-analysis of the potential impact of multi-dimensional prices used in previous studies on observed empirical responses may be of great help in clarifying our current understanding of consumer's price responses.

Multi-dimensional pricing provides marketing researchers with an abundance of topics to examine. For example, it would be useful in understanding how simple consumer responses such as quality inferences or seller evaluations are formed in a multi-dimensional pricing environment. Moreover, it would be interesting to uncover the common simplifying heuristics that consumers may utilize in processing highly complex prices. For example, automobile rental prices or cellular phone prices, which may vary as a function of the level of the consumer's usage of the service (that is, number of miles, number of minutes of call time), may require the consumer to estimate the distribution of likely usage (that is, mileage, call volume) levels. Such usage-based prices may therefore force consumers to utilize simplification strategies in their price judgments and would be interesting to examine. Moreover, an empirical study of the extent by which multi-dimensional prices are utilized in various markets would provide useful information for researchers, practitioners and regulators.

Conclusion

The use of multi-dimensional prices in the marketplace provides pricing managers with the ability to manage the complexity by which price information is communicated to buyers. The complexities introduced by multi-dimensional pricing are beginning to be the subject of empirical research. The results of these studies indicate that there are systematic consumer limitations in processing and evaluating multi-dimensional prices. These limitations may therefore not only provide sellers with opportunities for improving their margins, but may also be of concern to government or industry regulators attempting to protect consumers against a potentially sub-optimal information environment. Moreover, price multi-dimensionality provides consumer researchers with an abundance of topics to study, beyond the traditional uni-dimensional view of price. It is hoped that this work will help to inspire additional interest on this important branch of pricing.

References

Barnes, J. G. (1975) "Factors Influencing Consumer Reaction to Retail Newspaper Sale Advertising," in Edward Mazze (ed.), *Combined Proceedings* (Chicago: American Marketing Association), pp. 471–7.

Berkowitz, E. and J. Walton (1981) "Contextual Influences on Consumer Price Responses: an Experimental Analysis," *Journal of Marketing Research*, Vol. 17, No. 3, pp. 349–58.

Blair, E. and E. Landon (1981) "The Effectiveness of Reference Prices in Retail Advertisements,"*Journal of Marketing*, Vol. 45, No. 1, pp. 61–9.

Cacioppo, J. T. and R. E. Petty (1982) "The Need for Cognition," *Journal of Personality and Social Psychology*, Vol. 42, No. 1, pp. 116–31.

Capon, N. and D. Kuhn (1982) "Can Consumers Calculate Best Buys?," *Journal of Consumer Research*, Vol. 8, No. 4, pp. 449–53.

Compeau, L. D. and D. Grewal (1999) "Comparative Price Advertising: an Integrative Review," *Journal of Public Policy and Marketing*, Vol. 17, No. 2, pp. 257–73.

Dansereau, D. F., and L. W. Gregg (1966) "An Information Processing Analysis of Mental Multiplication,"*Psychonomic Science*, Vol. 6, No. 2, pp. 71–2.

Dehaene, S. (1992) "Varieties of Numerical Abilities," *Cognition*, Vol. 44, Nos 1–2, pp. 1–42.

Dickson, P. R. and A. G. Sawyer (1990) "The Price Knowledge and Search of Supermarket Shoppers," *Journal of Marketing*, Vol. 54, No. 3, pp. 42–53.

Estelami, H. (2005) "A Cross-Category Examination of Consumer Price Awareness in Financial and Non-Financial Services," *Journal of Financial Services Marketing*, Vol. 10, No. 2, pp. 125–39.

Estelami, H. (2004) "The Effect of Price Presentation Tactics on Consumer Evaluation Effort of Multi-Dimensional Prices," *Journal of Marketing Theory and Practice*, Vol. 11, No. 2, pp.1–16.

Estelami, H. (2003) "Strategic Implications of a Multi-Dimensional Pricing Environment,"*Journal of Product and Brand Management*, Vol 12, No. 5, pp. 322–34.

Estelami, H. (1999) "The Computational Effect of Price Endings in Multi-dimensional Price Advertising," *Journal of Product and Brand Management*, Vol. 8, No. 3, pp. 244–56.

Estelami, H. (1997) "Consumer Perceptions of Multi-dimensional Prices," in Merrie Brucks and Deborah J. MacInnis (eds), *Advances in Consumer Research*, Vol. 24 (Provo, UT: Association for Consumer Research), pp. 392–9.

Estelami, H. (1996) "Multi-dimensional Pricing," unpublished doctoral dissertation, Graduate School of Business, Columbia University.

Gendall, P., J. Hoek, T. Pope, and K. Young (2006) "Message Framing Effects on Price Discounting," *Journal of Product and Brand Management*, Vol. 15, No. 7, pp. 458–65.

Gourville, J. T. (1998) "Pennies-a-day: the Effect of Temporal Reframing on Transaction Evaluation,"*Journal of Consumer Research*, Vol. 24, March, pp. 395–408.

Groen, G., and J. Parkman (1972) "A Chronometric Analysis of Simple Addition," *Psychological Review*, Vol. 79, No. 4, pp. 329–43.

Guido, G. and A. Peluso (2004) "Consumers' Perception of Odd-Ending Prices with the Introduction of the Euro," *Journal of Product and Brand Management*, Vol. 13, No. 3, pp. 200–10.

Hitch, G. (1978) "The Role of Short-term Memory in Mental Arithmetic," *Cognitive Psychology*, Vol. 10, No. 3, pp. 302–23.
Kahneman, D. and A. Tversky (1979) "Prospect Theory: an Analysis of Decision Under Risk," *Econometrica*, Vol. 47, No. 2, 263–91.
Kim, H. (2006) "Consumers' Responses to Price Presentation Formats in Rebate Advertisements," *Journal of Retailing*, Vol. 82, No. 4, pp. 309–17.
Kim, H. and T. Kramer (2006) "The Moderating Effects of Need for Cognition and Cognitive Effort on Responses to Multi-Dimensional Prices," *Marketing Letters*, Vol. 17, No. 3, pp. 193–203.
Kim, H. and L. Kachersky (2006) "Dimensions of Price Salience: A Conceptual Framework for Perceptions of Multi-Dimensional Prices," *Journal of Product and Brand Management*, Vol. 15, No. 2, pp. 139–47.
Lichtenstein, D. R., S. Burton, and E. J. Karson (1991) "The Effect of Semantic Cues on Consumer Perceptions of Reference Price Ads," *Journal of Consumer Research*, Vol. 18, December, pp. 380–91.
Mervis, C. B. and E. Rosch (1981) "Categorization of Natural Objects," *Annual Review of Psychology*, Vol. 32, No. 1, pp. 82–115.
Monroe, K. B. (2003) *Pricing: Making Profitable Decisions*, 3rd edn (New York: McGraw-Hill).
Monroe, K. B., and A. Y. Lee (1999) "Remembering Versus Knowing: Issues in Buyers' Processing of Price Information," *Journal of the Academy of Marketing Science*, Vol. 27, No. 2, pp. 207–25.
Morwitz, V. G., E. A. Greenleaf, and E. J. Johnson (1998) "Divide and Prosper: Consumers' Reaction to Partitioned Prices," *Journal of Marketing Research*, Vol. 35, November, pp. 453–63.
Nason, R., and A. Della Bitta (1983) "The Incidence and Consumer Perceptions of Quantity Surcharges," *Journal of Retailing*, Vol. 59, No. 2, pp. 40–54.
Rao, A. and K. B. Monroe (1989) "The Effect of Price, Brand Name, and Store Name on Buyers' Perceptions of Product Quality: an Integrative Review," *Journal of Marketing Research*, Vol. 26, August, pp. 351–7.
Russo, E. (1977) "The Value of Unit Price Information," *Journal of Marketing Research*, Vol. 14, May, pp. 193–201.
Seraganian P., J. Hanley, B. Hollander, and E. Smilgaet (1985) "Exaggerated Psychophysiological Reactivity: Issues in Quantification and Reliability," *Journal of Psychosomatic Research*, Vol. 4, No. 4, pp. 393–405.
Services Marketing Today (1995) *Reach out and Confuse Someone*, June, p. 4.
Sinha, I., and M. F. Smith (2000) "Consumers' Perceptions of Promotional Framing of Price," *Psychology and Marketing*, Vol. 17, No. 3, pp. 257–75.
Sprott, D. E., K. C. Manning, and A. D. Miyazaki (2000) "Retail Pricing Strategy and the Existence of Quantity Surcharges: a Brand-size Demand Explanation," in Hooman Estelami and Sarah Maxwell (eds), *Proceedings of the 2000 Fordham University Pricing Conference*, Vol. 3 (New York: Fordham University).
Thaler, R. (1985) "Mental Accounting and Consumer Choice," *Marketing Science*, Vol. 4, No. 3, pp. 199–214.
Turner, J., and D. Caroll (1985) "Heart Rate and Oxygen Consumption During Mental Arithmetic, a Video Game and Graded Exercise: Further Evidence of Metabolically Exaggerated Cardiac Adjustments?," *Psychophysiology*, Vol. 22, No. 3, pp. 261–7.

Urbany, J. E., W. O. Bearden, and D. C. Weilbaker (1988) "The Effect of Plausible and Exaggerated Reference Prices on Consumer Perceptions and Price Search," *Journal of Consumer Research*, Vol. 15, June, pp. 95–110.
Varki, S., S. Sabherwal, A. Della Bitta, and K. Moore (2006) "Price-End Biases in Financial Products," *Journal of Product and Brand Management*, Vol. 15, No. 6, pp. 394–401.
Widrick, S. (1979) "Quantity Surcharge: a Pricing Practice Among Grocery store Items – Validation and Extension," *Journal of Retailing*, Vol. 55, No. 2, pp. 47–58.
Yadav, M. (1994) "How Buyers Evaluate Product Bundles: a Model of Anchoring and Adjustment," *Journal of Consumer Research*, Vol. 21, September, pp. 342–53.

Part II
Value-Based Pricing

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3

Does Being Good Pay Off? An Investigation of Consumers' Price Response to Social Product Information

Dirk C. Moosmayer

Introduction and background

In recent years corporate social responsibility (CSR) has been increasingly discussed in practice as well as in scientific discussions (see, for example, Baron and Diermeier, 2007). While some use the alleged Friedman quote to argue that the business of business is business rather than social issues, others claim that companies have a responsibility that goes beyond the business arena (Hansen and Schrader, 2005). An intermediate position assumes that CSR is a business case as many socially responsible activities pay off – at least in the long run. On the one hand, social activities may have an effect on the cost side of the balance sheet by saving resources such as energy, and by saving marketing expenditure through increased customer loyalty (Maignan et al., 1999), or by reducing the risk of crises such as corporate scandals or product harm (Klein and Dawar, 2004). On the other hand, socially responsible corporate behavior might lead consumers to buy more of a company's products or pay more for social product features (Elliott and Freeman, 2001). This latter aspect will be investigated in this contribution. Therefore, consumers' price response to social product features will be analysed with regard to the following questions:

- Are consumers willing to pay more for products with social features?
- Do consumers have a negativity bias in which they penalize the absence of social features stronger than they reward their presence?
- How do consumers' attitudes influence their price response to social product features?

We first review the existing research on consumers' response to corporate social behavior and social product features. Subsequently, hypotheses on consumers' willingness to pay for social product features and the influence of consumers' attitudes will be developed. These hypotheses will then be tested using empirical data from an experiment on the response to child labor information regarding athletic shoes.

Consumers' response to CSR

The claim that companies' social behavior should not be a matter of economic rationale rather than philanthropy is widespread among supporters of CSR. While one stream of reasoning focuses on internal factors such as reduced resource consumption, others focus on the market side and claim effects in consumers' response to corporate behavior. Hence the research into consumers' responses to CSR will be reviewed and narrowed to an examination of the effects on consumers' price response.

The broadest perspective including consumers and companies can be seen in the link between corporate social performance and a company's market value. Based on an analysis of business databases (for example, the Fortune 500 database), Luo and Bhattacharya (2006) showed that positive corporate social performance leads to a higher market value. As a moderating variable they identified customer satisfaction. However, they elaborate that the positive effect can only be shown for companies with strong capabilities to innovate and produce high-quality products or else high CSR investment will decrease satisfaction as well as market value. In addition to the impact on satisfaction, there is empirical evidence that CSR leads to increased customer loyalty (Maignan et al., 1999). One step closer to the point of sale is consumers' purchase intention. This has been found to be positively influenced by positive corporate social performance, moderated by positive brand evaluations (Klein and Dawar, 2004). The link between corporate social performance and purchase intentions had been analysed more directly by Sen and Bhattacharya (2001). In two studies they show that the consumers' personal support of social responsibility is one crucial aspect in their evaluation of a company's products. Additionally, they show that the congruence between the company's CSR activity and the area of action desired by the consumer is of high relevance.

Mohr and Webb (2005) added price to the scope of investigation and regarded the impact of CSR and price on purchase intention. They show that the impact of price on purchase intention possibly correlates with the level of CSR. While some studies focus on purchase intention which leads to the question of whether or not a product is sold,

other studies investigate the price as a dependent variable and show that CSR activities may lead to consumers being ready to pay a price premium. Creyer and Ross (1997) showed that the willingness to reward and punish firm behavior depends upon the expectations in relation to that behavior and on the importance given to ethical behavior. More explicitly, they showed that consumers expect ethical behavior and find a firm's ethicality to be important in the purchase decision process. In addition, consumers state that they would be willing to pay higher prices for products from socially responsible companies and even though they might buy products from unethical companies, they would expect a price discount in the latter case.

The research presented to date focuses on the impact of social responsibility on a corporate level. This perspective gains special relevance in the scope of an increasing discussion about brand value and corporate reputation (for example, Eberl and Schwaiger, 2006). Nevertheless, Mohr and Webb (2005, p. 124) "suggest that CSR may add value to a product" and thereby place a focus on the social and environmental aspects of a product's making, use, and disposal. We refer to these aspects as social product features. As most of these aspects are neither searchable nor can one experience them, they are referred to as credence qualities (Darby and Karni, 1973). Hence, consumers' contact with these features does not happen through the use of the product, but rather through communication of entities such as the producing company, public media, friends or consumer institutions. As a consequence, any potential behavioral change by consumers that is directed toward social product features would be a reaction not to the feature itself, but rather to the communication about the feature. This communication about social product features will be referred to as social product information. Additionally, one may assume that social product features are something desirable. Accordingly, the presence of a social product feature is considered positive while its absence is discussed as negative. The related communication is described as positive and negative social product information.

A direct link between social features and a product's price is implemented by cause-related marketing campaigns donating a certain amount of money per product to a charity. In a survey of 128 Singaporeans, Subrahmanyan (2004) found that consumers are willing to pay more for this type of product. Moreover, she found that the price premium is higher when the donation per unit is known than when it is unknown. Nevertheless, as depicted above, social product attributes go far beyond donating money and embrace any social aspect in a product's lifecycle. This raises the question if consumers are willing to reward ethical and punish unethical products. This issue was addressed by

Auger et al. (2003). In a survey of 445 respondents from Hong Kong and Australia, they evaluated the preferences for soaps and athletic shoes with certain bundles of characteristics. They then transferred them into monetary values of each product feature and calculated consumers' willingness to pay for specific, social and environmental product attributes. They showed that social product features contribute a substantial portion to the overall product value.

An additional set of studies investigated consumers' willingness to pay more for social product features more directly (Marymount University, 1999; University of Maryland, 2000). According to these studies, approximately 75 percent of consumers were willing to pay a surplus of 5–25 percent for such features. Elliott and Freeman (2001) produced similar results and added that the surplus that consumers are willing to pay increases absolutely and decreases relatively with increasing product price.

The reviewed body of empirical studies not only suggests that CSR has a positive impact on companies and their market value. But one may also assume that consumers' attitudes towards companies and their products are affected by information about their social performance. Moreover, it can be expected that consumers are willing to pay more for socially responsible products and that they expect a price discount for irresponsible products.

H_{1A}: Positive social product information increases consumers' willingness to pay.

H_{1B}: Negative social product information decreases consumers' willingness to pay.

Consumers' bias in response to negative stimuli

These hypotheses suggest that we should ask whether or not there is a difference between consumers' response to positive and negative social product information. While one might intuitively expect there to be no difference, social psychology offers a different answer. It has been shown that humans make a difference in weighting positive and negative information when it comes to integrating different types of information into one consistent evaluation (Kanouse, 1984). Research has observed a *negativity bias* in human behavior, implying that, when combining them into one judgment, humans tend to give a greater weight to negative information than to positive information (Reeder and Brewer, 1979; Skowronski and Carlston, 1987; Baumeister et al., 2001). Thereafter,

negative cues are weighted more strongly than positive cues of equal intensity. This bias has been observed in many different fields of investigation. It has been shown that information about an ethical and a comparable unethical action does not lead to a neutral evaluation as one might expect. Rather, it leads to a negative judgment (Cacioppo and Berntson, 1994). The assumed reason is that the negative impact of vice on attitude is stronger than the positive impact of virtue (Ito et al., 1998). One important application in business studies is the bias toward the overweighting of negative incidents in the evaluation of financial gains and losses as described by prospect theory (Kahneman and Tversky, 1979). Moreover, the negativity bias has also proven valid for the evaluation of organizations and their behavior (Folkes and Kamins, 1999).

Investigating the influence of positive and negative information on consumers' attitudes toward companies, it has been shown that unethical actions performed by organizations are more likely to have a negative influence on consumers' attitudes than ethical actions are expected to have a positive influence. Furthermore, it has been shown that different types of ethical action differ in terms of their impact on consumers' attitudes. Accordingly, one should assume that consumers' response to negative social product information is stronger than to comparable positive information.

H_2: Negative social product information has a stronger impact on consumers' willingness to pay than positive information of equal intensity.

In order to explain negativity biases a number of different theories have been applied – range-frequency theory, assimilation-contrast theory, range theory, and category-diagnosticity theory. These theories have found considerable application in behavioral pricing research. In the following analysis, these theories will be discussed, along with the basic assumptions that they follow in order to explain negativity biases. These are, on the one hand, that humans see the world based on a positive reference and, on the other hand, that uncertainty is inherent to any human judgment.

We will first consider *range-frequency theories* (Parducci, 1965) and *assimilation-contrast theory* (Sherif and Hovland, 1961). In both of these theories a negativity bias can be explained based on the empirical finding that humans tend to see most things positively (Kaplan, 1976; Parducci, 1968). This positive perspective of the world is used as a reference for

their evaluation of new stimuli. According to range-frequency theories, a stimulus loses its weight with repeated occurrences. As positive stimuli are seen as having a higher frequency than negative stimuli, the latter are judged as more unusual and receive higher attention and larger weight in the formation of judgments (Fiske, 1980). Referring to assimilation-contrast theory, humans evaluate perceptions of the real world against a range that they consider "normal." Still, all answers within this range lead to an assimilation while valuations outside the range lead to a contrasting judgment. Combined with humans' positive perspective of the world, it is easier for a negative stimulus to fall out of the range than a positive. In the case of both theories, neutral stimuli would be judged as rather negative since they deviate further from the positive anchor point. Accordingly, negative information would receive a stronger weight in evaluations than positive information of the same intensity. Thus, in the formation of judgments negative stimuli are overrepresented as compared to positive stimuli. Research in marketing has also referred to these theories for explaining a negativity bias. Empirical findings suggest that people believe most products perform well – that is, they have a positive expectation of most products and that negative information is not normative (Folkes and Patrick, 2003; Herr et al., 1991; Mizerski, 1982). Consumers' price expectation is an expectation referring to an evaluation by someone else. Since the referred theories explain negativity biases on the basis of the general human tendency to maintain a positive attitude toward the world, one should assume that consumers' price expectations follow the same bias. This is due to the idea that humans whom the expectations refer to (in this case the people setting the product prices) follow the same bias. Thus, one may expect that the negativity bias in response to social performance occurs equally in consumers' price expectation and in their willingness to pay. In addition to Hypotheses 2 one may expect:

H_{2A}: Social product information has an equal impact in percentage on consumers' willingness to pay and their price expectation.

A second set of theories explains the negativity bias based on the observation that people have a degree of uncertainty in relation to their judgments (Birnbaum, 1972; Wyer, 1973, 1974). In the following, *range theory* (Volkmann, 1951) and *category-diagnosticity theory* (Skowronski and Carlston, 1989) will be considered. According to range theory, when being asked for an evaluation people perceive a range of acceptable answers from which they chose the one that appears most probable

to them. With reference to range theory the negativity bias is explained by the fact that people are more confident in judging negative incidents than positive incidents (Lalwani, 2006) – in other words, negative information leads to a narrower distribution of possible evaluations. Based upon the lower level of uncertainty, negative judgments receive stronger weight than positive stimuli.

Category-diagnosticity theory is based upon the assumption that moral people seldom or never act immorally, but immoral people often act morally (Reeder and Coovert, 1986). Consequently, bad behavior is more diagnostic for bad personality traits than good behavior is for good traits. According to this theory, people use informational cues to categorize other products, services or people and cues with a high category-diagnosticity are expected to receive stronger weight in the construction of a judgment (Skowronski and Carlston, 1989, 1992). Consequently, people who are confronted with positive and negative moral stimuli of the same intensity will assign more weight to the negative stimulus and therefore they will have a negativity bias. In management research, category-diagnosticity theory has often been applied in explaining a negativity bias in the evaluation of companies' social performance (Folkes and Kamins, 1999; Mohr and Webb, 2005).

In both range theory and category-diagnosticity theory, negative information receives a greater weight because it offers a better discrimination between alternative categories than positive information. Thus, many researchers have treated range theories and category-diagnosticity theories under one roof (for example, Ahluwalia et al., 2000; Mellers et al., 1992). While the one theory highlights the diagnosticity, the other focuses on the distribution of choices. But in core "these two arguments make the same point" (Lalwani, 2006). Both have in common that the judgment is based on uncertainty, which is the result of a lack of information – for example, in relation to the consequences of a decision, or on the moral behavior of humans or organizations. Thereby, the uncertainty about the aspect to be judged is not a state inherent to the world; rather, it is due to an asymmetrical distribution of information. The knowledge about these uncertainties and asymmetries could mean that consumers expect companies' price setting to be proportional to the intensity of the stimulus. In addition to Hypotheses 2, one may, hence, expect that there is no negativity bias concerning price expectation:

H_{2B}: Negative and positive social product information have the same impact on consumers' price expectation.

Consumer attitudes' influence on stimuli response

In addition to the content of social information one should also expect personal attitudes to influence consumers' evaluation of such information. For the purpose of this study three dimensions are considered: product involvement, consumers' sensitivity to social performance and consumers' responsiveness to external information.

Product involvement

Product involvement (PI) represents the "personal relevance or importance" of a product for a consumer (Greenwald and Leavitt, 1984). One may assume subsequently that consumers with a high level of product involvement focus their attention on the product's core features like functionality and design and less on related aspects like social features. In this respect, one should expect that consumers with high product involvement react less to social product information than consumers with low product involvement. Additionally, consumers with high product involvement are assumed to have better product knowledge and should thereby be less responsive to situational cues like external informational stimuli. Consequently, one may assume that the absolute response to any information decreases with increasing involvement, even if the direction of the response might be unexpected (such as negative response to positive stimulus).

H_3: Product involvement correlates negatively with the absolute impact of social product information (regardless of its direction).

Consumers' sensitivity to social performance (CSSP)

Analogous to product involvement, one may understand the consumers' sensitivity to social performance (CSSP) as the "personal relevance or importance" of social responsibility. Hence, with increasing CSSP, the relative importance of social features increases. Moreover, people with strong CSSP are expected to be more willing to reward based on positive social product information but equally more willing to penalize for negative social product features. This expectation is in line with previous research that shows that consumers' reaction to social product information correlates in direction and intensity with the importance that social responsibility has in their own decisions (Klein and Dawar, 2004). Indeed, Mohr and Webb (2005, p. 127) found that "when measured trait of socially responsible consumer behavior is high, CSR will have

a stronger impact on evaluation and purchase intent than when CSSP is low."

H_{4A}: Consumers' sensitivity to social performance (CSSP) correlates positively with the impact of positive social product information.
H_{4B}: Consumers' sensitivity to social performance (CSSP) correlates negatively with the impact of negative social product information.

Consumers' responsiveness to external information (CREI)

Reference price research suggests that consumers rely on external and internal information when judging price information, forming price expectations, and determining their willingness to pay (Monroe, 1973; Briesch et al., 1997; Estelami and Maxwell, 2003). The extent to which one reacts to situational external information varies among consumers. The degree to which consumers react to situational stimuli will be referred to as *consumers' responsiveness to external information (CREI)*. Thereby one should assume that consumers' response to social product information is related to their general responsiveness to external information. The more consumers respond to situational stimuli in general, the stronger they will react to social product information in either direction.

H_5: Consumers' responsiveness to external information correlates positively with the absolute impact of social product information (regardless to its direction).

Method

In order to test the hypotheses, we designed an experiment to investigate consumers' price response to product information in relation to working conditions, especially child labor in the production of athletic shoes. This issue was chosen because it can be assumed that everybody may be assumed to regard child labor as an ethical issue and that there is a relative consensus about the relevance of the issue (Folkes and Kamins, 1999) and a rather clear distinction of positions that are considered good or bad.

Modifications

In the scope of the experiment, participants were presented with a picture of a pair of athletic shoes along with some basic functional information about these shoes. For ensuring realistic product descriptions and prices,

all information had been taken from a local sports equipment store. In order to minimize brand influence on the answers, all of the presented pairs were of the same brand. No price information was provided at this point of the experiment. Respondents were then asked to estimate the sales price of the shoes and they should name their willingness to pay. In the further analysis, these price figures will be referred to "PE1" for price expectation and "WTP1" for willingness to pay.

In a second step respondents were given information on three further pairs of athletic shoes that they would find in the same outlet with short description and price tags of €60, €80, and €100. Participants were then asked again to name their price expectation as well as their willingness to pay for the original pair of shoes (referred to hereafter as "PE2" and "WTP2").

After a set of questions measuring the latent constructs, respondents were presented with a piece of social product information and asked again to name their price expectation and their willingness to pay. Half of the respondents were presented with positive social product information (Stimulus A) the other half were presented with the negative information (Stimulus B). The price responses at this stage will be referred to as "PE3 pos/WTP3 pos" for positive stimulus and "PE3 neg/WTP3 neg" for negative stimulus.

Stimulus A: Positive social product information
ap. 12.10.06. (. . .) In the scope of its annual report the International Organization against Child Labor (IOACL) deplored that the production of sport shoes often involves child labor. Positively IOCAL mentioned the athletic shoe ILO as its production is based on high social and ecological standards and the production processes are certified on the basis of rigorous norms. (. . .).

Stimulus B: Negative social product information
ap. 12.10.06. In the scope of its annual report the International Organization against Child Labor (IOACL) claimed the athletic shoe ILO as a negative example as the production of the shoe in the Chinese town Dzaoyang involves children at the age of less than 12 years. The organization evaluated the working conditions of the organization as very critical (. . .).

At the end of the self-administered questionnaire, respondents were informed that the stimulus displayed purely fictitious information.

In order to ensure that the intensity of both stimuli is considered equal, the stimuli were developed in a group of three experienced marketing

researchers and tested with potential respondents. In addition, most research on negativity bias includes an explicit evaluation of the stimulus' intensity by the respondents (Lupfer, Weeks and Dupuis, 2000). This approach was not followed in the given case as the intense reflection of the stimulus' intensity might have influenced the price responses. The fact that both stimuli produce an equal influence on respondents' price expectation, gives further ex-post support of the assumed equal intensity. For the same reason of simulating the effective consumer reaction, a between-subject setting was chosen. This avoids that respondents are exposed to two stimuli where the effect of the first stimulus influences the reception of the second.

Sample

Respondents were first-year students taking business courses at a German state university. The population of business undergraduates was chosen as they are all part of a similar age cohort. Furthermore, first-year business students are assumed to have an interest in business issues and, thus, have the capacity to perform rather complex evaluations of different cues on their purchase decisions and price perceptions. Still, as first-year students they are expected to answer as consumers rather than as potential business academics.

The survey resulted in 253 duly completed questionnaires – 128 with positive social product information as a stimulus and 125 with negative. Because there were 124 female and 129 male students, the sample has no gender bias and the gender differences in the attribution of positive and negative stimuli were not significant.

Measures

As described above, both respondents' *willingness to pay* (WTP) and their *price expectation* (PE) were measured three times: (i) using respondents' internal expectations as a reference (WTP1/PE1), (ii) based upon outlet price information as a reference (WRP2/PE2) and (iii) based upon social product information as a reference (WTP3/PE3). These were measured as absolute price figures in Euros. For testing the hypotheses we used the absolute difference between the first two measures $|WTP2 - WTP1|$ as a measure of *consumers' responsiveness to external information* (CREI). As a measure of the *impact of social product information* (ISPI) we used the difference between WTP based on social product information and WTP based on outlet price information (WTP3 – WTP2). Thus positive ISPI figures stand for an increased WTP and negative ISPI for a decrease in WTP.

Absolute ISPI was measured as |WTP3 – WTP2| and thereby expresses the stimuli's impact regardless of its direction.

In order to measure the latent constructs *product involvement* and *consumers' sensitivity to social performance* established scales were used.In terms of involvement, the literature suggests a set of scales (Mittal, 1995). Laurent and Kapferer (1985) differentiate between product-class involvement and purchase decision involvement with three items each. For the purpose of this study, the general involvement in athletic shoes as product class is of interest, only the product-class involvement scale was applied and showed high reliability (Cronbach's $\alpha = 0.84$). Since the survey language was German, all English scales were translated based on a back translation process (Weidmer, 1994). All latent constructs were measured on a 7-point Likert Scale with the reference points 1 = "does not apply at all," 4 = "indifferent," and 7 = "applies completely" being explicitly named.

To measure *consumers' sensitivity to social performance (CSSP)*, the consumer sensitivity to corporate social performance scale (Paul et al., 1997) was used. This was chosen from a set of scales that measure consumers' attitudes to social responsibility as it focuses on consumers' willingness to effectively reward and penalize specific socially responsible or irresponsible behavior. It had been developed in an American context and has been replicated and adopted for the Netherlands by Meijer and Schuyt (2005). One particular difference between the original study and its replication is that the replication showed two separate factors – one to reward good ethics and one to punish bad ethics. In contrast to this, the original study produced only one factor. For the present study, items that represent issues that were less relevant in the German context (for the German CSR debate, see, for example, Hansen and Schrader, 2005) were removed. The reduced scale produced one single factor as in the original study. The reliability of the scale is shown to be very good (Cronbach's $\alpha = 0.83$).

Results

The mean price expectation of the pair of athletic shoes amounts to €90.89. This is a significant figure, because it is close to the shoes' original store price of €90 which had never been disclosed to the respondents. Furthermore, the differences between PE 1 and PE 2 are limited and only standard deviation decreases in this step. The same is true for WTP 1 and WTP 2. For the validity of the results, it is crucial that there are no systematic differences between the two samples exposed to the negative

Table 3.1 Mean values and standard deviations of measured variables

	All		Positive stimulus		Negative stimulus		Difference between samples	
	μ	σ	μ	σ	μ	σ	t test	Sig.
PE 1	90.89	25.05	91.87	23.17	89.89	26.90	−0.63	n.s.
PE 2	87.28	20.57	89.23	19.13	85.29	21.84	−1.53	n.s.
PE 3	86.75	23.02	94.39	19.87	78.93	23.46	−5.66	***
WTP 1	56.30	22.87	56.77	22.10	55.82	23.70	−0.33	n.s.
WTP 2	56.80	20.46	57.91	20.54	55.66	20.39	−0.87	n.s.
WTP 3	51.84	23.56	60.67	21.11	42.80	22.55	−6.51	***
CSSP	4.13	1.49	4.07	1.50	4.18	1.48	−0.62	n.s.
PI	4.27	1.62	4.58	1.56	3.95	1.63	3.13	**

μ = Arithmetic mean value; σ = Standard deviation; ***: $p < 0.001$; **: $p < 0.01$

and positive stimulus. Table 3.1 gives an overview of the mean values of all of the measured variables. The final column provides T-values that indicate the significance of the differences between the two samples. As required, the differences in WTP 1 and WTP 2, PE 1 and PE2 as well as CSSP are not significant. The significant differences in PE 3 and WTP 3 were expected (see Hypothesis 1). But there is also a difference in product involvement such that the sample exposed to the negative stimulus is significantly less involved in athletic shoes. This aspect will require special attention when discussing the related Hypothesis 3.

Consumers reward social product features

When respondents were exposed to the stimulus, their price expectation as well as willingness to pay changed significantly. The positive social product information led to an increase in PE of €5.16 and in WTP of €2.77. The negative social product information caused a decrease of €6.36 in PE and €12.86 in WTP. Thus, the data indicate that consumers are willing to penalize bad ethics as they respond to negative social product information with a decrease in WTP. But they are also willing to reward good ethics as positive social product information leads to an increase in WTP. As shown in the overview in Table 3.2, the findings are significant. Consequently, Hypotheses 1A and 1B are supported by the empirical data. Nevertheless, it is worth mentioning that respondents reported a decrease of WTP as a consequence of positive social product information.

Table 3.2 Overview over hypotheses and test results

Hypothesis	Argument 1	Mean	STD	Tested relation	Argument 2	Mean	STD	Applied method	Test result	Test significance
H_{1A}	WTP 3 pos	60.67	21.11	>	WTP 2 (pos)	57.91	20.53	t test (paired)	$t = -2.72$	**
H_{1B}	WTP 3 neg	42.80	22.55	<	WTP 2 (neg)	55.66	20.39	t test (paired)	$t = 7.88$	***
H_2	|WTP 3 neg – WTP 2 (neg)|	13.66	17.65	>	|WTP 3 pos – WTP 2 (pos)|	6.53	9.85	t test (indept.)	$t = 6.51$	***
$H_{2A/B}$	|PE 3 neg|	9.00	15.13	>	|PE 3 pos|	7.88	12.29	t test (indept.)	$t = 0.64$	n.s.
H_3	PI	4.27	1.62	∼-	|WTP 3 – WTP 2|	10.06	14.66	Corr. analysis	$r = -0.06$	n.s.
H_{4A}	CSSP (pos)	4.07	1.50	∼	(WTP 3 pos – WTP 2)	6.53	9.85	Corr. analysis	$r = 0.28$	**
H_{4B}	CSSP (neg)	4.18	1.48	∼-	(WTP 3 neg – WTP 2)	13.66	17.65	Corr. analysis	$r = -0.17$	n.s.
H_5	|WTP 2 – WTP 1|	7.80	11.91	∼	|WTP 3 – WTP 2|	10.06	14.66	Corr. analysis	$r = 0.23$	***

(neg)/(pos) indicates the sub sample exposed to the respective stimulus without the variable being directly affected by the stimulus

Test significance:
*** highly significant ($p < 0.001$)
** significant ($p < 0.01$)
n.s. not significant ($p > 0.1$)

Tested relations:
> is greater than
< is smaller than
∼ correlates positively
∼- correlates negatively

One possible cause might be a negative effect of the increased awareness of child labor as an issue related to athletic shoes that could have been stimulated by the product information.

Consumers' negativity bias

The presented price figures give an indication that consumers have a negativity bias in their judgment of social product information. While the decrease as the result of negative information amounts to €12.86, the increase upon exposure to positive information amounts to no more than €2.77. Hence, consumers' likeliness to punish socially irresponsible product features exceeds their willingness to reward ethical behavior to a considerable extent. Based upon the T-test results (see Table 3.2), Hypothesis 2 can be accepted. Figure 3.1 visualizes the relationship between WTP and PE for the three stages: (i) with negative, (ii) without any and (iii) with positive social product information. For consumers' willingness to pay, the sharp bend shows the negativity bias in response to social product information.

In reference to the theoretical explanation of the negativity bias, we present two alternatives. According to range-frequency theory and assimilation-contrast theory, the negativity bias is due to humans' likeliness to rely on a positive reference when judging the world. This would indicate that the negativity bias applies not only to consumers' willingness to pay, but also to their price expectations. Range theory and

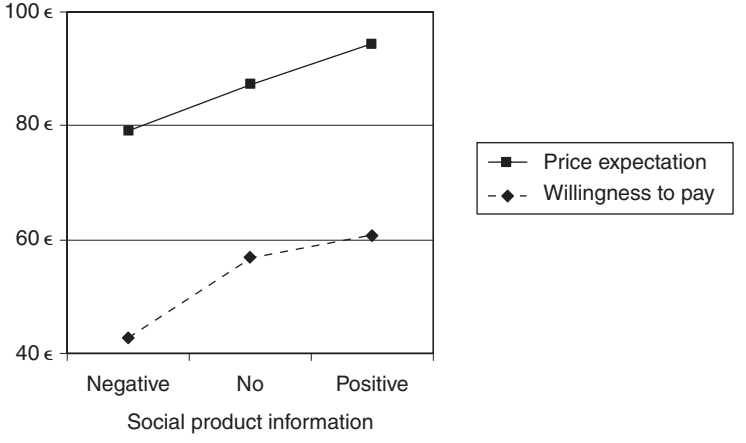

Figure 3.1 Effects of social product information on PE and WTP

category-diagnosticity theory, by contrast, see the source of the negativity bias as lying in the greater uncertainty that lies in judging positive stimuli compared to negative stimuli. Along with these theories, we argued that there should be no negativity bias regarding the price expectation but that the absolute impact |PE3 – PE2| should be equal for both stimuli. Being a straight line, the upper graph in Figure 3.1 illustrates that there seems to be no bias in price expectations. The T-test confirms that there is no significant difference between the absolute impact of positive and negative social product information on PE. This result suggests that consumers only apply the negativity bias to their own evaluations and not to their expectations of how others evaluate the world (for example, expected price set by a company). As a result, range theory and category-diagnosticity theory are better able to explain consumers' reaction to social product information than range-frequency theory and assimilation-contrast theory. Thus, Hypothesis 2B finds support while Hypothesis 2A is rejected. Furthermore, the result provides further evidence that the two stimuli may indeed be considered as being of equal intensity.

Influence of consumers' attitudes on price response

The third area of results concerns the impact of consumers' attitudes on their price response. In this scope the influence of product involvement (PI), consumers' sensitivity to social performance (CSSP) and consumers' responsiveness to external information (CREI) were investigated.

Product involvement

The assumption about product involvement was that it correlates negatively with the absolute impact of social product information as social aspects are relatively less important to highly involved consumers. However, the evaluation of the gathered data shows no significant relation between the two variables (see Table 3.2). Thus, hypothesis 3 needs to be rejected. A separate analysis for each subsample did not disclose any differing results. Yet, one should state that although the presented data does not support the given hypothesis, additional research on this issue is necessary due to the significant difference in product involvement between the two subsamples (see Table 3.1).

Consumers' sensitivity to social performance (CSSP)

Table 3.2 shows that CSSP has received average ratings close to the scale's midpoint of four. The assumption regarding the impact of CSSP was that

it intensifies the positive impact of positive and the negative impact of negative information. A correlation analysis reveals that a more differentiated view is necessary. For the positive sample, CSSP correlates positively ($r = 0.28$; $p < 0.01$) with the impact of positive information on WTP which provides support for hypothesis 4A. For the negative sample, however, the impact of CSSP is not of sufficient significance ($r = -0.17$; $p = 0.053$) and thus suggests rejecting hypothesis 4B. According to this finding, consumers with a high sensitivity to social performance are willing to pay more for social product features. But the expected discount on negative social product information does not significantly depend on CSSP. This result suggests that the willingness to penalize bad ethics is widely shared among the respondents irrespective of their attitude towards social performance.

Consumers' responsiveness to external information (CREI)

The final aspect to be regarded is the correlation between consumers' responsiveness to external information and their absolute impact of social product information on their willingness to pay. The analysis shows support for Hypothesis 5 with a highly significant correlation of 0.23. This means that the extent to which consumers respond to general reference information in their shopping environment, such as information on alternative products and their prices, partly determines the extent to which they respond to social product information. A separate analysis by subsample reveals, however, that the hypothesis should be refined. Other than hypothesized, the correlation between CREI and ISPI is not significant for both samples. While CREI does correlate significantly with the ISPI for the negative sample ($r = 0.20$; $p < 0.05$), this correlation is not significant for the positive sample ($r = 0.13$; $p > 0.10$). Thus, the decrease in willingness to pay after receiving negative information can be described as a general behavior of all consumers with the extent of response being mainly dependent on the general responsiveness to external information. In contrast, in explaining the price response to positive information, consumers' general responsiveness to external information is less valid but their sensitivity to social performance serves as a suitable determinant.

Conclusion and implications

We presented a study that gives support to the claim that being good pays off since consumers are willing to pay more for social product features. Nonetheless, it is even more important for companies not to offer

ethically bad products, since consumers have a strong negativity bias in response to social product information. Their discount responding to negative product features is considerably higher than their increase in WTP as a response to positive information. Furthermore, the results imply that it is the socially sensitive consumer who is willing to pay for social product features. In contrast, the reaction to negative information is broadly independent of consumers' social attitude but mainly depends on consumers' sensitivity to external information sources. Other than expected, product involvement has not been shown to have a significant influence.

Theoretically, the presented study was based on the negativity bias and attempted to add substantially to an understanding of consumers' response to social product information. In the theoretical foundation of the bias, we found explanations building upon consumers' uncertainty to be more suitable than those built on the assumption of consumers' positive view of the world. This is true since the former better explained the development of consumers' price expectations in response to positive and negative information.

Practically, the results yield implications about three levels of corporate action. First, the investigation has given further support to the claim that consumers react to a company's socially responsible and ethical behavior not only by expressing increased sympathy to the company, but by effectively adapting their willingness to pay. On a strategic level this means for companies that management that aims to achieve profit maximization or shareholder value optimization needs to take into account decisions about corporate social behavior as relevant actions in addition to product decisions and choices about financial transactions.

Secondly, the results offer a number of implications that need to be considered on a tactical management level. As we have shown, consumers are more likely to punish negative social performance than they are to reward positive performance. This implies that corporate management should place a strong emphasis on the fulfillment of minimum requirements – that is, on performing the socially responsible actions that are assumed to be "normal" by the consumers. In a second step one might aim to exceed the minimum requirements. However, from an economic perspective, a more detailed analysis about the cost side of specific CSR activities would be necessary in this context in order to judge which CSR activities still represent a business case and which go beyond.

The third operational perspective concerns the concrete shopping situation. The fact that consumers adapt social product information

instantly to their price perceptions may be considered in the design of sales outlets. Social product information given with the product at the point of sale may, if it is judged as being credible, influence the consumers' willingness to pay. Therefore adding positive social product information that has been certified by an independent and credible entity might have a direct impact on products' sales figures.

References

Ahluwalia, R., R. E. Burnkrant, and H. R. Unnava (2000) "An Integrative Model of Market-Related Negative Information Processing: The Context of Negative Publicity," *Journal of Marketing Research*, Vol. 37, pp. 203–14.

Auger P., P. Burke, T.M. Devinney, and J. J. Louviere (2003) "What Will Consumers Pay for Social Product Features?," *Journal of Business Ethics*, Vol. 42. No. 2, pp. 281–304.

Baron, D. P., and D. Diermeier (2007) "Introduction to the Special Issue on Nonmarket Strategy and Social Responsibility," *Journal of Economics & Management Strategy*, Vol. 16, No. 3, pp. 741–72.

Baumeister, R. F., E. Bratslavsky, C. Finkenauer, and K. D. Vohs (2001) "Bad is Stronger than Good," *Review of General Psychology*, Vol. 5, No. 4, pp. 323–70.

Birnbaum, M. H. (1972) "Morality Judgments: Tests of an Averaging Model," *Journal of Experimental Psychology*, Vol. 93. No. 1, pp. 35–42.

Briesch, R. A., L. Krishnamurthi, T. Mazumdar, and S. P. Raj (1997) "A Comparative Analysis of Reference Price Models," *The Journal of Consumer Research*, Vol. 24, No. 2, pp. 202–14.

Cacioppo, J. T. and G. G. Berntson (1994) "Relationship Between Attitudes and Evaluative Space: a Critical Review, With Emphasis on the Separability of Positive and Negative Substrates," *Psychological bulletin*, Vol. 115, No. 3, pp. 401–22.

Creyer, E. and W. T. Ross (1997) "The Influence of Firm Behavior on Purchase Intention: Do Consumers Really Care about Business Ethics?,"*Journal of Consumer Marketing*, Vol. 14, No. 6, pp. 421–8.

Darby, M. and E. Karni (1973) "Free Competition and the Optimal Amount of Fraud," *Journal of Law and Economics*, Vol. 16, No. 4, pp. 67–88.

Eberl, M. and M. Schwaiger (2006) "Segmentspezifischer Aufbau von Unternehmensreputation durch Übernahme gesellschaftlicher Verantwortung [Segment-Specific Creation of Corporate Reputation by Accepting Social Responsibility]," *Die Betriebswirtschaft*, Vol. 66, No. 4, pp. 418–40.

Elliott, K. A. and R. B. Freeman (2001) "White Hats or Don Quixotes? Human Rights Vigilantes in the Global Economy," *MA Working paper*, No. 8102 (Cambridge, MA: National Bureau of Economic Research).

Estelami, H. and S. Maxwell (2003) "The Behavioral Aspects of Pricing," *Journal of Business Research*, Vol. 56, No. 5, pp. 353–4.

Fiske, S. T. (1980) "Attention and Weight in Person Perception: The Impact of Negative and Extreme Behavior," *Journal of Personality and Social Psychology*, Vol. 38, No. 6, pp. 889–906.

Folkes, V. S. and M. A. Kamins (1999) "Effects of Information about Firms' Ethical and Unethical Actions on Consumers' Attitudes," *Journal of Consumer Psychology*, Vol. 8, No. 3, pp. 243–59.

Folkes, V. S. and V. M. Patrick (2003) "The Positivity Effect in Perceptions of Services: Seen One, Seen Them All?," *Journal of Consumer Research*, Vol. 30, No. 1, pp. 125–37.

Greenwald, A. and C. Leavitt (1984) "Audience Involvement in Advertising: Four Levels," *Journal of Consumer Research*, Vol. 11, pp. 581–92.

Hansen, U. and U. Schrader (2005) "Corporate Social Responsibility als aktuelles Thema der Betriebswirtschaftslehre [Corporate Social Responsibility as a Current Issue in Management Studies]," *Die Betriebswirtschaft*, Vol. 65, No. 4, pp. 373–95.

Herr, P. M., F. Kardes, and J. Kim (1991) "Effects of Word-of-Mouth and Product-Attribute Information on Persuasion: An Accessibility-Diagnosticity Perspective," *Journal of Consumer Research*, Vol. 17, No. 4, pp. 454–62.

Ito, T. A., J. T. Larsen, N. K. Smith, and J. T. Cacioppo (1998) "Negative Information Weighs More Heavily on the Brain: The Negativity Bias in Evaluative Categorizations," *Journal of Personality and Social Psychology*, Vol. 75, No. 4, pp. 887–900.

Kahneman, D., and A. Tversky (1979) "Prospect Theory: an Analysis of Decision Under Risk," *Econometrica*, Vol. 47, No. 2, pp. 263–91.

Kanouse, D. E. (1984) "Explaining Negativity Biases in Evaluation and Choice Behaviour: Theory and Research," *Advances in Consumer Research*, Vol. 11, pp. 703–8.

Kaplan, M. F. (1976) "Measurement and Generality of Response Dispositions in Person Perception," *Journal of Personality*, Vol. 44, No. 2, pp. 179–94.

Klein, J. and N. Dawar (2004) "Corporate Social Responsibility and Consumers' Attributions and Brand Evaluations in a Product-Crisis," *International Journal of Research in Marketing*, Vol. 21, No. 3, pp. 203–17.

Lalwani, A. (2006) "Negativity and Positivity Biases in Product Evaluations: The Impact of Consumer Goals and Prior Attitudes," ZIBS Research Report (Atlanta, GA: Emory University).

Laurent, G. and J. Kapferer (1985) "Measuring Consumer Involvement Profiles," *Journal of Marketing Research*, Vol. 22, pp. 41–53.

Lupfer, M. B., M. Weeks, and S. Dupuis (2000) "How Pervasive Is the Negativity Bias in Judgments Based on Character Appraisal?," *Personality and Social Psychology Bulletin*, Vol. 26, No. 11, pp. 1353–60.

Luo, X. and C. B. Bhattacharya (2006) "Corporate Social Responsibility, Customer Satisfaction, and Market Value," *Journal of Marketing*, Vol. 70, No. 4, pp. 1–18.

Maignan, I., O. C. Ferrell, and G. T. M. Hult (1999) "Corporate Citizenship: Cultural Antecedents and Business Benefits," *Journal of the Academy of Marketing Science*, Vol. 27, No. 4, pp. 455–69.

Marymount University Center for Ethical Concerns (1999) "The Consumers and Sweatshops: November 1999", http://www.marymount.edu/news/garmentstudy/overview.html. Accessed June 2007.

Mellers, B. A., V. Richards, and M. H. Birnbaum (1992) "Distributional Theories of Impression Formation," *Organizational Behavior and Human Decision Processes*, Vol. 51, No. 3, pp. 313–43.

Meijer, M. M. and T. Schuyt (2005) "Corporate Social Performance as a Bottom Line for Consumers," *Business & Society*, Vol. 44, No. 4, pp. 442–61.
Mittal, B. (1995) "A Comparative Analysis of Four Scales of Consumer Involvement," *Psychology & Marketing*, Vol. 12, No. 7, pp. 663–82.
Mizerski, R. W. (1982) "An Attribution Explanation of the Disproportionate Influence of Unfavorable Information," *Journal of Consumer Research*, Vol. 9, No. 3, pp. 301–10.
Mohr, L. A., and D. J. Webb (2005) "The Effects of Corporate Social Responsibility and Price on Consumer Responses," *The Journal of Consumer Affairs*, Vol. 39, No. 1, pp. 121–47.
Monroe, K. B. (1973) "Buyers' Subjective Perceptions of Price," *Journal of Marketing*, Vol. 10, No. 1, pp. 70–80.
Parducci, A. (1965) "Category Judgment: a Range-Frequency Model," *Psychological Review*, Vol. 72, No. 6, pp. 407–18.
Parducci, A. (1968) "The Relativism of Absolute Judgments," *Scientific American*, Vol. 219, No. 6, pp. 84–90.
Paul, K., L. M. Zalka, M. Downes, S. Perry, and S. Friday (1997) "US Consumer Sensitivity to Corporate Social Performance," *Business & Society*, Vol. 36, No. 4, pp. 408–18.
Reeder, G. D. and M. D. Coovert (1986) "Revising an Impression of Morality," *Social Cognition*, Vol. 4, No. 1, pp. 1–17.
Reeder, G. D. and M. B. Brewer (1979) "A Schematic Model of Dispositional Attribution in Interpersonal Perception," *Psychological Review*, Vol. 86, No. 1, pp. 61–79.
Sen, S. and C. B. Bhattacharya (2001) "Does Doing Good Always Lead to Doing Better? Consumer Reactions to Corporate Social Responsibility," *Journal of Marketing Research*, Vol. 38, No. 2, pp. 225–43.
Sherif, M. and C. I. Hovland (1961) *Social Judgment* (New Haven, CT: Yale University Press).
Skowronski, J. J. and D. E. Carlston (1987) "Social Judgment and Social Memory: The Role of Cue Diagnosticity in Negativity, Positivity, and Extremity Biases," *Journal of Personality and Social Psychology*, Vol. 52, No. 4, pp. 689–99.
Skowronski, J. J. and D. E. Carlston (1989) "Negativity and Extremity Biases in Impression Formation: a Review of Explanations," *Psychological Bulletin*, Vol. 105, No. 1, pp. 131–42.
Skowronski, J. J. and D. E. Carlston (1992) "Caught in the Act: When Impressions Based on Highly Diagnostic Behaviors Are Resistant to Contradiction," *European Journal of Social Psychology*, Vol. 22, No. 5, pp. 435–52.
Subrahmanyan, S. (2004) "Effects of Price Premium and Product Type on the Choice of Cause-related Brands: a Singapore Perspective," *The Journal of Product and Brand Management*, Vol. 13, Nos 2–3, pp. 116–24.
University of Maryland (2000) *Americans on Globalization: A Study of Public Attitudes* (Washington, DC: Program on International Policy Attitudes (PIPA)).
Volkmann, J. (1951) "Scales of Judgment and their Implications for Social Psychology," in J.H. Rohrer and M. Sherif (eds), *Social Psychology at the Crossroads* (New York: Harper & Row), pp. 273–94.
Weidmer, B. (1994) "Issues and Guidelines for Translation in Cross-cultural Research," American Statistical Association, *Proceedings of the Survey Research Methods Section* (Alexandria, VA: American Statistical Association), pp. 1226–31.

Wyer, R. S. (1973) "Category Ratings as 'Subjective Expected Values': Implications for Attitude Formation and Change," *Psychological Review*, Vol. 80, No. 6, pp. 446–67.
Wyer, R. S. (1974) "Changes in Meaning and Halo Effects in Personality Impression Formation," *Journal of Personality and Social Psychology*, Vol. 29, No. 6, pp. 829–35.

4

Reference Points Beyond Price – Fairness Effects in Customer Choices

Christine Mathies

Introduction

Reference price effects are well established in the extensive body of reference price research and are an important element in modeling customers' choices (cf. Briesch, Krishnamurthi, Mazumdar, and Raj, 1997; Kalyanaram and Winer, 1995; Putler, 1992; Rajendran and Tellis, 1994; Winer, 1989). The related area of perceived price fairness incorporates concepts from the fairness and justice literature (cf. Baumol, 1982; Konow, 2003) to examine the determinants of reference prices and how they impact on customers' fairness judgments. Despite widespread recognition of the importance of reference-dependent effects related to price, reference-dependency has not been extended to other product and service attributes. As reference-dependent preference theories (Kahneman and Tversky, 1979; Sugden, 2003; Tversky and Kahneman, 1991), adaptation level theory (Helson, 1948), and the literature on asymmetric customer satisfaction judgment (Mittal, William, and Baldasare, 1998) propose that human perception in general occurs relative to a reference point of neutral response, we extend the concept of reference price research and price fairness to a range of product attributes other than price.

The aim of this chapter is therefore to propose and test a model of customer choice that accounts for reference-dependent fairness considerations for price as well as non-price attributes in order to establish a better understanding of customer decision making in situations where firms convey conflicting messages that are also inconsistent over time and across customers. The specific context for this study is the hotel and airlines industry, where the practice of simultaneously applying yield management and customer-centric marketing initiatives increases the

risk of reference point deviations and perceived unfairness. For example, a frequent flyer member might try to redeem points for an award booking for the Easter weekend – a time of peak demand. She is likely to be unsuccessful because the allocation for award bookings has been utilized, although Internet booking platforms clearly show her that seats are still available. Applying an expected utility framework, we assume that customers choose the option which creates their highest level of utility. We then proceed to show how unfairness alters customers' utility assessments beyond the direct effects of price and product attributes, and extend the basic utility model by adding a reference-dependent fairness adjustment component for each attribute. These adjustments reflect the premise that customers judge the fairness of an offer by comparing its performance on a number of attributes to their respective reference points. In an effort to ensure distributional, procedural and interactional justice, customers form reference points based upon past personal experiences, knowledge obtained from other customers and various media sources, other offers advertised at the time of choice, and the presentation of an offer framed as a gain or loss. Lastly, we seek to confirm the findings of prospect theory that losses weigh more than gains.

This chapter is divided into six sections. Following this introductory paragraph, the next section describes a model to explain customer choice under unfairness, which can be tested using stated choice experiments. The model conceptualizes fairness adjustments as a comparison of actual attribute levels of an alternative with their respective reference points. We then summarize the analytical approach and the method of data collection and describe the characteristics of the data sample. The following two sections present and discuss a basic expected utility model and draw some implications for decision-making theory. Finally, we conclude with closing remarks and recommendations for further research.

Modeling fairness judgments in customer choice

Expected utility theory makes the assumption that individuals assess their options and select the alternative with the highest utility resulting from price and product attributes x (Thaler, 1980). Let A denote the number of brands available to customer n, who obtains a certain level of utility $U_{nj} = v_{nj} + \varepsilon_{nj}$ from each available, mutually exclusive alternative $\mathrm{j} \in \mathrm{A} = [1; \ldots \mathrm{J}]$, where vnj is the systematic and εnj the random component of utility (Louviere, Hensher, and Swait, 2000), and chooses

alternative i if and only if $Uin > Ujn \forall j \neq i \in A$. The probability that customer n chooses alternative i is therefore $Pin = P[(\varepsilon jn - \varepsilon in) < (vin - vjn)] \forall j \neq i$. Assuming independence and identical Gumbel distribution of the random components, the choice probability can be rewritten as the multinomial logit model (McFadden, 1986; Train, 2003):

$$P_{ni} = \frac{\exp^{v_{ni}}}{\sum_{j \in A} \exp^{v_{nj}}}, \quad \text{with } v_{nj} = x_n' \beta_i,\ P_{ni} = \frac{e^{x_n' \beta_i}}{\sum_{j \in A} e^{x_n' \beta_j}} \tag{4.1}$$

Customers, however, do not always choose the alternative with the highest utility, and their purchase decisions might be better captured by choice theories that account for the importance of customer expectations and resultant reference points (Burton and Babin, 1989; Sebora and Cornwall, 1995; Thaler, 1980). Kahneman and Tversky's (1979) prospect theory and the more general reference-dependent preference theory (Köszegi and Rabin, 2004; Munro and Sugden, 2003; Sugden, 2003; Tversky and Kahneman, 1991) imply that people evaluate outcomes relative to a neutral reference point, and that an editing or coding phase precedes the actual evaluation and choice phase. Similarly, customer satisfaction research found that customers evaluate performance of product attributes relative to their expectations (Mittal, William, and Baldasare, 1998).

Many of these deviations from objective utility maximization can be explained by using the concept of fairness (Konow, 2003). Kahneman et al. (1986a) show that perceived unfairness encourages individuals to take their business elsewhere, and the customers are willing to pay a premium to avoid unfairness. The effects of perceived unfairness on customer behavior have been found to be decreased perceived utility and negative emotions, and therefore lower current and future willingness to (re-)purchase (R. N. Bolton, Kannan, and Bramlett, 2000; Huppertz, Arenson, and Evans, 1978; Maxwell, 2002). Fairness can be defined as the subjective judgment of an outcome and the process to arrive at this outcome as reasonable, acceptable, or just, comparative to a standard, norm or reference point (L. E. Bolton, Warlop, and Alba, 2003; Frey and Pommerehne, 1993; Kahneman, Knetsch, and Thaler, 1986a; Maxwell, 2002; Xia, Monroe, and Cox, 2004).

Following the propositions of reference-dependent preference theory, the utility of an alternative can therefore be captured as a combination of a utility component independent of reference points, and a

reference-dependent utility or fairness adjustment component (Köszegi and Rabin, 2004; Sugden, 2003). The utility can be specified as follows:

$$v_{ni} = \beta_{1nik} X_{nik} + \beta_{2ni} R_{ni}, \tag{4.2}$$

where $\beta_{1ni} X_{ni}$ captures the preferences for the k price and product/service attributes x_{nik} describing alternative i, and $\beta_{2ni} R_{ni}$ relates to the utility changes created by fairness-based coding. The existing research focuses on adjustments based only on the price attribute. This research generalizes the reference point and fairness concept beyond price and also considers fairness adjustments for non-price attributes. Assuming that customers form separate reference levels and decision frames for each relevant product attribute (Biehal and Chakravarti, 1986; Janiszewski, Silk, and Cooke, 2003; Thaler, 1985), the findings of reference price research are applied to model reference points both for price and for attributes other than price.

The utility model from equation 4.2 is presented in Figure 4.1 and can be summarized in the following two hypotheses:

> Customers derive utility (a) directly from price and product attributes; and (b) through comparisons to a reference point.
>
> Customers form separate reference points and fairness judgments for (a) price and (b) non-price attributes.

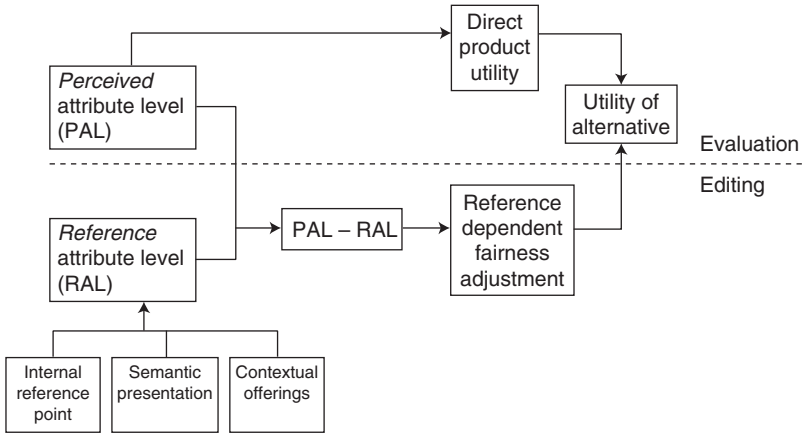

Figure 4.1 Conceptual model of reference-dependent fairness adjustments to utility

Fairness gains and losses

Customers assess product alternatives as either gains (above their reference point) or losses (below their reference point) and show a stronger behavioral response to perceived losses than to gains (Kahneman and Tversky, 1979). Reference price studies confirm this pattern and found that customers respond more strongly to price increases than to price decreases relative to reference prices (Kalyanaram and Winer, 1995). Customer satisfaction judgments show the same asymmetrical pattern (Mittal, William, and Baldasare, 1998). Customers are naturally expected to prefer advantageous to disadvantageous deviations, which makes it necessary to distinguish two separate terms for positive and negative deviations in customers' utility specifications:

$$v_{ni} = \beta_{1nik} X_{nik} + \beta_{2ni}\mathrm{RGAIN}_{\mathrm{ni}} + \beta_{3ni}\mathrm{RLOSS}_{\mathrm{ni}} \tag{4.3}$$

Where $\beta_{2ni}\mathrm{RGAIN}_{\mathrm{ni}}$ and $\beta_{2ni}\mathrm{RLOSS}_{\mathrm{ni}}$ capture the utility changes created by positive or negative deviations from the individual's reference points. These gain and loss effects are defined as follows. Each of the k RGAIN terms is the difference between the actual attribute of that alternative (PAL) and customer n's reference attribute (RAL), given that PAL < RAL for price and *PAL* > RAL for all other attributes. RLOSS terms are the difference given that *PAL* < RAL for price and *PAL* > RAL otherwise. The composition of the reference level RAL will be specified subsequently. Please note that the operationalization of the measurement of non-price attributes relative to their respective reference points are based on the assumption that the difference between any two attribute levels is equally spaced, rather than dummy codes because it is the difference between the reference point and attribute level (see equation 4.4) which enters the utility function.

$$\begin{aligned}
&\mathrm{RGAIN}_{\mathrm{njk}} = \min\left\{(\mathrm{PAL}_{\mathrm{njk}} - \mathrm{RAL}_{\mathrm{nk}}); 0\right\} && \text{and}\\
&\mathrm{RLOSS}_{\mathrm{njk}} = \max\left\{(\mathrm{PAL}_{\mathrm{njk}} - \mathrm{RAL}_{\mathrm{nk}}; 0\right\} \forall\ k = 1 && \text{and}\\
&\mathrm{RGAIN}_{\mathrm{njk}} = \max\left\{(\mathrm{PAL}_{\mathrm{njk}} - \mathrm{RAL}_{\mathrm{nk}}); 0\right\} && \text{and}\\
&\mathrm{RLOSS}_{\mathrm{njk}} = \min\left\{(\mathrm{PAL}_{\mathrm{njk}} - \mathrm{RAL}_{\mathrm{nk}}); 0\right\} \forall\ k \neq 1
\end{aligned} \tag{4.4}$$

Where k = 1 denotes the price attribute. The magnitude and direction of fairness adjustments are hypothesized to conform to the following rules:

A positive (negative) deviation of the attribute level from the reference point will lead to a positive (negative) adjustment to utility.

The relative size of a negative utility adjustment is larger than the relative size of a positive adjustment, assuming equal absolute deviations from the reference point.

Determinants of reference points

There is an extensive literature relating to individuals' preferences given a certain reference point, but far less has been done to identify the determinants of reference points (Köszegi and Rabin, 2004). Winer (1989) introduced the idea of reference dependency into customer decision making in his multi-staged model of customer choice which includes reference price effects. Reference price research in general investigates the effects of known reference prices (cf. Dholakia and Simonson, 2005; Erdem, Mayhem, and Sun, 2001), and determinants of expectations and reference points for prices. Bolton, Warlop et al. (2003), for example, see reference points determined by past prices, competitor prices and vendor costs. Kahneman, Knetsch and Thaler (1986b) find that market prices, posted prices, and the history of previous transactions can serve as a reference price. The general consensus is that customers may use both internal and external reference prices (Erdem, Mayhem, and Sun, 2001; Kalyanaram and Winer, 1995; Mazumdar and Papatla, 1995). Internal (or temporal) reference prices are based on previous experiences with a brand and/or product category, and past exposure to other price information. External (or contextual) reference prices are current observed prices and suggested list prices, usually at the point and time of purchase. Marketers have the opportunity to manipulate reference prices through advertising to make customers perceive a price as a gain (Biswas and Blair, 1991; Lowengart, Mizrahi, and Yosef, 2003).

The determinants of reference prices and also, as we will show, of reference points for non-price attributes are summarized in the following constructs:

1. Internal reference points from past personal experiences, and indirect knowledge of past experiences through peers, promotional messages, the media, etc X_{int};
2. External reference points from contextual offerings at the time of purchase X_{ext}; and
3. The semantic presentation of the price variable as a gain or loss relative to a suggested standard rate X_{stand}.

Internal reference points reflect a customer's past purchases i up to purchase situation t, and customer's knowledge at time *t* about past offerings that she has not chosen, and about past offerings available to other customers. This indirect knowledge stems from past observations and personal experiences of peers (Briesch, Krishnamurthi, Mazumdar, and Raj, 1997; Kalyanaram and Winer, 1995). Customers rely on their personal experiences with a specific product/service category and/or supplier to adapt their reference points, because customers' memory for chosen as opposed to rejected options is particularly strong (Briesch, Krishnamurthi, Mazumdar, and Raj, 1997). A frequent flyer, for example, is well familiar with typical rates and availabilities for regular trips based on past purchases. She might have also talked to friends and family about their recent flight bookings, and might recall favourable rates advertised in the past. Equity theory, and the concept of distributive justice, support the notion that customers compare their own past experiences and those of others to assess the fairness of outcomes (Hunt and Kernan, 1991; Huppertz, Arenson, and Evans, 1978; Xia, Monroe, and Cox, 2004). Reference point research is built on the assumption that customers are willing and able to recall past purchases (Briesch, Krishnamurthi, Mazumdar, and Raj, 1997; Monroe, 1973). While some reference point literature assesses individuals' limited ability to accurately recall past transactions (cf. Monroe, 1973; Thaler, 1985), reference points are subjective measures and do not rely upon objectively exact memory (Biehal and Chakravarti, 1986).

Semantic presentation accounts for the manner in which the price attribute is presented as a discount (gain) or surcharge (loss) in relation to an initial price level, such as a rack rate, which is communicated to customers (adapted from Erdem, Mayhem, and Sun, 2001). For example, a standard rate could be promoted as a "Spring special," suggesting that it is a bargain buy. Prospect Theory and other work on reference-dependent preferences found that the presentation of alternatives alters whether they are perceived as gains or losses, and demonstrate that choices are not independent of the communication process (Kahneman and Tversky, 1979; Munro and Sugden, 2003; Tversky and Kahneman, 1991). The deliberate presentation of offerings as discounts/add-ons or surcharges/restrictions can be expected to shift a person's reference point.

External reference points refer to the mean of all other offerings that are available to the customer at purchase occasion t, and those offerings that are advertised to a customer but not available to him. Firms might offer a range of price–product combinations at any given time, some of which might not be available and hence cannot be chosen.

Airline customers, for example, may search for flights online, and find that the cheaper booking classes listed by a particular airline are no longer available – despite being displayed. Although any present stimuli alter perception (Helson, 1948) and reference price formation (Rajendran and Tellis, 1994), the effect of non-available alternatives has been neglected in previous reference price studies.

Employing the work of Rajendran and Tellis (1994), we suggest that customers can integrate the three reference point components into their utility assessment as a single reference point, relative to which they evaluate each attribute level.

$$v_{ni} = \beta_{1nik} X_{nik} + \beta_{2ni}(\overline{X}_{nk} - X_{nik}) \tag{4.5}$$

For non-price attributes, which are generally not continuous variables, the reference point is modeled as a latent construct formed by measured indicators of the four determining constructs (Bollen and Lennox, 1991; Diamantopoulos, 1999). For the purposes of computational simplification, the latent reference point variable was included in the choice model as a fixed effect (Ashok, Dillon, and Yuan, 2002; Ben-Akiva et al., 1999; Ben-Akiva, Walker, Bernardino, and Polydoropoulou, 2002).

Research design

The study involved the conducting of stated choice experiments with 465 airline passengers and 446 hotel customers in order to consider their purchase choices in the light of reference point deviations for both price and non-price attributes. As stated earlier, deviations from reference points and perceived unfairness are likely to occur in both the airlines and the hotel industry, where yield management constantly varies the available price–product combinations and frequent traveler programs lead to relatively stable reference points. Online data collection included customers' responses to a set of survey questions about personal experience and knowledge about specific travel, and stated preference choice experiments.

Unlabeled discrete choice experiments were designed for the airlines and hotel context to describe each alternative. A 32-profile fractional experimental within-subject design was obtained by selecting 32 profiles from the $4^7 \times 2^3$ complete factorial based on an orthogonal main effects design (Sloane, 2006). The study used price and nine other attributes of a flight to Bangkok and a hotel stay in Sydney or Melbourne. The within-subject design was nested within a between-subjects design. Up to five

factors related to the proposed reference point determinants were manipulated in both (airline and hotels) experiments. These included, among other things, whether (a) each choice set included two additional non-available alternatives that could not be chosen (contextual offerings), (b) whether price was displayed as a dollar amount only, or as dollar amount and percent discount or surcharge of a standard rate (semantic presentation), and (c) whether the trip scenario was for leisure or business. Respondents chose their most preferred flight or hotel from each of the 32 choice sets, and the dependent variable was analysed using McFadden's conditional logit model where choice is a function of attributes describing the alternatives (McFadden, 1986). The choice probability has been specified earlier in equation 4.1. In order to estimate how observed attributes influence respondents' choices, unidentified parameters θ are estimated by maximizing the following log-likelihood function:

$$\ln L(\theta) = \sum_{n=1}^{N} \sum_{j=1}^{J} y_{nj} \ln P_{ni} \tag{4.6}$$

where y_{ni} takes the value 1 if alternative j is chosen, and 0 for all other alternatives. Potential scale effects between the different sub-samples were found to be absent.

Results and discussion

This section summarizes the results from the data collected on airlines passengers and hotel guests. We first describe the conditional logit model fit statistics for the basic utility model and the proposed fairness models, and proceed to discuss the preference estimates for price- and non-price-related fairness adjustments. Please note that the preferences for the product attributes as such are not reported, as the paper focuses on the concept of reference-dependency in customer choice.

Model selection

To investigate Hypotheses 1 and 2, the first step is to determine which model best accounts for the choices of respondents. If fairness judgments affect customer choices, adding fairness adjustment components will better explain choices. We estimate the baseline model which does not include any reference-dependent utility components, as well as fairness models employing gain and loss terms for price only (Fairness Model A), and for each service product attribute (Fairness Model B).

Tables 4.1 and 4.2 present the goodness of fit statistics of the three models for the hotel and airlines studies. In both studies, Hypotheses 1 and 2 are well supported as the inclusion of reference price terms (Fairness Model A), and in particular attribute-specific fairness adjustment components for each attribute (Fairness Model B) significantly improve model fit. The log-likelihood ratio tests (LLRT) between Baseline Model and Fairness Models I and II, as well as between Fairness A and Fairness B, are significant ($p < 0.01$).

The model fit results support the hypothesis that customers include reference-dependent fairness adjustments for price and non-price attributes in their purchase choices. However, the comparatively low pseudo-R^2 values indicate a poor overall model fit and suggests the existence of preference heterogeneity. Latent class segmentation analysis was therefore adopted, which simultaneously estimates choice probabilities and latent segment membership probabilities (Swait, 1994; Boxall and Adamovicz, 2002). Following the recommendations of Swait (1994), Boxall and Adamowicz (2002) and Verma, Thompson et al. (2001), the best segment solution was determined based on the minimum Bayesian Information Criterion (BIC), the minimum Akaike Information Criterion (AIC), and McFadden's pseudo R^2. The goodness of fit statistics support

Table 4.1 Model fit statistics – airline study

Model	Parameters	LL	Pseudo R^2	LLRT*	Chi^2 critical value (p = .01)
Baseline	19	−18400.348	0.108		
Fairness A	21	−17908.499	0.1318	990.592 (2df)	9.21
Fairness B	35	−17851.208	0.1346	114.582 (14df)	29.14

* relative to previous model

Table 4.2 Model fit statistics – hotel study

Model	Parameters	LL	Pseudo R^2	LLRT*	Chi^2 critical value (p = .01)
Baseline	19	−17781.743	0.1013		
Fairness A	21	−17775.627	0.1016	12.232 (2df)	9.21
Fairness B	35	−17785.798	0.1034	71.62 (14df)	29.14

* relative to previous model

a three-segment solution for both the airline and hotel studies. In consideration of the focus of this chapter, the demographic composition of the segments will not be discussed.

Preference parameters

Airlines data

The utility function parameters β_{nks} for all fairness terms for the three-segment model are displayed in Table 4.3. It should be recalled that the utility of alternative i for customer n is modeled as a combination of utility directly obtained from product attributes, and fairness adjustments to utility relative to a reference point. The direct effects of product attributes will not be discussed, as this chapter focuses on the role of attribute-specific fairness adjustments in customers' choices. Overall, Hypothesis 1a is well supported, with all attributes except free flights have a significant influence on choices.

Table 4.3 Model estimation results – preference parameter estimates for airlines study

	Expected sign	Segment 1	Segment 2	Segment 3
Segment size		47.43%	35.99%	16.58%
Price gain	(−)	−0.0004[1]	−0.005[1]	−0.001[1]
Price loss	(−)	−0.0005[1]	−0.0063[1]	−0.001[1]
Routing gain	(+)	−0.0549	−0.0354	−0.7671[1]
Routing loss	(+)	0.1330[1]	0.1833[1]	0.4133[1]
Ticketing gain	(+)	−0.0357	0.0427	0.0926
Ticketing loss	(+)	−0.0145	−0.0955[2]	−0.1245
Cancellation gain	(+)	−0.0764[2]	0.059	0.1360
Cancellation loss	(+)	0.0712[2]	0.0904	−0.1977[2]
Flights gain	(+)	0.0166	−0.0741	0.0285
Flights loss	(+)	0.0059	−0.0074	0.0455
Fees gain	(+)	−0.0792	0.0563	0.2804
Fees loss	(+)	0.2117[2]	0.0275	0.8138[1]
Validity gain	(+)	−0.0087	−0.039	0.2011[1]
Validity loss	(+)	0.0015	−0.0528	−0.0027
Upgrades gain	(+)	−0.0092	0.0233	0.1272
Upgrades loss	(+)	−0.0464	0.0551	0.0935

[1] significant at p = 0.05
[2] significant at p = 0.1
Source: Adapted from Mathies (2007).

With regard to the effects of fairness adjustments for the eight service attributes (Hypothesis 1b), price behaves exactly as predicted in support of Hypothesis 2a. The gain and loss terms show negative coefficients across all three segments, and the loss coefficients are larger or the same as the gain coefficients. The results confirm reference price research, and Hypotheses 3 and 4 are supported for the price attribute. Price-related fairness adjustments are also a reflection of a segment's price sensitivity, where Segment 2 reacts most strongly to price gains and losses, followed by Segment 3.

With regard to the reference effects of non-price attributes (Hypothesis 2b), across all segments the loss term for routing is significant and has the correct sign, meaning that customers who expect a direct flight and are sent via another city discount their utility. Interestingly, in Segment 3 we observe a rather large negative coefficient for routing gains, meaning that those who were prepared for a stop-over but are offered a reduced travel time and/or direct flight, also discount their utility of an alternative. This can be explained by deliberate itinerary planning of the more experienced travelers contained in this segment, where a stop-over is seen as beneficial. In view of the strong preference for direct flights, this is a particularly interesting result and shows that fairness adjustments are not simply a reflection of direct attribute-generated utility but capture utility effect truly relative to a reference point.

Segment 1 is mostly concerned with reference point deviations of rules for cancellation and changes of the ticket. However, only the loss term shows the expected positive sign. A negative gain term, and also the negative loss term for Segment 3, denotes that stricter rules than expected would lead to an increase in utility. Similarly, the loss term for ticketing and payment conditions in Segment 2 has a negative coefficient. These seemingly peculiar results may be a reflection of customers' preference for definite travel plans locked in through pre-payment and tickets that do not allow changes. The apparent utility gain from a negative deviation can also be a consequence of our necessary assumption that categorical answer options for previous experiences can be arranged in ascending order. In the case of cancellations and changes, some respondents might perceive rules which allow cancellations and changes in return for a fee, or a fee and fare differences, as less desirable than a non-refundable ticket.

Significant estimates for gain and loss terms related to frequent flyer program features are limited principally to Segment 3. Individuals in this class are the fussiest frequent flyers – perhaps because most can compare their experiences from the several programs they belong to. They are very strongly opposed to any fees charged beyond what they would expect

to pay. Membership in more than one program indicates opportunistic behavior, and fees would be an unwelcome entry barrier. Segment 1 also has a significant, albeit smaller loss term for fees. This means that customers who are not prepared to pay membership fees (or only a small fee) heavily discount an alternative that charges (higher) fees. It is also important to note that customers who are prepared to pay a fee cannot be delighted by no membership fees. Segment 3 also rewards less stringent rules for point validity, meaning if points are valid for longer than expected utility of an alternative increases.

In summary, Hypotheses 2b and 3 are supported partly for fairness adjustments related to non-price attributes. Although no significant effects were found for free flights, upgrades, gains regarding ticketing and fees, and losses related to validity of frequent flyer points, all other fairness components verify Hypothesis 3 by showing significant coefficients in at least one segment. With the exception of ticketing loss, cancellation gain, and cancellation loss, the coefficients are positive as expected, and the negative sign of routing gains is attributed to itinerary planning. This endorses the notion of Hypothesis 3 that positive deviations from a reference point increase utility, while negative deviations reduce utility. The confirmation for Hypothesis 4 is somewhat difficult, as in most cases only the negative fairness adjustments (losses) are significant, which renders a comparison of coefficients for corresponding gain and loss terms within a segment unfeasible. This phenomenon could be regarded, however, as an extreme case of losses weighing more than gains, because with the exception of validity gains, only loss terms have a significant effect on utility judgments.

Hotel data

The segment-specific preference parameters β_{nis} for the hotel study are presented in Table 4.4. The discussion of results again focuses on the effects of reference-dependent fairness adjustments on utility. Overall, the hotel study again provides ample support for Hypothesis 1a as most attributes have significant coefficients in one or more segments.

Pertaining to the impact of reference-dependent utility, we find slightly less support for Hypothesis 1b in the hotel study. Contrary to the airlines study, the gain and loss adjustment terms for price are mostly not statistically significant – except for the loss term of Segment 2. This could be a reflection of the small price parameters for Segments 1 and 3, which indicate low levels of price sensitivity. The seemingly small reference price effects might also result from the way in which the data

Table 4.4 Model estimation results – preference parameter estimates for hotel study

	Expected sign	Segment 1	Segment 2	Segment 3
Segment size (%)		54.49	25.45	20.06
Price gain	(−)	0.0008	−0.0005	0.0004
Price loss	(−)	0.0005	−0.0063[1]	−0.0031
Location gain	(+)	−0.0174	−0.2336[1]	−0.0071
Location loss	(+)	0.0042	0.3812[1]	0.5411[1]
Cancellation gain	(+)	−0.0371	0.0106	−0.0317
Cancellation loss	(+)	0.0143	−0.0066[2]	−0.0427
Ticketing gain	(+)	0.0328	−0.0870	−0.1168
Ticketing loss	(+)	−0.0121	0.0794	−0.0112
Stays gain	(+)	0.1011[1]	−0.0724	0.0667
Stays loss	(+)	0.0403	0.0030	0.0330
Fees gain	(−)	−0.1395[1]	0.0676	−0.1093
Fees loss	(−)	−0.1037[1]	0.0662	−0.1642[1]
Validity gain	(+)	−0.0374	0.0442	0.1173
Validity loss	(+)	−0.0170	0.1253[2]	0.0462
Upgrades gain	(+)	0.0314	0.0689	0.0276
Upgrades loss	(+)	0.0238	0.0670	−0.0328

Note: The expected signs for some coefficients differ from those in the airline study due to reversed coding.
[1] significant at $p = 0.05$
[2] significant at $p = 0.1$
Source: adapted from Mathies (2007).

on past price experiences and price knowledge were collected. In an effort to avoid overestimating the effects of price-related fairness adjustments, the lowest price category in the survey section of the hotel study was specified as "up to $175." This means that the reference prices of respondents with knowledge and experience below $175 are conservative estimates above their real unobserved reference prices. As a result, fairness adjustments are deflated. The extensive body of reference price research confirming the importance of reference price terms renders the non-significance of the fairness adjustments for price a surprising result.

In support of Hypothesis 2b, several fairness adjustment terms for attributes other than price are, however, significant in at least one segment. Regarding the location of the hotel, Segment 3, and to a lesser extent Segment 2, penalize a location that is further away from the places to be visited than expected. The difference can be attributed to the different trip purposes, where business travelers are less willing to compromise on a convenient location. Perhaps surprisingly, Segment 2

also shows a negative coefficient for the location gain term, representing cases where the distance of the hotel to places of interest is larger than expected. We have already observed this phenomenon in the airlines data, and a plausible explanation is that some customers prefer a more quiet location further away from places to be visited. The unexpected, small negative, coefficient for the cancellation loss term in Segment 2 is also consistent with the findings of the airline study. It is difficult to account for an increase in utility resulting from cancellation terms that are more stringent than the individual's reference terms.

Customers in Segment 1 are most likely to make fairness adjustments if the hotel loyalty program features deviate from the respective reference points. In particular, the mainly premium level loyalty program members in this segment adjust utility upwards if the terms to make an award booking are less strict than expected, and if membership fees are below the reference point. The result for Segment 1 differs from the airline studies, where a fairness gain could not be achieved for award bookings and fees. This is one of the rare cases emerging from this study where exceeding customers' reference points can in fact increase utility for a profitable customer segment, meaning that fees and terms for award bookings for premium members should exploit this effect. Kim et al. (2004), however, encourage the use of loyalty programs as a means to successfully fill excess capacities during times of low demand, which means that award bookings are not available during shoulder or peak times. While this might be an appropriate approach for casual customers (Segments 2 and 3 cannot be delighted with absent or lower fees and easier access to award bookings), it has negative effects on demand in the case of premium loyalty members. In accordance with the findings for the airlines industry, the coefficients for fee-related unfairness show that Segments 1 and 3 are strongly opposed to fees. However, the fairness loss in Segment 1 is smaller than a potential gain, which contradicts the proposal of Hypothesis 4. Finally, Segment 2 adjusts utility downwards if the validity of loyalty points is shorter than the reference value, reconfirming the results of the airline study.

In summary, the hotel study partly supports Hypothesis 3, in that all but two of the significant fairness adjustments had the correct sign. The negative sign for location gains can be explained easily, whereas the negative sign for cancellation gains is difficult to account for. With regards to Hypothesis 4, we identified only one pair of matching gain and loss terms, for membership fees in Segment 1, where the size of the parameter estimates for gains and losses contradict the hypothesis. For the remaining fairness adjustments the same argument presented in the

airline study applies: in general, unfairness terms are significant while fairness gain terms, with only a few exceptions, have no significant effect.

Discussion

First, the results of both studies substantiate that customers' choices are captured more completely by a choice model accounting for the coding of alternatives relative to an (attribute-specific) reference point. This is a core argument of prospect theory (Kahneman and Tversky, 1979), and especially the more general reference-dependent preference theory (Sugden, 2003; Tversky and Kahneman, 1991). In the latter, it is shown how choices depend upon both reference points and also a preference component that is not related to reference points. In addition to the utility obtained directly from product attributes, customers make utility adjustments relative to a reference point as either gains (above the reference point) or losses (below the reference point). In support of Hypothesis 1, we found empirical support for both of these utility components. Reference-dependent fairness effects for all attributes correspond partly with the direct effect of the attributes, but also add a new dimension. For example, although the availability of rooms for award bookings does not have a direct impact on utility, one segment of hotel guests gains additional utility if the rules are less stringent than expected.

In general, reference-dependent preferences have been applied to price, giving rise to an extensive body of research relating to the effects of reference prices on customer choices (cf. Briesch, Krishnamurthi, Mazumdar, and Raj, 1997; Kalyanaram and Winer, 1995; Niedrich, Sharma, and Wedell, 2001; Putler, 1992; Winer, 1989). Reference price effects are clearly visible in the airlines data, but to a lesser extent in the hotel study because of the way data about past price experiences was collected.

The two studies extend the concept of reference dependency beyond price and test the effects of reference-dependent gain and loss terms for an additional seven non-price attributes. While only four of the reference-dependent components for non-price attributes were significant across both studies (price losses, routing gains and losses, and fee losses), we recognise the importance of reference points for all attributes except "upgrades" in one or more segments of the data. The relevance of reference points for non-price attributes as outlined in Hypothesis 2b is attested, but further research may be required to investigate different approaches to how to compute reference points for non-monetary values.

A closer examination of the significant reference-dependent components in both studies further confirms prospect theory and the link between attribute performance and customer satisfaction. Loss terms are more likely to be significant, and where they can be compared to a matching gain term, they are consistently larger. In both studies, Hypotheses 3 and 4 are well supported and provide empirical indications for the effects of gains and losses outlined in prospect theory for price and non-price attributes. This is an important finding to be considered by those in charge of product and pricing strategies. Achieving positive deviations from an individual's reference point will presumably entail additional costs, but it is likely to fail to delight customers in a way that has a favorable influence on their choices. Negative deviations, however, are penalized by a utility deduction and decrease the likelihood of a particular alternative being chosen. Service firms need to decide whether the cost savings of performing below customers' reference points outweigh the potential losses of sales revenue.

Conclusion

We propose that the findings from reference price research and perceived price fairness can be applied to product attributes other than price in an endeavor to achieve a more comprehensive explanation of customer choices. The results support reference-dependent preference theory and show that customers base their choices on utility derived directly from product attributes, and on attribute-specific utility adjustments relative to reference points. In both the airlines and the hotel study, utility judgments relative to a reference point were significant not only for price, but also for a range of non-price attributes specifying the flight and hotel alternatives. These utility adjustments follow the pattern of reference price research, prospect theory, and customer satisfaction research, in that positive deviations increase utility, negative deviations create utility losses, and losses generally have a larger impact than gains.

Regarding the limitations of this research, reference points could be recalculated using different reference point determinants and estimation methods, and the assumption of equally spaced qualitative attribute levels for non-price attributes may also affect results. Potential problems associated with the necessary, yet limiting assumptions of equal spaces have, for instance, become apparent in the results for gain and loss terms of cancellations and changes. Future research may explore alternative operationalization and estimation methods. Furthermore, data on past

purchase experience and knowledge were collected with a survey tool rather than revealed preference data. Although reference points are a subjective measure and are not dependent on objectively correct memory of past experiences, drawing on purchase histories and past and present purchase options might improve reference point calculations.

References

Ashok, K., W. R. Dillon and S. Yuan (2002) "Extending Discrete Choice Models to Incorporate Attitudinal and Other Latent Variables," *Journal of Marketing Research*, Vol. 39, No. 1, pp. 31–46.

Baumol, W. J. (1982) "Applied Fairness Theory and Rationing Policy," *The American Economic Review,* Vol. 7, No. 4, pp. 639–51.

Ben-Akiva, M., D. McFadden, T. Garling, D. Gopinath, J. Walker, D. Bolduc, et al. (1999) "Extended Framework for Modeling Choice Behavior," *Marketing Letters*, Vol. 10, No. 3, pp.187–203.

Ben-Akiva, M., J. Walker, A. T. Bernardino and A. Polydoropoulou (2002) "Integration of Choice and Latent Variable Models," in H. S. Mahmassani (ed.), *In Perpetual Motion: Travel Behaviour Research Opportunities and Application Challenges* (Amsterdam: Elsevier).

Biehal, G. and D. Chakravarti (1986) "Consumers' Use of Memory and External Information in Choice: Macro and Micro Perspectives," *Journal of Consumer Research,* Vol. 12, No. 4, p. 382.

Biswas, A. and E. A. Blair (1991) "Contextual Effects of Reference Prices in Retail Advertisement," *Journal of Marketing,* Vol. 55, No. 3, pp. 1–12.

Bollen, K. and R. Lennox (1991) "Conventional Wisdom on Measurement: a Structural Equation Perspective," *Psychological Bulletin,* Vol. 110, No. 2, p. 305.

Bolton, L. E., L. Warlop and J. W. Alba (2003) "Consumer Perceptions of Price (Un)fairness," *Journal of Consumer Research,* Vol. 29, pp. 474–91.

Bolton, R. N., P. K. Kannan and M. D. Bramlett (2000) "Implications of Loyalty Program Membership and Service Experiences for Customer Retention and Value," *Journal of the Academy of Marketing Science,* Vol. 28, No. 1, pp. 95–108.

Boxall, P. C. and W. L. Adamowicz (2002) "Understanding Heterogeneous Preferences in Random Utility Models: a Latent Class Approach," *Environmental and Resource Economics,* Vol. 23, No. 4, pp. 421–46.

Briesch, R. A., L. Krishnamurthi, T. Mazumdar and S. P. Raj (1997) "A Comparative Analysis of Reference Price Models," *Journal of Consumer Research,* Vol. 24, No. 2, pp. 202–14.

Burton, S., and L. A. Babin (1989) "Decision-framing Helps Make the Sale," *Journal of Consumer Marketing,* Vol. 6, No. 2, pp. 15–24.

Dholakia, U. M. and I. Simonson (2005) "The Effect of Explicit Reference Points on Consumer Choice and Online Bidding Behavior," *Marketing Science,* Vol. 24, No. 2, p. 206.

Diamantopoulos, A. (1999) "Viewpoint – Export Performance Measurement: Reflective Versus Formative Indicators," *International Marketing Review,* Vol. 16, No. 6, p. 444.

Erdem, T., G. Mayhem and B. Sun (2001) "Understanding Reference-Price Shoppers: a Within- and Cross-Category Analysis," *Journal of Marketing Research,* Vol. 38, No. 4, pp. 445–57.

Frey, B. S. and W. W. Pommerehne (1993) "On the Fairness of Pricing – an Empirical Survey Among the General Population," *Journal of Economic Behaviour and Organization,* Vol. 20, pp. 295–307.

Helson, H. (1948) "Adaptation-Level as a Basis for a Quantitative Theory of Frames of Reference," *The Psychological Review,* Vol. 55, No. 6, pp. 297–313.

Hunt, J. M. and J. B. Kernan (1991) "Consumer Reaction to Inequitable Exchange: the Role of Causal Inferences," *Journal of Social Psychology,* Vol. 131, No. 5, pp. 685–97.

Huppertz, J. W., S. J. Arenson and R. H. Evans (1978) "An Application of Equity Theory to Buyer–Seller Exchange Situations," *Journal of Marketing Research,* Vol. 15, pp. 250–60.

Janiszewski, C., T. Silk and A. D. J. Cooke (2003) "Different Scales for Different Frames: the Role of Subjective Scales and Experience in Explaining Attribute-Framing Effects," *Journal of Consumer Research,* Vol. 30, No. 3, p. 311.

Kahneman, D., J. L. Knetsch and R. Thaler (1986a) "Fairness and the Assumptions of Economics," *Journal of Business,* Vol. 59, No. 4, pp. S285–S300.

Kahneman, D., J. L. Knetsch and R. Thaler (1986b) "Fairness as a Constraint on Profit Seeking: Entitlements in the Market," *The American Economic Review,* Vol. 76, No. 4, pp. 728–41.

Kahneman, D. and A. Tversky (1979) "Prospect Theory: an Analysis of Decision Under Risk," *Econometrica,* Vol. 47, No. 2, pp. 263–91.

Kalyanaram, G. and R. S. Winer (1995) "Empirical Generalizations From Reference Price Research," *Marketing Science,* Vol. 14, No. 3, pp. 161–70.

Kim, B. D., M. Shi and K. Srinivasan (2004) "Managing Capacity Through Reward Programs," *Management Science*, Vol. 50, No. 4, pp. 503–20.

Konow, J. (2003) "Which is the Fairest One of All? A Positive Analysis of Justice Theories," *Journal of Economic Literature*, Vol. 41, No. 4, pp. 1188–239.

Köszegi, B. and M. Rabin (2004) *A Model of Reference-Dependent Preferences* (Berkeley: Department of Economics, University of California Berkley), pp. 1–44.

Louviere, J. J., D. A. Hensher, and J. D. Swait (2000) *Stated Choice Methods: Analysis and Application* (Cambridge: Cambridge University Press).

Lowengart, O., S. Mizrahi, and R. Yosef (2003) "Effect of Consumer Characteristics on Optimal Reference Price," *Journal of Revenue and Pricing Management*, Vol. 2, No. 3, p. 201.

Mathies, C. (2007) *Four Essays on the Integration of Customer-Centric Marketing and Revenue Management* (Sydney: University of Technology, Sydney).

Maxwell, S. (2002) "Rule-Based Price Fairness and Its Effect on Willingness to Purchase," *Journal of Economic Psychology*, Vol. 23, pp. 191–212.

Mazumdar, T. and P. Papatla (1995) "Loyalty Differences in the Use of Internal and External Reference Prices," *Marketing Letters*, Vol. 6, No. 2, pp. 111–22.

McFadden, D. (1986) "The Choice Theory Approach to Market Research," *Marketing Science*, Vol. 5, No. 4, pp. 275–97.

Mittal, V., T. R. William, and P. M. Baldasare (1998) "The Asymmetric Impact of Negative and Positive Attribute-level Performance on Overall Satisfaction and Repurchase Intentions," *Journal of Marketing*, Vol. 62, pp. 33–47.

Monroe, K. B. (1973) "Buyers' Subjective Perceptions of Price," *Journal of Marketing Research*, Vol. 10, pp. 70–80.
Munro, A. and R. Sugden (2003) "On the Theory of Reference-Dependent Preferences," *Journal of Economic Behaviour and Organization*, Vol. 50, pp. 407–28.
Niedrich, R. W., S. Sharma and D. H. Wedell (2001) "Reference Price and Price Perceptions: a Comparison of Alternative Models," *Journal of Consumer Research*, Vol. 28, No. 3, pp. 339–54.
Putler, D. S. (1992) "Incorporating Reference Price Effects into a Theory of Consumer Choice," *Marketing Science*, Vol. 11, No. 3, pp. 287–309.
Rajendran, K. N. and G. J. Tellis (1994) "Contextual and Temporal Components of Reference Price," *Journal of Marketing*, Vol. 58, No. 1, pp. 22–34.
Sebora, T. C. and J. R. Cornwall (1995) "Expected Utility Theory vs Prospect Theory: Implications for Strategic Decision Makers," *Journal of Managerial Issues*, Vol. 7, No. 1, pp. 41–61.
Sloane, N. J. A. (2006) "A Library of Orthogonal Arrays", Retrieved January 7, 2006, from http://www.research.att.com/~njas/oadir/index.html.
Sugden, R. (2003) "Reference-Dependent Subjective Expected Utility," *Journal of Economic Theory*, Vol. 111, pp. 172–91.
Swait, J. D. (1994) "A Structural Equation Model of Latent Segmentation and Product Choice for Cross-Sectional Revealed Preference Choice Data," *Journal of Retailing and Consumer Services*, Vol. 1, No. 2, pp. 77–89.
Thaler, R. (1980) "Toward a Positive Theory of Consumer Choice," *Journal of Economic Behaviour and Organization*, Vol. 1, pp. 39–60.
Thaler, R. (1985) "Mental Accounting and Consumer Choice," *Marketing Science*, Vol. 4, No. 3, pp. 199–214.
Train, K. (2003) *Discrete Choice Methods with Simulation* (Cambridge: Cambridge University Press).
Tversky, A. and D. Kahneman (1991) "Loss Aversion in Riskless Choice: a Reference-Dependent Model," *The Quarterly Journal of Economics*, Vol. 106, No. 4, pp. 1039–61.
Verma, R., G. M. Thompson, W. L. Moore, and J. J. Louviere (2001) "Effective Design of Products/Services: an Approach Based on Integration of Marketing and Operations Management Decisions," *Decision Sciences*, Vol. 32, No. 1, p. 165.
Winer, R. S. (1989) "A Multi-Stage Model of Choice Incorporating Reference Prices," *Marketing Letters*, Vol. 1, No. 1, pp. 27–36.
Xia, L., K. B. Monroe, and J. L. Cox (2004) "The Price is Unfair! A Conceptual Framework of Price Fairness Perception," *Journal of Marketing*, Vol. 68, pp. 1–15.

5

Price Sensitivity for Green Power in Electricity Markets: Results From a Conjoint Analysis and a Representative Survey in Switzerland

Jürg Hari, Nikos Karathanasis and Stefan Burri

Introduction

Traditionally, households have purchased all of their electricity from one single local or regional energy supplier and this is still largely the case in the Swiss market. Across Europe, many electricity customers are gaining the ability to switch their power providers and are also able to choose their own mix of electricity products and price schemes. Market liberalization in Switzerland has been rejected in several public votes and it appears that the Swiss parliament now favors a step-wise liberalization over the coming years. In anticipation of potential pending market liberalization, over the past decade many utility providers have launched appropriate marketing programs. Two main routes were followed: the launch of customer retention programs and the launch of new products in the area of green energy. Customer retention programs are designed to avoid switching behavior and product choices aim at improving provider's image perception and consumer education. The latter two would again result in customer retention. Pricing is considered to be central for most electricity managers, but is not yet used as a marketing instrument. Some managers anticipate a price war once markets have been liberalized.

Energy issues are critical to the earth's environment and this insight is spreading rapidly within society. Electric utilities and other power suppliers in a considerable number of countries are giving consumers a chance to buy some portion of their energy in the form of electricity generated by renewable sources, including solar, wind and geothermal power.

The marketing practice, called green power marketing, allows utilities to add more renewable resources to their traditional production mix,

such as coal, hydroelectric, natural gas and nuclear power – obviously depending upon the utility's geographic location.

As electricity restructuring in Switzerland proceeds, the debate over appropriate mechanisms for the marketing of renewable energy will intensify. Renewable power marketing seeks to widen an emerging, customer-driven market for green energy. Currently, a vast majority of existing green power marketing programs are designed which is analogous to the voluntary provision of public goods. Because of this, some believe that green marketing will not, by itself, provide a large market for renewables. Individuals have strong incentives to "free-ride" and hence will not contribute to the provision of public goods. These two studies explore the intention to switch power suppliers and the willingness to pay for green electricity in a selected population of Swiss citizens.

Review of the relevant literature

This chapter focuses only on the demand side of the business. This introductory part, therefore, focuses on the literature exploring the green power customers in more detail.

A survey of international green power markets showed that the level of market penetration varies considerably from country to country (Bird, Wüstenhagen and Abbakken, 2002a, 2002b). Market penetration rates are typically of the order of 1 percent and the most successful countries have achieved a rate of between 5 and 15 percent. The results of the survey identify supply-side as well as demand-side factors that can explain the differences. Aggressive and targeted marketing on the part of the green power suppliers is one of the most important factors stimulating consumer response to these products. When customers gained access to competitive electricity, a number of markets have seen numerous marketing activities. New entrants choose to enter markets by offering green power products. In addition, many customers did not switch suppliers, but added green electricity to some part of their consumption. The results of this survey were largely confirmed by other authors (Markard and Truffer, 2006).

Definition of green power

What qualifies as "green power" is an obvious first question to ask. It is likely that different consumers will have different definitions of what constitutes "green" production. One Canadian study showed that electricity from wind and solar sources is clearly perceived as "green;" by

contrast, nuclear, coal, oil, gas are classified as "non-green," as is some biomass energy. Hydropower electricity from both small and large power plants is generally given an intermediate position (Rowlands, Parker and Scott, 2002). Interestingly, there is a clear gap between what is considered green and the anticipated or perceived environmental impact.

Previous "willingness to pay" studies

Traditionally, electricity has been perceived as a homogenous good, with neither electricity traders, nor suppliers and customers caring about where or how it was generated. In such circumstances, price is the main characteristic in making purchasing decisions. This approach still dominates much of the discussion. Consequently, many studies have focused on the price sensitivity of end-users, as detailed below.

However, since the mid-1990s, several studies using different methods have explored customers' willingness to pay for green energy. In an earlier study that drew together the findings from more than a dozen market research studies on this topic, Farhar (1999) showed that customers do express a preference for renewable sources of energy. Yet those customers know little about those products and the product knowledge increases as education about the available options increases. Between 52 and 95 percent of households claimed that they are willing to pay some small additional premium for green power. Residential customers have a more favorable image of energy suppliers and may also purchase from those suppliers that use environmentally sound management practices. It also seems that in a liberalized market environment, more customers are willing to pay more for energy from renewable resources. This means that they may respond in greater numbers when there is the option of forgoing rate decreases compared to paying more, as is the case in utility green-pricing programs. This is, incidentally, still the only option in Switzerland. These findings also correspond to more recent data collected in the US (see Borchers, Duke and Parsons, 2007).

A comprehensive survey of 1,205 customers in California explored their willingness to pay for different attributes such as service, energy source, contract terms, and so on (Goett, Hudson and Train, 2000). This study suggested that, on average, end-users are willing to pay 2.0 cents more per kWh for electricity from renewable energy sources compared to a standard non-renewable mix of electricity. Interestingly, some customers are willing to pay considerably more than the average indicated. The authors also note that there are large variations between the customers included in this survey.

Finally, there are data available for the prices actually paid in the market. In the USA in 2002, the price of renewable energy offered in green pricing programs was 2.5 US cents per kilowatt-hour (median value) and the prices have declined over recent years by around 10 percent annually (Bird, Swezey and Abakken, 2004; for an update, see Bird and Brown, 2006a). In Switzerland, a premium of between 5 and 10 percent is being paid for green products (Markard and Truffer, 2006). Calculated at an average price of 14 cents per kWh, this would translate into a premium of 0.7 to 1.4 cents per kWh.

In conclusion, one important lesson learned in green power marketing is that customers are willing to pay a premium for green electricity, but this willingness to pay for greater ecological value will vary among different market segments. A more in-depth look into customer behavior is given in the following paragraphs.

Customers of green power

As mentioned above, traditionally price has been the main focus in the electricity markets. With the advent of market liberalization, researchers explored the different market segments of end-users in more detail. Studies that have investigated consumers' priorities for their electricity supplier have been focused largely on the USA and Canada.

The crucial aspect of any green power marketing program is market segmentation. A segment of the population has a readiness to willingly pay above market rates for their power. The experience in real life is limited as yet, but the response to surveys asking prospective customers about this question is encouraging.

Rowlands and his colleagues have conducted intensive studies of green consumers and non-consumers (Rowlands, Scott and Parker, 2000). The authors showed that consumers in general did not have a good understanding of electricity consumption. Consumers identified automobile driving as a major cause of climate change and considered heating and air conditioning to be minor causes. Surprisingly, nuclear energy was also considered to cause global climate change. In a different study, the authors explored consumers' importance weights when making purchasing decisions about their energy supplies (Rowlands, Parker and Scott, 2001a). The price and reliability of supply were by far the most important attributes, followed by the impact on the environment and customer service. The survey also showed that end-users are interested in green power programs and collective actions in green

electricity (often government-led). And, finally, the survey demonstrated the citizen/consumer paradox (the free rider problem, discussed below).

In a later study the same authors characterized green electricity consumers as having, on average, a higher level of education, being somewhat younger, having higher incomes, and being altruistic, liberal and ecologically concerned (Rowlands, Scott and Parker 2003). They also state that simple market segmentation will not suffice, but a mixed model of different demographic and psychographic variables will be needed to identify and target the green power customers.

In another survey Rowlands, Parker and Scott (2004) concluded that green power customers are younger, more educated and have higher incomes. Respondents were more likely to be interested in switching electricity suppliers when they felt they could reduce collective energy use through individual action. For the consumers in general, the price of electricity, the quality of customer service and the location where electricity is generated were the most important factors taken into consideration when choosing a supplier (in this order). The other rank-ordered factors are the environmental effects of the electricity produced by the supplier reputation of the supplier and, finally, reliability of electricity supply.

Electricity product attributes

In general marketing terms suppliers offer products with different attributes from which the consumers derive some benefit. In the case of electricity this is a tricky question to answer. The source of the energy is certainly an attribute. This is not easily understood by customers. The power coming out of the electricity plug carries no label for identification. Students in Germany, as an example of a target group with a highly positive attitude towards green power products, were able to correctly identify green power, but additional knowledge seemed to be limited (Gossling et al., 2005). In particular, knowledge on power generation, distribution and energy in general seemed limited. A number of students were concerned about green power supplier's ability to provide electricity during periods with calm winds. Yet, for other students changing to a green power supplier would not make sense, since the power received at home would always be coming from a mix of sources. In conclusion, the source is a product attribute, but maybe not well understood by customers.

In order to end customer confusion on the issue of energy source, certificates for renewable energy sources have been implemented in

many markets (for a review, see Truffer et al., 2001; for Switzerland, Wüstenhagen, Markard and Truffer, 2003). Those eco-labels are an important tool in empowering consumers to freely express their preferences in terms of electricity mix choices. The labels also reduce search and evaluation costs for the end-users.

Thus, it appears that electricity, a seemingly simple product, is not well understood by customers. For them, this is a complex product and switching power supplier is a daunting task (Editorial, 2006). In consequence, more than 50 percent of UK households prefer the status quo. These conflicts are illustrated, for example, in surveys finding that 84 percent of consumers think that competition is good and still 54 percent call for increased regulation of suppliers to protect the end-users (Editorial, 1997).

A further attribute of electricity is price. Billing usually takes the form of the amount of energy used in a given period (normally kWh) plus, in some cases, a flat rate. This price may also vary according to the time of the day. This pricing strategy is used to provide an incentive to consumers to shift their use from peak times to off-peak times of the day. For the energy supplier this results in a shift of the load on the grid. For findings in this area see paragraphs below (see also Matsukawa et al., 2000).

It is also possible to sell renewable energy as blocks, as percentage of use or as a fixed price premium (Bird, Swezey and Abakken, 2004). Blocks are in a range from 15 kWh to 1,000 kWh with a typical size of 100 kWh per block. Customers may also opt to buy a certain percentage of their use as green power. And finally customers may have the option to pay a fixed price premium for their electricity to support feed-in of renewable energy.

Energy outage, in either a planned or an unplanned form, is a further attribute of electricity. Households have an increasing number of electronic devices. According to unpublished information from the local energy supplier, there are, on average, 32 devices per household in the Winterthur area in Switzerland. A power outage has very obvious impacts on refrigerators and heating/cooling in general, but also on unexpected consequences such as resetting clocks on electronic controlling devices. Therefore, most households are very vulnerable to energy outage (see also Itaoka et al., 2006; Carlsson and Martinsson, 2007).

Several less important attributes – customer service, sign-up bonuses, energy source, contract terms, brand names, and so on – could also be considered in a choice experiment (see Goett, Hudson and Train, 2000).

For the present study, the following three attributes were used: source of the electricity, price and time-of-day pricing. Power outage was excluded.

The Swiss market for green electricity

Swiss utilities were among the first in the world to develop green power marketing programs (Markard and Truffer, 2006). On the domestic market today, there are more than one hundred different products being marketed by 135 suppliers. In 2002 a proposed stepwise market liberalization of the electricity markets in Switzerland was rejected by public vote. Because of this, the market is likely to remain regulated for most consumers until at least 2011. It is important to note that in Switzerland the market for electricity is liberalized for customers with a total annual consumption of more than 100,000 kWh (that is, large customers only).

In Switzerland, there was a heavy emphasis on solar power at the beginning of green power marketing. The success was remarkable, given the fact that the price premium that customers had to pay was between three and five times above standard tariffs (Bird, Wüstenhagen and Abbakken, 2002a). The penetration rate of such products is in the range of 1–2 percent.

In summary, the Swiss market is relatively active, with many green power products available. Consumer response has been on par with most countries, with about 1–2 percent of customers purchasing green power.

The research questions

It is clear from the above survey of recent literature that green electricity fits well into the logic of an environment of market liberalization. Communication between customers and power suppliers will become an increasingly important element. Green electricity product mixes and pricing will be inextricably linked. Therefore, the following research questions were formulated.

- What is the willingness to pay for different forms of electricity products?
- What is the utility of a peak/off-peak pricing tariff?
- How many people will switch to products produced from hydropower only given different price levels in the single cents range?
- How many people will switch to nuclear power for a small amount of savings?

Methodology

In order to explore these research questions, we conducted two studies in the German-speaking area of Switzerland. The first study used a

representative sample of the population to consumers' willingness to switch to pure hydroelectric power products. As already mentioned, today's consumers are aware that they receive a mix of electricity from different sources. For a single consumer switching to pure hydroelectric power products is a realistic alternative. If this is an alternative for the whole of Switzerland, it is not under consideration in this study. It is important to note that this first study is part of a bigger survey for a utility company – some parts of the survey are not shown and are proprietary and confidential.

The second study uses a conjoint design to explore the willingness to pay for different electricity products, in their pure form in a convenient sample of consumers.

Willingness to switch study

In Switzerland the market for electricity is liberalized for those customers with a total consumption of more than 100,000 kWh. Only bigger companies of more than about 30 employees or special businesses, such as bakeries or larger hotels, qualify under this scheme. The smaller consumers, both private and commercial, representing the greater part of the market in terms of numbers of end-users, do not have the option of switching.

This study was conducted in the market area of a larger electricity supplier in the German-speaking part of Switzerland. A representative sample of 1,831 private residential customers of the utilities company was contacted and 719 consumers agreed to participate in the study (a 39 percent response rate) – 479 private customers and 240 small businesses (such as shops and small offices). The great majority of those companies had fewer than ten employees.

A structured questionnaire was used for the phone survey. Participants were asked various questions about their energy use and their use of green power, including some sociodemographic data and their housing (or commercial) situation. The questionnaire then continued by asking questions about price sensitivity in relation to renewable energy and their willingness to pay a premium for renewable energy (in small, incremental steps). Respondents were asked what increase in percentage would be acceptable to them. The questionnaire continued by asking, if respondents think that a premium of X cents per kWh is justified using a four-point scale for the answers (yes, rather yes, rather no, no). The premium X cents varied from 0.2 cents to 3 cents in six incremental steps. Respondents were then asked if they would switch supplier (yes or no).

In the final part of the questionnaire, consumers were asked if they would switch from the today's standard product mix (approximately 60 percent hydroelectric power and 40 percent from nuclear power plants – see also Wüstenhagen et al., 2003) to a pure nuclear product mix for a saving of 1 cent.

The telephone interviewers administered the questionnaire to 80 private and 40 small commercial consumers using a single premium X. Subsequently, they administered the questionnaire using a different premium. This would result in the production of 720 completed questionnaires. Data were evaluated using Excel, SPSS and comparative analysis.

Conjoint analysis for green power products

Conjoint analysis involves the measurement of judgments (consumer preferences, acceptability or perceived similarities) of differences between alternatives. The word "conjoint" implies the study of the joint effects.

The conjoint measurement model assumes three important elements. First, that the set of objects being evaluated is at least weakly ordered (it may contain ties). Secondly, that each alternative evaluated may be represented by a combination of separate utilities existing for the individual attribute levels. And thirdly, that the derived evaluation model is interval scaled.

The measurement of preference is an established part of consumer research that is based on expectancy value models of attitude theory and measurement. In conjoint analysis, we examine the preference for a set of brands or other choice alternatives that are described by an inventory of attributes.

In the analysis, the first step was to develop either a full or a fractional factorial design. In this study, a full profile approach for the three attributes was used: source of the electricity, price and time-of-day pricing. The attribute "source" had four different levels – solar, wind, water and nuclear. The attribute "price" also had four levels being (in Swiss cents): 9.5, 15, 28 and 45 cents. The attribute "time-of-day" included only two levels – day tariff and night tariff (at 30 percent discount compared to the day tariff).

As respondents a convenience sample was used: several individuals from graduate student classes, employees from the university and acquaintances were asked to participate in the study. A total of 128 respondents were surveyed.

The following steps were taken for the full profile analysis:

1. The respondents were given the full set of stimulus profiles.
2. The respondents ranked the alternatives according to their own overall criterion on their own likelihood of purchase.
3. The respondents were asked to rate each alternative in descending manner, with a value of 100 attached to their preferred product. If they felt that two alternatives were very close to one another, they would assign point scores that were very close together. Indeed, all respondents – with one exception – took great care in assigning realistic values. For some, the top products were ranked very closely with, for example, values of 100, 99, 95 80. Others displayed clear priorities and used close values only in the middle range of their choices.

This procedure comes as close as possible to recovering the original non-metric rank order into metric input data.

The Ordinary Least Squares (OLS) regression approach to conjoint analysis offers a simple, yet robust method for deriving alternative forms of respondent utilities also called part-worth. This methodology is the de facto standard for conjoint analysis. The objective of OLS conjoint analysis is to produce a set of additive part-worth utilities that identify each respondent's preference for each level of a set of product attributes. These results can be used to build the utility preference model for each single respondent and for the whole dataset of the 128 respondents.

Utility preference models are the mathematical formulations that define the utility levels for each of the attributes (beta values from the regression analysis). The part worth model requires that each level of an attribute is to be defined as a dummy variable within the design matrix. This step was not necessary for the attribute "price". The absolute prices were entered as data.

The standardized beta factors can be used as the importance factor for each individual. As a final step in a conjoint analysis one would simulate the choices. The purpose of the choice simulator is to estimate the percentage of respondent choice for specific factor profiles entered into the simulator. The choice probability for a given product is based on the utility for that product divided by the sum of all products in the simulated market. Since the sample is not representative for the total market, this analysis was not performed. Instead, a cluster analysis on the importance factors was used to at least get a hint to some market segments.

Results

Willingness to switch study

With respect to the demographic breakdown, 52.3 percent of the total sample was male and 43.9 percent female (n = 719) – several respondents declined to answer. When compared to the general population, the age distribution of the respondents has a slight bias toward older consumers. An unusually large proportion of the respondents refused to answer this age-related question. The majority of the respondents in the sample (60.6 percent) made joint decisions in relation to household consumption; in only 10.5 percent of households, the male partner made the decision and in 28.0 percent the female partner made the decision.

Respondents were asked if, in general, they purchased goods that had been produced sustainably. 81.1 percent responded "yes" and in this finding there is a statistically significant difference between males and females, with females being more inclined to use such products (Table 5.1). One comparable observation can be made for the difference between households and small commercial companies (Table 5.2). The latter ones are significantly lower users of those products.

It should be mentioned at this point that a considerable number of the customers surveyed had little knowledge about electricity in general. The interviewers had to explain different aspects within the questionnaire and this may have biased the results.

Where decision making in the household was a joint process, it was more likely that households would use products from sustainable

Table 5.1 Products from sustainable production in general terms by gender. Chi-Square indicates a significant relationship among the variables ($p < 0.001$)

		Products from sustainable production		**Total**
		Users	**Non-users**	
male	Observed	283	89	372
	Expected	302.3	69.8	372.0
	Standardized residuals	−1.1	2.3	
female	Observed	276	40	316
	Expected	256.8	59.3	316.0
	Standardized residuals	1.2	−2.5	
Total	Observed	559	129	688
	Expected	559.0	129.0	688.0

Table 5.2 Products from sustainable production in general terms by type. Chi-Square indicates a significant relationship among the variables ($p < 0.002$)

		Products from sustainable production		Total
		Users	**Non-users**	
Households	Observed	381	68	449
	Expected	365.6	83.4	449.0
	Standardized residuals	.8	−1.7	
Small companies	Observed	176	59	235
	Expected	191.4	43.6	235.0
	Standardized residuals	−1.1	2.3	
Total	Observed	557	127	684
	Expected	557.0	127.0	684.0

Table 5.3 Products from sustainable production in general terms by type of decision making. Chi-Square indicates a significant relationship among the variables ($p < 0.01$)

		Products from sustainable production		
		Users	**Non-users**	**Total**
Male decision maker	Observed	34	14	48
	Expected	40.9	7.1	48.0
	Standardized residuals	−1.1	2.6	
Female decision maker	Observed	107	21	128
	Expected	109.1	18.9	128.0
	Standardized residuals	−.2	.5	
Joint decisions	Observed	245	32	277
	Expected	236.0	41.0	277.0
	Standardized residuals	.6	−1.4	
Total	Observed	386	67	453
	Expected	386.0	67.0	453.0

production (Table 5.3). For the other potential grouping variables, there are no significant differences between groups. This was tested according to age groups, income groups and household size.

The second part of the questionnaire explored people's knowledge about electricity in general and green power in particular. Only 9 percent of the respondents claimed to have a good knowledge on this topic. In addition, 46.7 percent believed tat they had an "average" level of

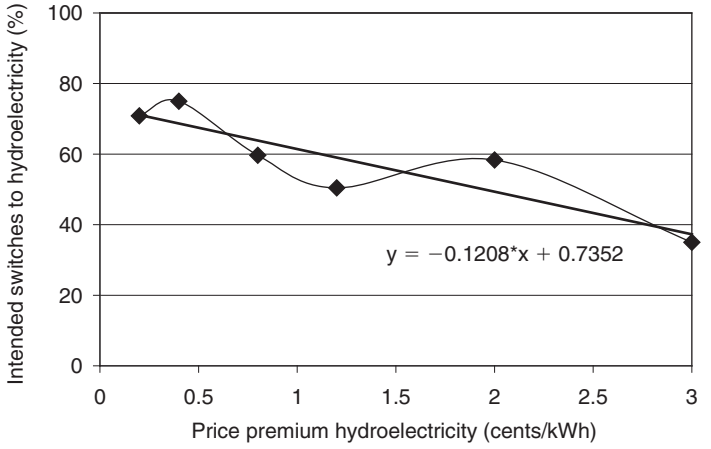

Figure 5.1 Willingness to switch to a pure hydroelectric product (all 719 customers)

knowledge and 43.6 percent claimed to have no knowledge of the topic. Only 36.0 percent knew the correct proposed date for their market liberalization. 63.1 percent believed that they knew how much they were spending on electricity and more than 90 percent could indicate the correct unit of billing (the kilowatt-hour – kWh).

Currently, Switzerland produces 60 percent of its electrical energy from hydroelectricity and 40 percent from nuclear power (Wüstenhagen et al., 2003). On a prompted recall test, 47.8 percent correctly knew this relation and 30.1 percent thought it was the other way around (40/60). The remaining chose the two extremes and only 2.9 percent said that they did not know.

The third part of the questionnaire focused on the respondents' sensitivity to switching to an electricity product produced from water sources (dams, rivers, and so on). A shift from the abovementioned 60/40 ratio toward more nuclear power would be viewed as completely unwelcome by 6.9 percent of the population, 30.1 percent would not like it and 47.8 percent would not care. Only 12.4 percent would welcome such a shift.

Figure 5.1 shows the percentage of customers willing to switch to a pure hydroelectric product plotted against the premium they would have to pay for such a product. For illustration purposes, the connecting line was smoothed out on Excel. The linear regression line is also provided in the graph. For a small premium of 0.2 cents, 70 percent of the respondents would switch to a pure hydroelectric product. This willingness to switch decreases as the premium increases, and at a premium of 3 cents only

35 percent of the customers would switch to such a product. Figure 5.2 shows the same graph for the 474 private customers and Figure 5.3 the graph for the small commercial customers.

Since in the case of most small commercial businesses the owner, in general, should show the same attitude and switching behavior in his

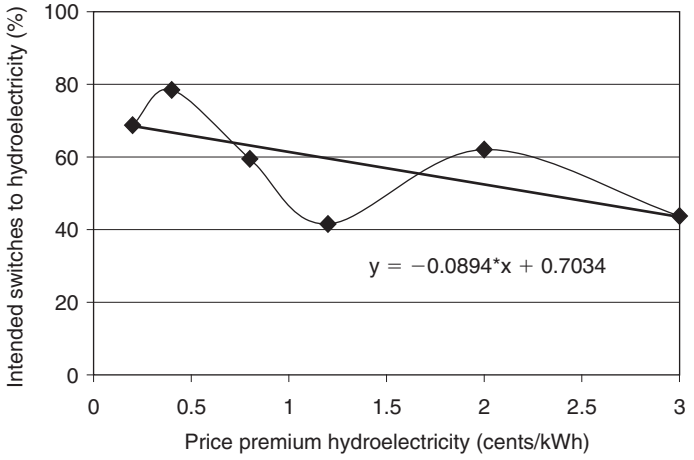

Figure 5.2 Willingness to switch to a pure hydroelectric product (474 private customers)

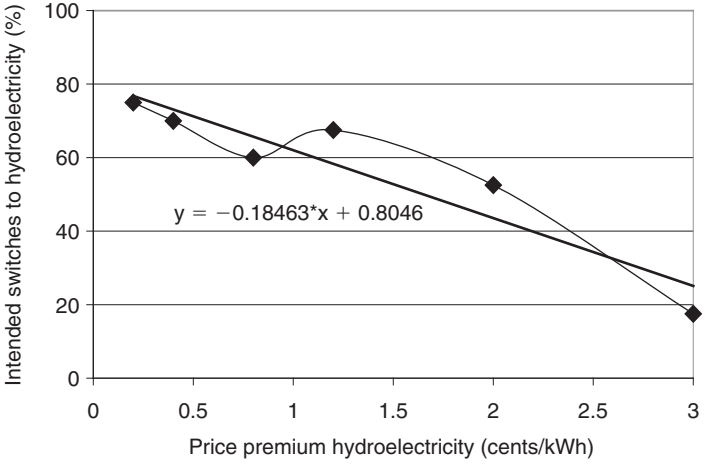

Figure 5.3 Willingness to switch to a pure hydroelectric product (240 small commercial customers)

or her private or business life. One anticipates that the willingness to switch curves would be comparable. This is not the case for larger price increases. In a commercial setting (Figure 5.3), many fewer consumers would switch to hydroelectricity in case of larger price premiums. For a premium of 3 cents, only 18 percent of commercial customers would switch, compared to 48 percent of private customers.

Interestingly, the willingness to switch drops dramatically at a premium of 1.2 cents. Since in smaller rented apartments the electricity bill is included in a monthly flat fee, respondents may have given imprecise indications of their intentions. We find that the exclusion of those respondents living in a small apartment yielded a somewhat smoother curve. It is also possible that there are more people switching in the 2 cents premium group, because of the existence of hydroelectric products offered in the Swiss market and occasional extensive advertising campaigns promoting those products. The willingness to switch curve for the entire sample excluding the people living in smaller rental apartments yields the graph shown in Figure 5.4. This is in line with findings from the US (see, for example, Borchers, Duke and Parsons, 2007).

Customers were asked if they would welcome paying less for a pure nuclear power electricity supply. 84 percent of private customers answered "no" and only 12 percent welcomed this suggestion. For the commercial customers the corresponding numbers are 90 and 10 percent. The numbers do not total to 100 because of missing data.

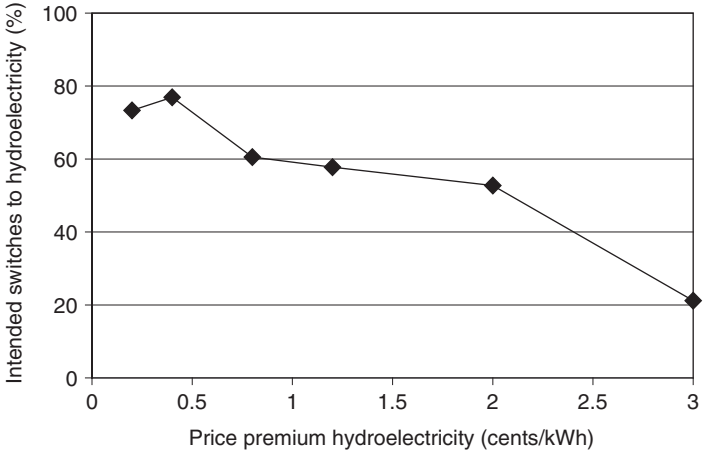

Figure 5.4 Willingness to switch to a pure hydroelectric product (513 customers, excluding rental apartments with flat fee tariffs)

Asked about their willingness to switch to a pure nuclear power product for a discount of 1 cent per kWh, only 5.1 percent customers would do so. 6.0 percent would consider such an offer and 11.0 percent stated that they would rather not switch, and the great majority (76.1 percent) claimed that they would definitively not switch to the cheaper product.

Conjoint analysis for green power products

As already mentioned above, the Ordinary Least Squares (OLS) regression approach to conjoint analysis offers a simple, yet robust method of deriving respondents' utilities. SPSS multiple regression analysis was used to produce the set of additive part-worth utilities that identify each respondent's preference for each level of the set of product attributes. These results can be used to build the utility preference model for each single respondent and for the whole dataset of the 128 respondents. The results for the entire dataset are provided in Table 5.4. It is important to note that all attributes, except price, were coded as dummy variables and nuclear power would thus be the default option for respondents and be included in the regressions' constant.

For the entire dataset the coefficient of determination was R^2 0.483 and the adjusted R^2 was 0.482. These measures indicate the proportion of variability in a dataset that is accounted for by a statistical model, meaning the full model explains 48 percent of the variability. The Q-Q plot and also the statistics on residuals indicated a very good fit for the model.

The data show that for every one cent increase in price, the utility also called part-worth of electricity falls by 1.38 units. Solar power in this model would be worth 17.7 cents (this would be approximately equal to an average day tariff in Switzerland). In other words, those consumers

Table 5.4 Regression model: all 128 respondents

Model	Non-standardized coefficient		Standardized coefficient	T	Significance
	B	Standard error	Beta		
Constant	68.741	1.007		68.231	.000
Price	−1.382	.026	−.603	−53.639	.000
Solar	24.475	.996	.338	24.567	.000
Hydro	26.801	.997	.370	26.888	.000
Wind	21.089	.996	.292	21.167	.000
Day/Night tariff	3.562	.705	.057	5.055	.000

would be willing to pay almost double the amount for their electricity in a pure green power form. It is important to note that the design of the analysis did not allow for a mixture of different products. Respondents were forced to look for one or the other in their electricity consumption, but not both.

It is also noticeable that solar and hydro generated power both have approximately the same values for the part-worth. The utility for a solar or a hydro product would thus be equal. The part-worth for wind is slightly below.

The option of having a lower night-time tariff added surprisingly little utility to the offering. In the evaluation of the single respondents' utilities there was, indeed, a large amount of variability within this factor (data not shown).

The standardized coefficients allow for a ranking of attribute importance. Price is a dominant attribute, as expected, then people clearly find solar- and hydro-generated energy important and wind-generated power lag slightly behind. The day/night tariff option adds some value to the offering for the respondents – but the amount is surprisingly small.

The multiple linear regression analysis was also calculated on a per respondent basis. The coefficients of determination were, on average, 0.871. Only two respondents had a R^2 value below the 48 percent for the full model and 95 percent of the R^2 values were above 0.711. The individual model explains much more of the variance than the full model, hinting to a wide presence of different views on the importance attached to the different attributes.

As a consequence of this individual variability, the individual standardized coefficients were used to build clusters of respondents. Since the sample is not representative of the population, data are not shown and the results only hint at possible customer groups. The cluster analysis revealed four different respondent groups: A pure price-sensitive group of about 40 percent of the respondents. The second group – slightly smaller in size – had a strong preference on price, but cares about hydro and solar sourced energy. About 25 percent of the respondents had a clear preference for green power (hydro, solar, wind) and a negligible cluster had a strong preference for water-generated electricity.

Discussion

Two important findings have emerged from this study. First, customers are willing to pay a premium for green electricity, and, secondly, this willingness to pay for greater ecological value translates into a willingness to switch to a product including larger amounts of renewable energy

such as hydropower. However, in markets where users have been given a choice, only a few have opted to do so. In Germany, only about 4 percent actually do so and compared to the most advanced markets such as the UK (with 30 percent) this is a very small number (Walsh, Groth and Wiedmann, 2005; Wiedmann, Hennings and Kilian, 2005). This is surprising since Germany is considered to be a leader in renewable energy development (Wüstenhagen and Bilharz, 2006). In Switzerland, the number of users opting for a green power product is only 2 percent (Wüstenhagen, 2004). In their survey, the authors (Walsh et al., 2005; Wiedmann, 2005) found that the switching motives were largely related to customers' levels of dissatisfaction with their current supplier. Surprisingly, the prices were only a secondary consideration for those customers. As in other studies already mentioned in this article, the authors found substantial variation among different clusters of end-users. This could mean that customers can be induced to switch to higher value products within one supplier. For suppliers this means offering differentiated products to their customers.

This finding of an increased willingness to pay will most certainly exceed the actual payment commitments as shown by others (Byrnes, Jones and Goodman, 1999). This is probably also true in the case of the results presented in this study. In reality, the actual amounts will be lower. The finding that almost 80 percent of customers intend to switch to "greener" electricity bodes well for any green power marketing program (see Figures 5.1–5.4 above). In California, of the 73 percent of respondents who said they would be willing to support their utility's investments in renewable energy programs, only 13 percent opted to actually participate (Byrnes et al., 1999). Farhar (1999) also reported that in a predictable pattern around 70 percent of customers are willing to pay at least a modest amount for renewable energy (see also Swezey, Houston and Porter, 1998).

The present results also demonstrate considerable differences between customers with respect to their switching intentions. Generally, almost 80 percent of customers intend to switch for the small price premiums. Small commercial customers are, however, very sensitive to higher prices and at a premium of 3 cents per kWh fewer than 20 percent would actually switch. Women are less price sensitive than men and in a joint decision situation, their price sensitivity is again less than is the case for men alone. Age and income had no statistically significant influence on switching intentions. In a German study the willingness to switch to eco-electricity was surprisingly large for the very small premium amounts (Menges, Schröder and Traub, 2004). This largely confirms the results

from the present willingness to switch study. Roe, Teisl, Levy and Russell (2001) also confirmed existing results. In their study, they found that a premium of 3 US$ would be paid for a 1 percent reduction in emissions. They also emphasize the considerable variation among consumers' willingness to contribute.

In addition, the present conjoint study clearly showed that there are different market segments. A large proportion will not be price sensitive (in this non-representative study around 40 percent), but this leaves a good portion of the market open to green power products. In conclusion, these studies clearly demonstrate considerable variations among consumers and calls for carefully targeted marketing programs. Byrnes and Serchuk (2005) suggest that a targeted approach – still in its infancy in the power industry – needs to be implemented for the different market segments. This approach ideally should include all of the basic 4Ps from the general marketing practice.

In a first approach to market segmentation, it seems that younger, more educated and wealthier respondents are more likely to be interested in switching and this includes those who feel they can reduce collective energy use through individual action (Rowlands et al., 2003).

There is one very important point to bear in mind. Taking the data presented in this study, in combination with the review of the relevant literature, it can be anticipated in the case of Switzerland that many will take no action and will thus remain with their default supplier. As outlined above, actually switching behavior differs considerably from actual behavior. The percentage who will actually switch may be in the single-digit range. The customer's default supplier will often be the electric utility that has historically supplied them with electricity. This means – as already mentioned above in a different context – that a strategy of offering differentiated products to the existing customers is the best alternative to participate in this market.

In a choice experiment, customers have a tendency to de-emphasize price, since they do not have to actually pay the price. This creates an upward bias in both the estimated willingness to pay and switching intentions. Yet the results are still valid with regard to segment size and the relationship among the parameters. This means that the relative willingness to pay for a certain attribute, as compared to another attribute, will not be affected.

The conjoint analysis also offers some interesting insights. According to this model, solar power would be worth 17.7 cents. This would be approximately equal to an average day tariff in Switzerland. In other words, those consumers would be willing to pay almost double the

amount for their electricity in a pure green power form. Indeed, electricity users in Switzerland are used to such tariffs or may have at least heard about them. Electricity from solar sources is in many cases charged at a premium of between 400 and 700 percent (Wüstenhagen et al., 2003).

The day/night tariff did not add as much value to the offering as one could expect. The conjoint study showed that this is the least important attribute. Indeed, others also found that an hourly rate is not necessarily attractive to customers. Goett, Hudson and Train, (2000) found in their choice experiment that end-users wanted a compensation of 3.91 cents per kWh for hourly rates compared to a flat rate throughout the day. This amount is, in absolute terms, almost double the amount stated as willingness to pay for renewable energy (which was 2.0 cents per kWh as mentioned above). This provides further confirmation to the findings from time-of-day studies mentioned above (Ham et al., 1997; Matsukawa et al., 2000).

It is also noteworthy that both solar- and hydro-generated power have approximately the same values for the part-worth. The utility for a solar or a hydro product would thus be equal. The part-worth for wind is slightly lower. During the interviews several respondents remarked on the negativity of wind farms and this probably has impacted the results.

Since electricity is considered by many to be a public good, many will treat and perceive their contribution as a kind of service to the public. This will be discussed in the following paragraphs.

There are a number of interesting parallels to a contingent valuation study from the United States. Following the infamous Exxon Valdez spillage in Alaska, the authors evaluated people's willingness to pay for cleaning up birds that has been contaminated by oil (Desvousges et al., 1993). In a laboratory experiment, they found that people are willing to donate or spend money for the cleaning of a bird, but they were not really ready to pay for the cleaning of an additional bird. The amount of money spent was seen as being in the nature of a donation. Such a structure should be avoided for renewable energy programs. The green power price premium should not take the character of a donation towards, for example, some additional solar panels on a public building. Rather, it should focus on the value that customers get and therefore it should include a mix of different electricity from several renewable energy sources.

Green power must be considered to be a public good and standard theoretical models of voluntary public goods provision make strong predictions of under-contribution by individuals. They will strategically behave as free riders, because they perceive their contribution independent of the public benefit (Menges, Schröder and Traub, 2004).

The authors state, however, that this need not be true for a large proportion of the population. Individuals will show a readiness to contribute under the premises that they see a personal moral benefit. In addition, Wiser (1998) questioned that the free rider problem will be a major hurdle, but agrees that it is a challenge for marketers of green power.

In conclusion, an important lesson learned in green power marketing is that customers are willing to pay a premium for green electricity, but this willingness to pay for greater ecological value depends largely upon how well the power suppliers can explain the products and market the environmental benefits of their green electricity (see also Wüstenhagen, 2004).

How well the power companies can document and market the environmental benefits of their green electricity products is an important lesson learned in green electricity marketing in the US (Rowland et al., 2003).

Managerial implications for green power marketing

There are important messages arising from these two studies. This section of the chapter focuses on potential marketing campaigns targeted toward different market segments. Each will be considered in turn below.

As has been mentioned, attitudes will play an important part in the decision-making process of consumers (Rowlands et al. 2000, 2001a). The ABC model of attitudes and the hierarchies of effects (Solomon, Bamossy, and Sakegaard, 2001) may offer some insights relating to how the promotion of green power products could be structured. The model has three components: affect, behavior and cognition. Affect refers to consumer's feelings about green power, behavior refers to people's action with respect to green power, and cognition refers to the beliefs consumers have about green power. Knowing, feeling, and doing interrelate in this model, which is well established in consumer behavior theory. This interrelation may take three basic forms. The first is generally called standard learning hierarchy and can be modeled as CAB. First, people make a cognitive search for information (C), then they form attitudes on these beliefs (A) and act (B). In the low-involvement hierarchy consumers have limited information (C), act on this information (B) and through evaluation of their action form their affects. The third alternative is referred to as the experiential learning hierarchy. People feel good about green power (A), act on this feeling (B) and, finally, develop beliefs and are convinced (C) that this is the right thing to do.

Table 5.5 Summary of potential marketing programs for eight different market segments. For explanations see text

	Cognition plus: educated on green power	Cognition negative: know little about green power
Positive affect toward green power	Behavior: Reinforce and confirm correct choice, eliminate cognitive dissonance, highly interested, use of online resources (S1)	Behavior: Reinforce and confirm correct choice, eliminate cognitive dissonance, simple emotional marketing messages (S5)
	No behavior: The prime target for customer acquisition, highly interested, use of online resources (S2)	No behavior: Acquisition through simple promotional campaigns, price may be important (S6)
Negative affect toward green power	Behavior: focus on elimination of cognitive dissonance (S3)	Behavior: focus on elimination of cognitive dissonance, simple emotional marketing messages (S7)
	No behavior: ignore as target segment, rely on general campaigns (S4)	No behavior: ignore as target segment, rely on general campaigns (S8)

In a simple form, managers can anticipate that all three elements of the ABC model can have either a positive or a negative connotation. This will result in eight distinctive market segments, as shown in Table 5.5. Four market segments are well informed about green power and the other four segments have little knowledge about green power. Similarly, four segments will either have positive or negative feelings about green power and, finally, four segments will act on green power and four segments will take no action.

Several concepts will play a role when designing marketing campaigns for the eight segments. Festinger's concept of cognitive dissonance will be an important one (discussed in Solomon et al., 2001, pp. 134–6). Consumers value harmony among their thought, feelings and behaviors and thus will seek to eliminate any disharmony. Marketing managers can support those consumers in providing them good reasons for their original choice of green power products.

For some segments more complex marketing messages will be appropriate whereas for others they would need to be more emotional. Some segments could safely be ignored for any company marketing campaign. The power companies should not run individual campaigns – rather they should rely on general campaigns initiated by governmental bodies or private associations.

The table relating to potential marketing campaigns should be read as follows (reading example): the segment in the upper left (segment S1) will include consumers who are educated about green power, have positive feelings about that and have already subscribed to some green power program. Those customers will need to have their correct choice both reinforced and confirmed. They will seek to eliminate any cognitive dissonance. Since they are probably highly interested and will almost certainly make use of online resources, potential marketing actions can include combined internet and off-line mailing campaigns.

In this model, the prime target for new customers will be segments S2 and S6. They have positive affects in relation to green power and are either educated or not about green power. In the first case (S2), cognitively heavy campaigns accompanied by e-messages will be appropriate. Messages focusing on the ecological aspects may not work well in this group and marketers should concentrate more on pricing, product mix offerings and the use of ecological attributes as additional arguments in positioning the products (Belz, 2001). This segment (S2) will, for example, include students. Some additional comments and insights into this segment can be found in the literature (Gossling et al., 2005). In the second case (S6), more emotional campaigns should be used. This segment is not well educated about green power, but has a positive affect toward renewable energy. Since these customers are emotionally oriented, they react to short-term promotional campaigns. These must probably include price as message elements. For additional comments, see also Förster (2004). The proposed marketing mix was also quite successfully used in the USA (Bird and Brown, 2006a, 2006b) with the websites being used increasingly. Others caution that those instruments will be below the estimated response rates (Byrnes and Serchuk, 2005).

Further research

As we have already mentioned earlier, different market segments are not well researched for Europe in general – or for Switzerland in particular. More research is required in order to clarify which segments respond best to green power marketing programs. One can anticipate that it will not be a straightforward demographic segmentation, but will also include psychographic elements.

Based on the findings of Matsukawa et al. (2000), Matsukawa (2004) and Carlsson and Martinsson (2007), one can conclude that consumers are only marginally flexible with respect to energy usage. In general. today's households possess a greatly increased number of electrical

devices. Some of these, such as refrigerators, are in constant use, and others are kept permanently in stand-by mode, reducing the ability of households to reduce their levels of power consumption. This should be confirmed in further studies and definitively include psychographic data on the participants.

And finally, at an operational level, the type of messages suggested in the managerial implications part of this article need to be refined and fine tuned. Particularly, suppliers of green power, but also researchers will be interested in this topic.

References

Belz, F. M. (2001) "Nachhaltiges Öko-Marketing" (Sustainable eco-marketing), *Thexis*, Vol. 18, No. 2, pp. 24–8.

Bird, L., R. Wüstenhagen and J. Aabakken (2002a) "A Review of International Green Power Markets: Recent Experience, Trends, and Market Drivers," *Renewable and Sustainable Energy Reviews*, Vol. 6, pp. 513–36.

Bird, L., R. Wüstenhagen and J. Aabakken (2002b) "Green Power Marketing Abroad: Recent Experience and Trends," *National Renewable Energy Laboratory, Technical Report*, NREL/TP-620-32155. Available online from http://www.osti.gov/bridge.

Bird, L., and E. Brown (2006a) "Trends in Utility Green Pricing Programs," *National Renewable Energy Laboratory, Technical Report*, NREL/TP-640-40777. Available online from http://www.osti.gov/bridge.

Bird, L., and E. Brown (2006b) "Utility-Marketer Partnerships: An Effective Strategy for Marketing Green Power?," *National Renewable Energy Laboratory, Technical Report*, NREL/TP-620-39730. Available online from http://www.osti.gov/bridge.

Borchers, A. B., J. M. Duke, and G. R. Parsons (2007) "Does Willingness to Pay for Green Energy Differ by Source?,"*Energy Policy*, Vol. 35, pp. 3327–34.

Byrnes, B., C. Jones, and S. Goodman (1999) "Contingent Valuation and Real Economic Commitments: Evidence from Electric Utility Green Pricing Programmes," *Journal of Environmental Planning and Management*, Vol. 42, No. 2, pp. 149–67.

Byrnes, B. and A. Serchuk (2005) "Six Ways to Improve Green Marketing," *Electric Perspectives*, Vol. 30, No. 1, pp. 40–8.

Carlsson, F. and P. Martinsson (2007) "Willingness to Pay among Swedish Households to Avoid Power Outages: A Random Parameter Tobit Model Approach," *The Energy Journal*, Vol. 28, No. 1, pp. 75–89.

Desvousges, W.H., F. R. Johnson, R. W. Dunford, S. P. Hudson and K. N. Wilson (1993) "Measuring Natural Resource Damages with Contingent Valuation: Test of Validity and Reliability," in J. A. Hausman (ed.), *Contingent Valuation: A Critical Assessment* (Amsterdam: North-Holland), pp. 91–164.

Editorial (1997) "Give 'Em Greenbacks, Not Green Power," *Public Utilities Fortnightly*, Vol. 135, No. 6, p. 46.

Editorial (2006) "News Analysis: Can Consumers be Tempted to Play the Supplier Field?," *Precision Marketing*, Vol. 11.

Farhar, B. C. (1999) "Willingness to Pay for Electricity from Renewable Resources: a Review of Utility Market Research," *National Renewable Energy Laboratory, Technical Report*, NREL/TP-550-26148. Available online from http://www.osti.gov/bridge.

Förster, H. (2004) "Warum wechseln Sie nicht? [Why do they not switch?]," *planung&analyse*, Vol. 2, pp. 83–6.

Goett, A. A., K. Hudson and K. E. Train (2000) "Customers' Choice Among Retail Energy Suppliers: the Willingness-to-Pay for Service Attributes," *The Energy Journal*, Vol. 21, No. 4, pp. 1–28.

Gossling, S., T. Kunkel, K. Schumacher, N. Heck, J. Birkemeyer, J. Froese, N. Naber, E. Schliermann (2005) "A Target Group-Specific Approach to 'Green' Power Retailing: Students as Consumers of Renewable Energy," *Renewable and Sustainable Energy Reviews*, Vol. 9, pp. 69–83.

Ham, J. C., D. C. Mountain and M. W. L. Chan (1997) "Time-of-Use Prices and Electricity Demand: Allowing for Selection Bias in Experimental Data," *RAND Journal of Economics*, Vol. 28, pp. 113–41.

Itaoka, A., A. Saito, A. Krupnick, W. Adamowicz and T. Taniguchi (2006) "The Effect of Risk Characteristics on the Willingness to Pay for Mortality Risk Reductions from Electric Power Generation," *Environmental & Resource Economics*, Vol. 33, pp. 371–98.

Markard, J., and B. Truffer (2006) "The Promotional Impact of Green Power Products on Renewable Energy Sources: Direct and Indirect Eco-effects," *Energy Policy*, Vol. 34, No. 3, pp. 306–21.

Matsukawa, I., H. Asano and H. Kakimoto (2000) "Household Response to Incentive Payments for Load Shifting: a Japanese Time-of-Day Electricity Pricing Experiment," *The Energy Journal*, Vol. 21, No. 1, pp. 73–86.

Matsukawa, I. (2004) "The Effects of Information on Residential Demand for Electricity," *The Energy Journal*, Vol. 25, No. 1, pp 1–17.

Menges, R., C. Schröder and S. Traub (2004) "Erhebung von Zahlungsberitschaften für Ökostrom [Willingness to Pay for Eco-electricity]," *Marketing ZFP*, Vol. 26, No. 3, pp. 247–58.

Roe, B., M. F. Teisl, A. Levy and M. Russell (2001) "US Consumers' Willingness to Pay for Green Electricity," *Energy Policy*, Vol. 29, pp. 917–25.

Rowlands, I. H., D. Scott and P. Parker (2000) "Climate Change Knowledge and Attitudes: Links to Action in the Residential Sector," *Energy Studies Working Paper 2000-08*, University of Waterloo, Canada. Available online from www.fes.uwaterloo.ca.

Rowlands, I. H., P. Parker and D. Scott (2001a) "Citizen and Consumer Attitudes Towards Electricity Industry Restructuring: An Ontario (Canada) Case-Study," *Energy Studies Working Paper 2001-01*, University of Waterloo, Canada. Available online from www.fes.uwaterloo.ca.

Rowlands, I. H., P. Parker and D. Scott (2001b) "Consumer Perception of 'Green Power'," *Energy Studies Working Paper 2001–03*, University of Waterloo, Canada. Available online from www.fes.uwaterloo.ca.

Rowlands, I. H., P. Parker and D. Scott (2002) "Consumer Perception of 'Green Power'," *Journal of Consumer Marketing*, Vol. 19, Nos 2–3, pp. 112–29.

Rowlands, I. H., P. Parker and D. Scott (2003) "Consumers and Green Electricity: Profiling Potential Purchasers," *Business Strategy and the Environment*, Vol. 12, No. 1, pp. 36–48.

Rowlands, I. H., P. Parker and D. Scott (2004) "Consumer Behaviour in Restructured Electricity Markets," *Journal of Consumer Behaviour*, Vol. 3, No. 3, pp. 1479–838.

Solomon, M., Bamossy, G., Sakegaard S. (2001) *Consumer Behaviour: A European Perspective*, 2nd edn (London: Prentice Hall).

Swezey, B.G., A. H. Houston and K. L. Porter (1998) "Green Power Takes Off with Choice in Electricity," *Public Utilities Fortnightly*, Vol. 136, No. 15, pp. 46–51.

Truffer, B., J. Markard and R. Wüstenhagen (2001) "Eco-Labelling of Electricity Strategies and Tradeoffs in the Definition of Environmental Standards," *Energy Policy*, Vol. 29, pp. 885–97.

Walsh, G., M. Groth, and K. P. Wiedmann (2005) "An Examination of Consumers' Motives to Switch Energy Suppliers," *Journal of Marketing Management*, Vol. 21, pp. 421–40.

Wiedmann, K. P., J. Hennings and T. Kilian (2005) "Wechselbereitschaft privater Erdgaskunden als zentrale Herausforderung im Erdgasmarketing [Switching Intentions of Private Gas Customers as a Central Challenge for Natural Gas Marketing]," *Marketing ZFP*, Vol. 44, No. 1, pp. 44–54 (in German).

Wiser, R. H. (1998) "Green Power Marketing: Increasing Customer Demand for Renewable Energy," *Utilities Policy*, Vol. 7, pp. 107–19.

Wüstenhagen, R., J. Markard and B. Truffer (2003) "Diffusion of Green Power Products in Switzerland," *Energy Policy*, Vol. 31, pp. 621–32.

Wüstenhagen, R. (2004) "Umweltverträgliche Stromprodukte in Europa: Status und Schlüsselfaktoren der Marktentwicklung [Sustainable Electricity Products in Europe: Status and Key Factors for Market Development]," *Zeitschrift für Energiewirtschaft*, Vol. 28, pp. 17–26.

Wüstenhagen, R. and M. Bilharz (2006) "Green Energy Market Development in Germany: Effective Public Policy and Emerging Customer Demand," *Energy Policy*, Vol. 34, pp. 1681–96.

Part III
Efficiency Through Price Transparency

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6

Exploring the Role of Information and Trust in Price Fairness Judgments

Sandra Rothenberger, Dhruv Grewal and Gopalkrishnan Iyer

Introduction

Recent marketing literature examines the antecedents and consequences of perceptions of price fairness (Campbell 1999; Xia et al., 2004), noting that price fairness refers to a customer's judgment of whether or not the seller's price is reasonable, acceptable, or just (Bolton et al., 2003). Price fairness has important consequences, in that it affects the firm's image among customers and determines their repurchase intentions. However, little research investigates how prices affect satisfaction (Matzler et al., 2004). The central importance of price in purchase decisions and post-purchase behavior makes the neglect of price aspects in customer satisfaction measures surprising. Price influences both purchasing and post-purchasing processes. For example, in a qualitative study focusing on switching behavior in services, Keaveney (1995) reports that more than half of the customers switched because of poor price perceptions (compared with competitors), and Varki and Colgate (2001) arrive at similar results in their study of the banking industry; specifically, they note that price perceptions directly influence customer satisfaction, the likelihood of switching, and the likelihood of recommendations to others.

We review the existing research to identify how price might affect satisfaction. Price fairness emerges as a critical factor that influences satisfaction and, therefore, customer repeat purchase intentions. Customer perceptions of price fairness may be formed by several factors; however, our focus is on the key impacts of two variables: (i) the clarity of price information and (ii) the trust that customers have in a firm's pricing policies.

Impacts of pricing on satisfaction

Pricing decisions include two basic dimensions: economic and psychological (Vaidyanathan and Aggarwal, 2003). Whereas the economic

dimension focuses on costs, target return on investments, and the demand and supply sides of the industry, the psychological dimension concentrates on the customer's perception of a price or a price change. Money-back guarantees (for example, Heskett et al., 1990), fixed prices (for example, everyday low prices, Ortmeyer et al., 1991), "honest pricing" (that is, price fairness, Ayres and Nalebuff, 2003), and customer advocacy (for example, giving customers open, honest, complete information about products and complex fee structures to find the best product; see Urban, 2003) constitute some of the tools firms use to increase satisfaction with pricing policies and the company's offer. Customer value and perceived price fairness have also been identified as central determinants of customers' reactions to prices (Campbell, 1999; Varki and Colgate, 2001).

Several studies show empirically that price and quality perceptions influence value perceptions (Bolton and Drew, 1991; Varki and Colgate, 2001; Ralston, 2003). Therefore, companies should orient their strategies toward delivering superior customer value, which drives satisfaction, retention, and profitability (Woodruff, 1997; Slater, 1997). Customer value represents a trade-off between the perception of benefit (utility or economic value) and sacrifice (monetary loss) by paying a certain price (Monroe, 1990; Zeithaml, 1988) and therefore managers should actively manage their customers' price perceptions.

As a central aspect of customers' price perceptions is perceived price fairness, a great deal of the literature centers on the antecedents and consequences of price fairness perceptions (Campbell, 1999; Xia et al., 2004). Because fairness involves a judgment about whether an outcome and/or the process to reach that outcome is reasonable and just (Bolton et al., 2003; Xia et al., 2004), the implication is that a customer's judgment relates to a reference point, standard, or norm.

In general, according to the theory of distributive justice (Homans, 1961), customers form judgments by comparing their investments (for example, price paid) to the benefits (quality) they receive. Equity theory (Adams, 1965) also includes various comparative factors that may influence a fairness judgment, such as other persons, a class of people, organizations, or the person's own experiences from an earlier point in time (Jacoby, 1976). Thus, theory suggests that equity or inequity judgments have several antecedents (Oh, 2003). Buyers seem to compare their gains to the gains of an exchange partner (Oliver and Swan, 1989), such that if they believe the seller earns exceptionally high profits or that a price increase is not attributable to cost or quality increases, they will perceive the exchange as unfair (for example, Bolton et al., 2003; Dickson

and Kalapurakal, 1994; Campbell, 1999; Frey and Pommerehne, 1993). In a bank setting, Urbany, Madden, and Dickson (1989) reveal that customers perceive a price increase as unfair if they think it only serves to increase the bank's profits. Moreover, buyers perceive an exchange as unfair if they discover that other buyers in an exchange relationship with the same seller receive a lower price for the same product (Martins and Monroe, 1994). Some authors also indicate that customers use both social norms and personal and societal approval to arrive at their fairness judgments (for example, Maxwell, 1999). Thus, price fairness depends upon the extent to which customers believe that the difference between a seller's price and a reference point (determined by comparison with others or with social norms) is justifiable, reasonable, and acceptable.

Four factors influence price fairness judgments: (1) comparisons with transactions that involve different parties; (2) information that provides reasons for a certain price or a change in price; (3) the customer's previous experience; and (4) the customer's general knowledge or beliefs about the seller's practices and what generally seems justifiable (Xia et al., 2004).

The two central aspects in the formation of price fairness judgments, information and trust, warrant further examination. Because fairness judgments are cognitive processes that require information processing, information about prices should affect fairness judgments. The more information customers have about a seller's prices (for example, complex fee structures, differentiated prices), the greater their trust in the superiority of the offer. This trust, in turn, should lead to more favorable evaluations of price fairness and thus greater satisfaction with the firm's pricing policy.

Price information, trust and price fairness

Extensive research considers the different effects that price presentations can have on price perceptions (for example, Krishna et al., 2002) and how firms can make their offers more attractive (Bearden et al., 2003). The existing research also addresses aspects such as advertised reference prices (Grewal et al., 1998), individual differences in reference price utilization (Chandrashekaran, 2001), semantic cues associated with sale and comparative price claims (Liechtenstein et al., 1991), the situational context (Grewal et al., 1996), and factors that shape internal reference prices (Yadav and Seider, 1998). To date, however, little research considers the effect of complete and accurate price information on perceptions of price.

Increasing access to information, access to more alternatives, more simplified transactions, greater communications between customers, and general distrust and resentment on the part of customers all increase customer power (Urban, 2003). With greater power, customers demand more open, honest, and complete information about products and prices. Price information is clear when the customer can easily obtain a comprehensive, effortless overview of the company's quoted prices (Diller, 1997). Greater price information clarity reduces customers' search and evaluation costs, which should lead to greater satisfaction with the firm's pricing policy. Several companies recognise this trend and have taken active measures to promote price information clarity. For example, some firms install software-based advisors that help customers obtain all the product- and price-related information they need to make their buying decisions. In the banking industry, innovative credit unions such as First Tech (which serves Intel and Microsoft in the northwest US region), SACU (San Antonio), Mission Federal (San Diego) and Patelco (Colorado) are experimenting with web-based tools that help customers select mortgages, loan programs, deposit accounts, and so forth. These programs aim to provide open, honest, complete information about products and prices and, thus, to build trust. Their experiences indicate that the programs are highly effective in terms of increasing satisfaction, trust, and sales (Urban, 2003).

Price comparisons can be either explicit or implicit, but in both cases they are highly subjective (Xia et al., 2004). Lacking information about the seller's profits or costs, customers are likely to use the benefits they expect to receive from the product as a comparison standard (Thaler, 1985; Oh, 2003). However, if they have information about firm profits, they may compare their gains with the gains of their exchange partner (Oliver and Swan, 1989). Thus, the availability of information about the firm's prices, fee structures, and differentiated prices should affect judgments relating to price fairness.

Support for this argument emerges from signaling theory, which is based in information economics and relevant in situations in which different parties to a transaction have asymmetric information (Spence, 1974). In a buyer–seller relationship, for example, a customer lacking relevant information must either gather the needed information, which is a costly undertaking, or make inferences about the nature of the unknown or missing information (Biswas et al., 2002). The seller can convey or "signal" information so that the customer believes the information is true and reliable. Such a strategy works if a cost or "bonding" component penalizes the signaling firm if the information actually is untrue

or invalid. In price perception literature, signaling theory explains the effects of low price guarantees (for example, Biswas et al., 2002; Srivastava and Lurie, 2004). Srivastava and Lurie (2004) also argue that signaling is particularly relevant in situations in which customers lack full price information and in markets with intense price competition and related price fluctuations.

Trifts and Häubl (2003) use signaling theory to explain the positive effect of access to uncensored competitor price information on the Internet. They argue that "in the long run, a retailer that provides access to uncensored competitor price information may benefit from an enhanced perceived trustworthiness and, ultimately, an increased likelihood of being chosen by consumers" (Trifts and Häubl, 2003, p. 150). Sharing relevant and potentially self-damaging information can be interpreted as openness in communication, which is an important antecedent of trust (Morgan and Hunt, 1994). Trust itself has been defined as "the mutual confidence that no party to an exchange will exploit its informational advantage" (Sabel, 1993, p. 1133).

Similarly, signaling may work to communicate the firm's own prices. When firms provide complete pricing information, including complex fee structures, customers should judge those firms as more open and honest about their pricing policies and therefore infer that the prices are fair. Such openness with regard to pricing is especially important in situations (such as airlines) that are marked by intensive price competition, strongly fluctuating prices, or complex price mechanisms. Open and honest pricing policies increase customers' confidence that they can consider the firm's prices to be fair.

Trust also pertains to whether – and to what extent – the customer believes that an offered price is favorable (Diller, 1997, 2000). The more trust customers have in the superiority of an offer, the higher their satisfaction with the price. Customers gain trust in price when they believe that prices are favorable and that the firm is customer oriented in its price setting. Furthermore, trust requires that customers can rely on those prices – that is, that they do not change unexpectedly. Stable prices enable customers to evaluate the offer accurately and judge if the prices offered are favorable. Moreover, unless customers have trust in the firm's prices, they cannot compare the offered prices with those of competitors to determine if the firm's prices are favorable. Thus, price structures that are complete and policies that are open and honest enhance customer trust in prices.

Furthermore, if customers perceive that the seller wishes to assist them in making a well-informed purchase decision (as is the case with

competitor price information, Trifts and Häubl, 2003), much of the uncertainty surrounding the intended purchase dissipates (Biswas et al., 2002). Thus, there would be an increase in customer confidence.

The extent to which customers actively search and respond to advertised prices is generally overestimated by executives in the retail grocery industry (Urbany et al., 1996); that is, customers do not always process price information actively and extensively. Rather, their price confidence might be more a subjective perception than a result of extensive information processing. In any case, the availability of information about prices, price structures, and special offers and the openness of the pricing system have an impact on whether the customer believes a price is favorable.

Because price fairness judgments, as noted, can be implicit and highly subjective, we argue that subjective beliefs that a price is favorable have a directly influence upon judgments of price fairness. Recall that fairness judgments are customers' evaluations of whether or not a price that differs from a reference point is justifiable, reasonable, and acceptable. If customers are confident that a company's price is favorable, they are more likely to perceive it as fair.

Empirical research demonstrates that the customer's perceived price fairness directly influences his or her overall satisfaction and post-purchase behavior. Voss, Parasuraman, and Grewal (1998) study the effect of price perceptions in an experimental setting using a hotel check-in scenario and find that price perceptions directly influence overall customer satisfaction. Bolton and Lemon (1999) also report that price disconfirmation, payment equity, and the actual price significantly affect overall customer satisfaction in their study of the entertainment and cellular phone industries. Therefore, we conclude that the customer's price confidence, as a perception of price superiority, influences his or her overall satisfaction with the firm's pricing policy, a component of overall satisfaction.

A substantial amount of research into satisfaction literature links equity judgments to overall satisfaction and behavioral intentions. Oliver and Swan (1989) show that perceptions of unfair prices lead to dissatisfaction. Other studies reveal that unfairness judgments lead to negative customer reactions for the firm, including lower purchase intentions, complaints, and negative word-of-mouth behavior (for example, Campbell, 1999; Huppertz et al., 1978; Xia et al., 2004). In turn, we argue that price fairness judgments first influence the customer's satisfaction with the overall pricing policy of the firm, which then has an effect on post-purchase behavior, such as positive or negative word of

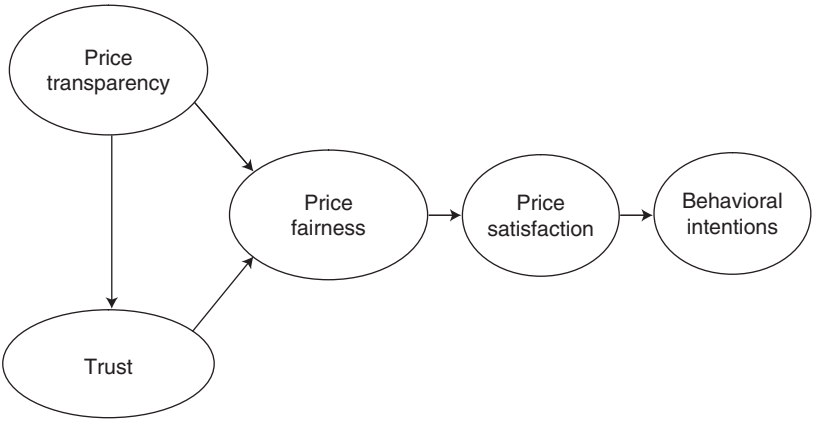

Figure 6.1 Conceptual model

mouth and repurchase intentions. Price fairness itself is influenced by price information and trust, as shown in Figure 6.1.

Finally, we argue that price information influences the customer's overall satisfaction with the firm's pricing policy. This argument relies on the assumption that complete, accurate, and honest price information can benefit customers, because it makes more informed decisions possible (see also Bearden et al., 2003). Price information also reduces customers' search costs. Therefore, we believe that price information directly influences the customer's satisfaction with a firm's pricing policy. In a study of the hotel industry, Mattila and Choi (2006) make the similar finding that hotel guests are more satisfied when they receive information about the hotel's pricing policy.

Discussion and conclusion

Our conceptual model and arguments have important implications for the theory and practice of pricing. From a theoretical point of view, we identify some antecedents of price fairness that have been overlooked in the previous research; specifically, neither information nor trust has been studied as a possible antecedent of price fairness judgments. Because fairness judgments involve cognitive effort and information processing, these two constructs may be considered to be logical extensions of the existing price fairness literature and it would also be interesting to conceptualize the two constructs in other industries in which price information and price uncertainty play major roles.

Drawing upon signaling theory in pricing (for example, Biswas et al., 2002; Srivastava and Lurie, 2004), we posit that delivering price information becomes particularly relevant in situations in which customers lack full price information and in markets that are characterized by intense price competition and related price fluctuations. Yet it remains unclear how the constructs that we have explored may apply in situations in which customers have easy access to all price information, little price competition exists, and prices do not fluctuate. Another interesting environment in which to study such effects is the Internet, which has a very strong influence on price perceptions (Suri et al., 2003).

It seems reasonable to assume that some moderating effects play roles in price perceptions, such as price consciousness (Sinha and Batra, 1999), involvement (Chandrashekaran, 2001), or price presentation (Krishna et al., 2002); further empirical studies should address these potential moderators. Literature on price-matching guarantees suggests that their effectiveness depends upon whether the customer's search costs are high or low (Srivastava and Lurie, 2004) and the extent to which other cues indicate high or low prices (Biswas et al., 2002). These findings could be relevant in the delivery of complete, accurate, easy-to-understand price information.

Some important practical implications also emerge from our research review. Price fairness judgments are highly subjective, and customers usually have little knowledge about a seller's actual costs and profit margins (Bolton et al., 2003). Delivering a clear, complete, and comprehensive overview of prices can increase customers' trust in price. Trust, in turn, increases perceived price fairness. If, however, unfavorable differences mark the comparison of the firm's prices with those of its competitors, the firm should focus more on product differentiation to justify its higher price. Customers perceive greater price reliability if no hidden costs exist and prices do not change unexpectedly. If prices change, customers should be informed properly and promptly to built trust and maintain long-term relationships. Studies also show that customers generally consider practices such as demand-based or dynamic pricing to be unfair and harmful to trust building (Garbarino and Lee, 2003). In many different industries, such as cellphone operators, rental car companies or low-cost air carriers, dynamic pricing is a common practice, and conventional wisdom assumes that such tactics are a good idea (Ayres and Nalebuff, 2003). Companies announce their "low" prices while hiding various additional charges in the fine print. In the long run, however, such practices are harmful not only to customers, who become frustrated when they work out what the product or service really

costs, but also to the whole industry, because they induce unfair price competition (Ayres and Nalebuff, 2003).

References

Adams, J. S. (1965) "Inequity in Social Exchange," in L. Berkowitz (ed.), *Advances in Experimental Social Psychology* (New York: Academic Press), pp. 267–99.

Anderson, E.W., C. Fornell and D. R. Lehmann (1994) "Customer Satisfaction, Market Share, and Profitability: Findings from Sweden," *Journal of Marketing*, (July), pp. 53–66.

Anderson, E. W., C. Fornell and S. K. Mazvancheryl (2004) "Customer Satisfaction and Shareholder Value," *Journal of Marketing*, Vol. 68, No. 4, pp. 172–85.

Ayres, I. and B. Nalebuff (2003) "In Praise of Honest Pricing," *Sloan Management Review*, (Fall), pp. 24–8.

Bearden, W. O., J. P. Carlson and D. M. Hardesty (2003) "Using Invoice Price Information to Frame Advertised Offers," *Journal of Business Research*, Vol. 56, pp. 355–66.

Biswas, A., C. Pullig, M. I. Yagci, and D. H. Dean (2002) "Consumer Evaluation of Low Price Guarantees: The Moderating Role of Reference Price and Store Image," *Journal of Consumer Psychology*, Vol. 12, No. 2, pp. 107–18.

Bolton, L. E., L. Warlop and J. W. Alba (2003) "Consumer Perceptions of Price (Un)Fairness," *Journal of Consumer Research*, Vol. 29, pp. 474–91.

Bolton, R. N. and J. H. Drew (1991) "A Multistage Model of Customers' Assessments of Service Quality and Value," *Journal of Consumer Research*, Vol. 17, pp. 375–84.

Bolton, R. N. and K. N. Lemon (1999) "A Dynamic Model of Customer's Usage of Services: Usage as an Antecedent and Consequence of Satisfaction," *Journal of Marketing Research*, Vol. 36, pp. 171–86.

Campbell, M.C. (1999) "Perceptions of Price Unfairness: Antecedents and Consequences," *Journal of Marketing Research*, Vol. 36, pp. 187–199.

Chandrashekaran, R. (2001) "The Implications of Individual Differences in Reference Price Utilizations for Designing Effective Price Communications," *Journal of Business Research*, Vol. 53, pp. 85–91.

Dickson, P. R. and R. Kalapurakal (1994) "The Use and Perceived Fairness of Price-Setting Rules in the Bulk Electricity Market," *Journal of Economic Psychology*, Vol. 15, No. 3, pp. 427–48.

Diller, H. (1997) "Preis-Management im Zeichen des Beziehungsmarketing," *Die Betriebswirtschaft*, Vol. 57, No. 6, pp. 749–63.

Diller, H. (2000) "Preiszufriedenheit bei Dienstleistungen. Konzeptionalisierung und explorative empirische Befunde," *Die Betriebswirtschaft*, Vol. 60, No. 5, pp. 570–87.

Fan, X., B. Thompson and W. Wang (1999) "Effects of Sample Size, Estimation Methods, and Model Specification on Structural Equation Modeling," *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 6, No. 1, pp. 56–83.

Fornell, C. and D. F. Larcker (1981) "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research*, Vol. 18, pp. 39–50.

Frey, B. S. and W. W. Pommerehne (1993) "On the Fairness of Pricing – An Empirical Survey Among the General Population," *Journal of Economic Behavior and Organization*, Vol. 20, No. 3, pp. 295–307.

Garbarino, E. and O. F. Lee (2003) "Dynamic Pricing in Internet Retail: Effects on Consumer Trust," *Psychology and Marketing*, Vol. 20, No. 6, pp. 495–513.

Grewal, D., H. Marmorstein and A. Sharma (1996) "Communicating Price Information through Semantic Cues: the Moderating Effects of Situation and Discount Size," *Journal of Consumer Research*, Vol. 23, pp. 148–55.

Grewal, D., K. B. Monroe and R. Krishnan (1998) "The Effects of Price-Comparison Advertising on Buyers' Perceptions of Acquisition Value, Transaction Value, and Behavioral Intentions," *Journal of Marketing*, Vol. 62, pp. 46–59.

Heskett, J. L., W. E. Sasser and C. Hart (1990) *Service Breakthroughs* (New York: The Free Press).

Homans, G. C. (1961) *Social Behavior: Its Elementary Forms* (New York: Hartcourt, Brace & World).

Homburg, C. and A. Giering (2001) "Personal Characteristics as Moderators of the Relationship Between Customer Satisfaction and Loyalty – An Empirical Analysis," *Psychology and Marketing*, Vol. 18, No. 1, pp. 43–66.

Hu, L. T. and P. M. Bentler (1999) "Cutoff Criteria for Fit Indices in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives," *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 6, No. 1, pp. 1–55.

Huppertz, J. W., S. J. Arenson and R. H. Evans (1978) "An Application of Equity Theory to Buyer–Seller Exchange Situations," *Journal of Marketing Research*, Vol. 15, pp. 250–60.

Jacoby, J. (1976) "Consumer and Industrial Psychology: Prospects for Theory Corroboration and Mutual Contribution," in M. D. Dunnette (ed.), *Handbook of Industrial and Organizational Psychology* (Chicago: Rand-McNally), pp. 1031–61.

Keaveney, S. M. (1995) "Customer Behavior in Services Industries: An Exploratory Study," *Journal of Marketing*, Vol. 59, pp. 71–82.

Krishna, A., R. Briesch, D. R. Lehmann and H. Yuan (2002) "A Meta-Analysis of the Impact of Price Presentation on Perceived Savings," *Journal of Retailing*, Vol. 78, pp. 101–18.

Liechtenstein, D. R., S. Burton and E. J. Karson (1991) "The Effects of Semantic Cues on Consumer Perceptions of Reference Price Ads," *Journal of Consumer Research*, Vol. 18, pp. 380–91.

Marsh, H. W. and J. R. Balla (1988) "Goodness-of-Fit Indexes in Confirmatory Factor Analysis: the Effect of Sample Size," *Psychological Bulletin*, Vol. 103, No. 3, pp. 391–410.

Martins, M. and K. B. Monroe (1994) "Perceived Price Fairness: a New Look at an Old Construct," in C. T. Allen and D. R. John (eds), *Advances in Consumer Research*, Vol. 21 (Provo, UT: Association for Consumer Research), pp. 75–90.

Mattila, A. S. and S. Choi "A Cross-cultural Comparison of Perceived Fairness and Satisfaction in the Context of Hotel Room Pricing," *International Journal of Hospitality Management*, Vol. 25, No. 1, pp. 146–53.

Matzler, K., H. H. Hinterhuber, C. Daxer and M. Huber (2005) "The Relationship Between Customer Satisfaction and Shareholder Value," *Total Quality Management and Business Excellence*, Vol. 16, No. 5, pp. 1–10.

Matzler, K., H. Mühlbacher, A. Altmann and H. Leihs (2004) "Price Satisfaction as a Multi-Attributive Construct," *Yearbook of Marketing and Consumer Research*, Vol. 2, pp. 77–92.

Maxwell, S. (1999) "The Social Norms of Discrete Consumer Exchange: Classification and Quantification," *American Journal of Economics and Sociology*, Vol. 58, No. 4, pp. 999–1018.

Monroe, K. B. (1990) *Pricing: Making Profitable Decisions* (New York: McGraw-Hill).

Morgan, R. M. and S. D. Hunt (1994) "The Commitment–Trust Theory of Relationship Marketing," *Journal of Marketing*, Vol. 58, pp. 20–38.

Oh, H. (2003) "Price Fairness and its Asymmetric Effects on Overall Price, Quality, and Value Judgments: the Case of an Upscale Hotel," *Tourism Management*, Vol. 24, pp. 387–99.

Oliver, R. L. and J. E. Swan (1989) "Consumer Perceptions of Interpersonal Equity and Satisfaction in Transactions: a Field Survey Approach," *Journal of Marketing*, Vol. 53, pp. 21–35.

Ortmeyer, G., J. A. Quelch and W. Salmon (1991) "Restoring Credibility to Retail Pricing," *Sloan Management Review*, Vol. 33, pp. 55–66.

Ralston, R. W. (2003) "The Effects of Customer Service, Branding, and Price on the Perceived Value of Local Telephone Service," *Journal of Business Research*, Vol. 56, pp. 201–13.

Reuben, B. M. and D. A. Kenny (1986) "The Moderator–Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology*, Vol. 51, No. 6, pp. 1173–82.

Sabel, C. F. (1993) "Studied Trust: Building New Forms of Cooperation in a Volatile Economy," *Human Relations*, Vol. 46, No. 9, pp. 1133–70.

Sinha, I. and R. Batra (1999) "The Effect of Consumer Price Consciousness on Private Label Purchase," *International Journal of Research in Marketing*, Vol. 16, No. 3, pp. 237–51.

Slater, S. F. (1997) "Developing a Customer Value-Based Theory of the Firm," *Journal of the Academy of Marketing Science*, Vol. 25, pp. 162–7.

Spence, M. (1974) *Market Signaling* (Cambridge, MA: Harvard University Press).

Srivastava, J. and N. H. Lurie (2004) "Price-Matching Guarantees as Signals of Low Store Prices: Survey and Experimental Evidence," *Journal of Retailing*, Vol. 80, pp. 117–28.

Suri, R., M. Long and K. B. Monroe (2003) "The Impact of the Internet and Consumer Motivation on Evaluation of Prices," *Journal of Business Research*, Vol. 56, pp. 379–90.

Tabachnik, B. G. and L. S. Fidell (1996) *Using Multivariate Statistics* (New York: Harper Collins).

Thaler, R. (1985) "Mental Accounting and Consumer Choice," *Marketing Science*, Vol. 4, pp. 199–214.

Trifts, V. and G. Häubl (2003) "Information Availability and Consumer Preference: Can Online Retailers Benefit from Providing Access to Competitor Price Information?," *Journal of Consumer Psychology*, Vol. 13, Nos 1–2, pp. 149–59.

Urban, G. L. (2003) *Customer Advocacy: Is It for You?*, Working Paper MIT, 175 (October).

Urbany, J. E., R. Kalapurakal and P. R. Dickson (1996) "Price Search in the Retail Grocery Market," *Journal of Marketing*, Vol. 60, pp. 91–104.

Urbany, J. E., T. J. Madden and P. R. Dickson (1989) "All's Not Fair in Pricing: an Initial Look at the Dual Entitlement Principle," *Marketing Letters*, Vol. 1, pp. 17–25.

Vaidyanathan, R. and P. Aggarwal (2003) "Who Is the Fairest of Them All? An Attributional Approach to Price Fairness Perceptions," *Journal of Business Research*, Vol. 56, pp. 453–63.

Varki, S. and M. Colgate (2001) "The Role of Price Perceptions in an Integrated Model of Behavioral Intentions," *Journal of Service Research*, Vol. 3, No. 2, pp. 232–40.

Voss, G. B., A. Parasuraman and D. Grewal (1998) "The Roles of Price, Performance, and Expectations in Determining Satisfaction in Service Exchanges," *Journal of Marketing*, Vol. 62, pp. 46–61.

West, S. G., J. F. Finch and P. J. Curran (1995) "Structural Equation Models with Nonnormal Variables: Problems and Remedies," in R. H. Hoyle (ed.), *Structural Equation Modeling* (Thousand Oaks, CA: Sage).

Woodruff, R. B. (1997) "Customer Value: the Next Source for Competitive Advantage," *Journal of the Academy of Marketing Science*, Vol. 25, pp. 139–53.

Xia, L., K. B. Monroe and J. L. Cox (2004) "The Price Is Unfair! A Conceptual Framework of Price Fairness Perceptions," *Journal of Marketing*, Vol. 68, pp. 1–15.

Yadav, M. S. and K. Seider (1998) "Is the Price Right? Understanding Contingent Processing in Reference Price Formation," *Journal of Retailing*, Vol. 74, pp. 311–29.

Zeithaml, V. A. (1988) "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence," *Journal of Marketing*, Vol. 52, pp. 2–22.

7

Price Transparency on the Internet Requirements of Revenue Management for the Development of an Online Strategy in the Hospitality Industry

Roman Egger and Irene Walters

Introduction

There is no doubt that information communication technologies (ICTs) have had a significant and lasting effect upon tourism over the last few years. As a very information-intensive trade sector, the tourist industry is making extremely successful use of ICTs. Sheldon (1997) rightly comments "IT [...] provides the information backbone that facilities tourism."

The triumphal advance of the Internet has also opened up new distribution channels for tourist products, creating the possibility not only to address new target groups but also, above all, to open up new markets (Andrews and Noone, 2003). Online distribution allows the suppliers of goods and services to make them accessible to customers in an innovative manner within the framework of e-commerce. The resulting possibility of direct contact between supplier and purchaser has serious effects on the overall tourism distribution process, which is reflected in increased disintermediation tendencies. It becomes possible to circumvent traditional intermediaries, since the main transaction phases can be handled by means of e-commerce applications. The exponential spread of tourist providers on the Internet, searching for direct contact to the customer in order to obtain information advantages and cost savings is leading to an increasing lack of transparency. The phenomenon of disintermediation is accordingly being taken ad absurdum, since this new lack of clarity favors and, in part, even encourages the reintermediation of cybermediaries. Thus, an increasing number of new intermediaries are setting

up on the Internet, offering platforms for the marketing of tourist products and services. The extraordinary dynamism in this field of business is making the use of innovative marketing channels a challenge.

On the Internet, the customer is increasingly enjoying an improved market position, since he is being offered products at different prices via different marketing channels. Moreover the product and price transparency in the Internet economy thus makes it easier for the customer to compare prices and services. A field of tension is created, since not only hotel chains but also tour operators and online travel agencies attract customers with best-rate guarantees. The resulting price transparency is additionally intensified by price comparability in the same currency through the provision of currency converters (Buhalis, 2003).

Theory

The developments of information and communication technologies are having far-reaching effects on the whole of the tourism industry, and for businesses they represent principally an innovation in the field of strategic management, optimized processed structuring and the development of competitive products (Buhalis and Egger, 2006). The marketing instrument probably most affected by the ICTs is distribution policy. Three waves of technological development have had a decisive influence upon tourism distribution in the hotel trade in the past. The 1970s saw the launch of computer reservation systems (CRS), the 1980s global distribution systems (GDS) and the Internet, which since the late 1990s has been in use alongside the three already existing distribution channels of face-to-face, catalog and telephone.

An effective clarity of distribution is required, since the customer is reliant on clear-cut, real-time, careful and qualitative information in order to be able to differentiate between providers in the wide range of products offered (O'Connor and Frew, 2002; O'Connor, 2004). So far, hotels have concluded special contracts on net rates and rooms' allocation with tour operators and incoming agencies. The contract prices for hotel services depend upon the forecast sales volume. In addition, some allotments (for example, hotel rooms) are supplied with a release date that is agreed in advance. An allocation gives the intermediary security about the availability of the product. There is thus no need to consult the hotel about availability, saving time and money. Because of the phenomenon in the tourist industry that products are sold that cannot be stored, the supplier must have timely control over his capacities since they cannot be sold at a later date (Buhalis, 2003). The supplier's website

allows the customer to have unlimited disposal over all free capacities in real time, which means that a larger selection of products is at his disposal. Since Internet penetration amongst private users has grown rapidly over the past few years, the Internet offers considerable opportunities to the hotel trade to push marketing by means of the hotel's own website in order to eliminate tour mediators and thus to reduce the payments of transactions (Andrews and Noone, 2003).

In the hard-fought market of the hotel trade, the hotel attempts to be present on the market through numerous distribution channels. As a matter of fact, the hotelier is confronted with a high level of market and price transparency that makes many processes incalculable and unpredictable. Month after month, new tour operators with their own online maintenance systems approach hotels. The various online travel agencies offer sales via their website on a contractual basis with commission or net rates, free sale or based on allocation. The hotelier can or must assume responsibility for updating the data and availabilities often manually by means of an extranet. This represents an additional expenditure for the hotel, but with the advantage of an increased market presence.

Revenue management (RM) as a separate department, above all in chain hotels, acts as an organizer between traditional booking channels via fax, telephone or letter, GDS and online booking channels, thereby amounting to an interface between marketing and technology. Its function is to arrange facts, principles and methods in order to be able to measure the results as a consequence. If it is to be successfully applied, the definition of an objective is required, how it is achievable and how the success can be identified. The most difficult function is to think through the very complex processes, determine the objectives and draw up a plan that takes effect within the market environment (Cross, 2001). Yield management methods are used to attempt to address specific potential income opportunities. An attempt is made to forecast the customers' decision-making criteria in order to adjust what is offered to the customers' requirements. The control of demand by means of flexible pricing requires precise knowledge about the availability data of one's own capacities and of the customers' value judgments. The manual data maintenance of the online travel agencies' extranets is very time-consuming and often require large hotels to employee a separate member of staff if they are to achieve a broad presence. O'Connor (2003) recommends a uniform price strategy that applies to all distribution channels. He suggests that constant prices should be offered in all online channels. This is also the opinion of the hotel chains, and requires that the RM of each hotel apply "rate parity through all online channels."

The pressure exercised on hotels by the online travel agencies is increasing constantly. High commission payments are required and, in addition, high membership fees are often claimed. At the same time, the hotel must guarantee that it will maintain and update sales-relevant data. Anyone who cannot – or does not – want to invest the effort and, above all, the financial costs, is no longer included in the marketing partner's offers, or poorly placed on their websites. Specifically in five-star hotels, where the guests expect that quality and service are at a high level, and that the information is up to date, action must be taken from the very beginning. One problem is the fact that, to date, there has been little experience of the new economy. It is not only pricing factors, but also knowledge of the market, the target groups, the competition and the suppliers that are decisive if a hotel is to be able to maintain its position in a dynamic market environment. Acting strategically primarily means having an overview over all of the influencing factors that are relevant on the market and for sales. It is often necessary to accept a certain risk and the possibility of mistakes in order to acquire experience for future action.

Method

The primary aim of this chapter is to develop an online strategy for five-star chain hotels for the marketing of vacant capacities by means of a distribution channel that is as inexpensive as possible. Taking into account the influencing factors of relevance for revenue management, the aim is to maintain an increase in market shares in order to secure the long-term business success (Yeoman and Ingold, 2003). For the purpose of being able to develop a corresponding strategy under the applying market conditions, the objective is "... to sell the *right product*, to the *right customer*, at the *right time*, for the *right price*" (Cross, 2001, p. 61) using the *right channel*. The research design, as shown in Figure 7.1, is based on Cross's statement, and puts the focus of revenue management on the customer, the competitors, online travel agencies and the user's own business as the most important internal and external factors.

In order to analyse the requirements for an online strategy, four empirical investigations were carried out in collaboration with a Salzburg five-star chain hotel, which serves to answer the mainly theory-driven hypotheses (H_n) shown in the chart. It should be pointed out that their formulation is relatively comprehensive as a result of the complexity of this field of research, and therefore requires a breakdown into part propositions. Statistical and empirical data about competition, customer and

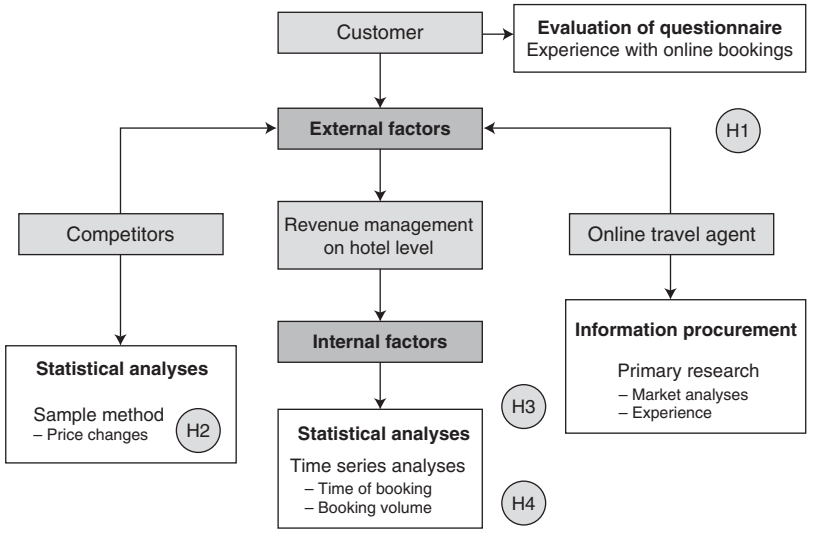

Figure 7.1 Research design

market observation on the Salzburg hotel market were used to draw up the following hypotheses:

H1: The five-star hotel online customer is a holiday traveler between 25 and 55, who sees price as the major advantage for his online booking. He invests a great deal of time in obtaining information about what is being offered.

H2: An adjustment of the price to the available capacities of a hotel is sensible, achieving greater exploitation of capacity and maximum sales.

H3: Online bookings are largely made during leisure time – for example, at weekends and at a short notice.

H4: The average daily rate (ADR) of the online partner is affected by high commission payments and this cuts the hotel's overall ADR.

Starting situation

Taken as a whole, the occupancy rates of the hotel trade in the city of Salzburg show a clear high season in the summer months of July and August, coinciding with the Salzburg Festival, with good "shoulder" months (May, June, September, October) resulting from bookings for

conferences and trade fairs. The low level of occupancy is reflected in the low number of overnight stays in January, February and March. These market facts presuppose a sophisticated price policy in the various seasons. The eight five-star hotel establishments account for 14 percent of the total number of beds, and in 2004 their occupancy rate was 43.9 percent (Stadtgemeinde Salzburg, 2005). This means that the potential number of beds to be filled is greater than 50 percent.

Results

The overall image of the customer is essential for the structuring of an online strategy, since detailed knowledge of his/her behavior can be seen as a prerequisite for the taking of strategic action decisions. A standardized questionnaire was developed for the analysis of the customer profile. Of the 600 questionnaires left for guests to complete in the establishment under investigation, 106 valid questionnaires were returned, with 54 percent of the sample already having had experience with online booking. Of these, only 47.4 percent cited "finding an inexpensive offer" as being the main reason for making an online booking, with 40.4 percent of the sample carrying out the booking on a site in which they had confidence. The majority of the sample, 63.2 percent, regarded their previous experience with online bookings as the reason for booking. For a further 24.6 percent, the short time needed and for 19.3 percent the recommendation of the Internet site by friends was a decisive reason. Nevertheless, the results of the determination of the "Advantages of an online booking" show parallels to the literature. Online searchers carry out cross shopping in order to find offers on competing suppliers' sites (Kontzer, 2005). 75.4 percent of the sample considered the greatest advantage of an online booking to be the rapid comparability of what was offered, while 71.9 percent also cited the most inexpensive price. The fact that real-time availability could be determined was of major importance for 66.4 percent. That the booking required little time was cited by less than one-half (40.4 percent), that a clear view could be obtained of what was offered by one-third (33.3 percent) and that the booking procedure was straightforward by somewhat more than one-quarter (28.1 percent) of the sample. Somewhat more than 50 percent of those polled invested between 30 minutes and 3 hours in an online search. A small percentage of the sample invested up to two days and more in order to obtain information about online offers. The results from H1, after verification by means of a number of parameters, show the Internet booker as: a 41-to-55-year-old business or holiday tourist, who uses the Internet for

a hotel booking because of the speed of the inquiry about availabilities, comparability of offers and favorable prices. He only invests between 30 minutes and three hours of his time for this purpose.

In order to verify H2, four competitors in the five-star sector of the study establishment were selected, one hotel being in the prestige sector, one hotel having a traditional setting based on individuality, the third relying on charm thanks to its small size and the fourth representing the study establishment's strongest competitor due to location and size. Over a period of four weeks in advance (May 3, May 10, May 17, and May 24), competitor prices between the period of June 1 and 15 have been collected and analysed, in order to observe the price structure and price changes of five-star operations in the City of Salzburg. In addition, those rooms still available in the study establishment were used for interpretation purposes. The starting variable for the determination of prices was the price for a single room, for one night including all taxes and levies, with no additional services. The data were collected for the primary research on the competitors' own hotel websites. The analysis showed the price-policy factors very well – for example, which competitors were pursuing a high- or low-price policy. Since not every hotel has a revenue management team, the time necessary for the implementation of a demand-focused pricing policy was not available in every case. It was found that the study establishment, because of its flexible pricing system, was able to react at short notice to demand fluctuations within the period of the investigation, leading to almost 100 percent exploitation of occupancy.

It is absolutely necessary to know the market and the customers' price elasticity and price sensitivity. If despite a short-term price reduction no increase in booking numbers is observable, the hotel is selling itself below its value, since obviously no customers appreciate such price reductions, and the applied YM tactic of discounting is, in the long term, not focused on the result. The question arises of how can high price differences be possible for the same product? The justification of the prices lies, on the one hand, in differentiation (room standard, room category, booking volume, booking time) and, on the other hand, however, in the adjustment of the price to the few available rooms in the hotel and to soft factors such as luxury, prestige and image. What this investigation does not show is the travel typologies that lie behind the bookings. For instance, additional group room nights could have been booked or cancelled at short notice. In addition, the competitors' excess booking and cancellation factors are not known. If the parameters of No Shows, Early Departures, Walk-Ins and Extended Stays are analysed for a longer period

of time, trends can be identified that could form the basis for a long-term overbooking strategy and could improve capacity exploitation over a longer period of time.

H3 and H4 concern online travel agencies and their integration in the hotel's distribution strategy. The following questions are relevant in the decision for or against collaboration with online travel agencies. What business model is being pursued? What target group is being addressed? Where do the customers come from? In what markets are advertising and marketing pursued? How high are fame and image? What are the costs in terms of money and time that the hotelier will have to pay?

For the time series analysis, we made a comparison of the data from different online travel agencies. Their business models for the bookings mediated can distinguish the online travel agencies above all by the agency or merchant model. The data are updated through means of extranets, none of them being similar to any other. Navigation of the websites is very different, from extremely user-friendly to extremely complex. Price and contingent changes for a day can take between one minute and three minutes. At first sight, this might not appear much time to the reader. However, if this time is multiplied by the number of daily price and availability changes in the PMS (some of which for a number of weeks in advance), it becomes apparent that much time must be invested in maintenance. The efforts, for possible differentiation of the extranets, also show large differences. The authors attach very great value to these aspects, since it is necessary to see the effort invested that ultimately leads to bookings. (The user-friendliness of the systems is very different, with above all high-booking providers offering simpler systems.)

For the analysis of part 2 of H3, the parameter of room reservations made in the period under investigation (January 1 to June 30, 2005) was examined first. The analysis of how far in advance online bookings are made produced the following results: more than 50 percent of bookings are made 14 days or less before the date of arrival, with the majority being between two and four days in advance. The remaining 47 percent of bookings were spread over 15 to over 90 days before arrival with a large booking volume for reservations from between 22 and 31 days in advance. To verify part 1 of H3 "*Online bookings are largely made during leisure time, for example, at the weekend*", a closer look was taken at the distribution of bookings on the individual weekdays with markedly significant features. The assumption that bookings are made largely at the weekend because the customer has more resources for a search during leisure time is incorrect in the light of the results, since there are clear

peaks on Mondays and Fridays, and a low booking volume at weekends. The authors assume, however, that the significantly high booking volume on Mondays means that the search for the online offers indeed uses the weekends, but the ultimate reservation is only finalized during the first two days of the week. The high volume of bookings on Fridays possibly suggests short-term weekend visits that are only booked on the day of arrival.

In H4, the ADR of the Internet bookings were compared with the overnight stays booked through traditional distribution channels (travel agencies via GDS or direct bookings at the hotel via telephone or fax). The ADR of the Internet overnight stays is below the ADR of the traditional distribution channels across the board, as the result of high commission payments and a high proportion of merchant model bookings. Therefore, a considerably higher volume is necessary to compensate for the losses resulting from the lower average rate. Table 7.1 shows the volume that would be necessary from individual online providers in order to achieve the same revenue after deduction of all the transaction costs.

The calculation is based on a turnover per room of €110.00. From this basic price, we deduct commission (we use the term commission to make the figures more easily comparable, although the providers in columns 5 and 6 operate using the agency model and those in columns 7 and 8 the merchant model, negotiating agreements of up to 20 and more percent below the daily price) and transaction costs. However, the transaction costs relate only to payments created through the bookings in the systems (GDS and CRS costs). They do not include fax and telephone costs, or the work involved in making reservations in the hotel. The empty fields for transaction costs in columns 5 and 6 are due to the fact that these providers do not have interfaces to GDS and CRS. As shown in column 5 of Table 7.1, bookings using GDS incur uniform costs of €5.50. Expedia.com and hotels.com transfer bookings directly into the hotel chain's CRS. Expedia.com and hotels.com transactions are charged at €1.50 per booking, even if the bookings are subsequently cancelled. The "Necessary number of bookings" in Table 7.1 shows that 22 per cent more volume must be achieved with expedia.com and hotels.com in order to achieve the same total revenue as the hotel website in column 2. In entrepreneurial terms, increased sales through numerous bookings via online travel agencies at favorable rates mean higher costs for goods and materials in all sectors of the hotel. It is highly visible that bookings through the hotel website require the least transaction costs.

Table 7.1 Commission payments and transaction costs

Provider	**Hotel website**	**GDS**	**Travel agency**	**hrs.devenere.com salzburg.info nethotels.com**	**bookings.org**	**orbitz.com travelocity.com**	**hotels.com expedia.com**
Turnover/night in EUR	110	110	110	110	110	110	110
Commission				10%	12%	13%	20%
Subtotal				99.00	96.80	95.70	88.00
Transaction costs	4.75	5.50	5.50			5.50	1.50
Subtotal	105.25	104.50	95.70	99.00	96.80	90.20	86.50
Bookings required	95	96	104	101	103	111	116
Theoretical total revenue	10,000	10,000	10,000	10,000	10,000	10,000	10,000

Conclusion and discussion

Revenue management is a sophisticated management method for hotels and, like market and price transparency in e-business, should be regarded as a challenge. The development of an online strategy for the Internet as a distribution channel represents only a sub-sector of RM. This chapter shows the complex manner in which the part-factors, starting with the customer, via the competition and the market and ending with the internal hotel areas, are related to each other and dependent upon each other. An enterprise that has the competitive advantage of an online strategy based on an organized RM is able to take the right decisions much faster than the competition. To summarize, the most important findings for an online strategy are listed as followed:

First, the hotel must be aware of what customers are addressed by the online partners via their website in order to be able to offer target-group focused services. The customer requires up-to-date information about availability and prices in a fast and clear website, and if these data are available it can be react to convert *lookers* to *bookers* on the hotel's own website. Based upon their own experience, the authors recommend the same pricing for all online channels. In practice, it proves to be extremely difficult to explain to the customer why different prices are offered for the same product. In addition, it is standard in chain hotels to provide price parity through all online channels.

Secondly, a hotel must know the market environment of the competition and its distribution partners if it is to know what other revenue management methods can be applied. A controlled price strategy using short-term or long-term YM tactics influences the exploitation of capacity. Price increases or reductions should only be within the limits of a market-compatible framework. This confirms the need for precise knowledge about the demand and price elasticity on a market.

Thirdly, there are the resources of the hotel itself, with all those involved being coordinated and restricted to the core competences. The internal system with a convergent technical apparatus, an up-to-date information system and flexible staff are decisive factors for success.

The authors once again point out the importance and relevance of the hotel's own website. Bookings using this distribution channel are the most inexpensive and require the lowest level of sales volumes. This factor shows how important it is to attract the customer to the hotel's own website and how intensively the hotel's website must be integrated as an ICT into a long-term business and online strategy. Revenue management is an attitude, a philosophy that welds a company together in

order to focus attention on growth and success. In all, given the stimuli for thought for a possible online strategy provided by the proof of the hypothesis, faulty decisions support future successes. The Internet as a market place offers every competitor the same opportunities if the technical logical preconditions are satisfied. Low market access barriers allow new competitors to penetrate the market very quickly. A hotel is well advised to focus on its own core competencies or to maintain its position on the market using differentiation strategies. The physical size of the provider on the Internet is no longer decisive as to whether or not a competitor represents a threat. It is not the large that eats the small, but rather the fast that will eat the slow and the dynamic that will eat the static.

Online travel agencies will continue to develop new business systems and new customer-friendly tools such as dynamic packaging will improve. Nevertheless, there will continue to be customers who remain loyal to the traditional booking channels through the hotel or the travel agency, using the Internet only with preferred suppliers or to test new suppliers. However, there is one thing that the customer will demand: across-the-board sale at fair prices. The hotel industry must convince the customer that he has chosen the best offer and that all of the traditional and new technological distribution channels are representatives of the hotel's own business (Peters, 2005).

References

Andrews, N. and B. Noone (2003) "Revenue Management Over the Internet: a Study of the Irish Hotel Industry," in A. Ingold et al. (eds), *Yield Management: Strategies for the Service Industries*, 2nd edn (London: Continuum), pp. 149–61.

Buhalis, D. (2003) *eTourism: Information Technology for Strategic Tourism Management* (Upper Saddle River, NJ: Prentice Hall).

Buhalis, D. and R. Egger (2006) "Informations- und Kommunikationstechnologien als Mittel zur Prozess- und Produktinnovation für den Unternehmer," in M. Peters and B. Pikkemaat (eds), *Innovationen im Tourismus* (Berlin: ESV Verlag).

Cross, R. G. (2001) *Ressourcen erkennen – Umsätze steigern. Mit Revenue Management neue Einnahmequellen erschließen* (Vienna and Frankfurt: Wirtschaftsverlag Carl Überreuter).

Egger, R. (2005) *Grundlagen des eTourism: Informations- und Kommunikationstechnologien im Tourismus* (Aachen: Shaker Verlag).

Kontzer, T. (2005) "Consumers Don't Rely on Any One Online Source When Shopping for Travel Services," http://informationweek.com/story/showArticle.jhtml?articleID=160400770. Accessed on March 31, 2005.

O'Connor, P. and A. J. Frew (2002) "The Future of Hotel Electronic Distribution," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 43, No. 3, pp. 33–45.

O'Connor, P. (2003) "Online Pricing: An Analysis of Hotel Company Practices," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 44, No. 1, pp. 10–19.

O'Connor, P. (2004) "Privacy and the Online Travel Customer: an Analysis of Privacy Policy Content, Use and Compliance by Online Travel Agencies," in A. Frew (ed.), *Information and Communication Technologies in Tourism* (Vienna and New York: Springer).

Peters, W. D. (2005) "A View on the Merchant Model," http://www.hospitalitynet.org/news/4022608.html. Accessed on March 25, 2005.

Sheldon, P. (1997) *Tourism Information Technology* (Oxford: CABI).

Stadtgemeinde Salzburg (2005) *Salzburg in Zahlen. Der Tourismus im Jahr 2004*. Magistrat Salzburg Abteilung 2/01, Archiv und Statistisches Amt.

Yeoman, I. and A. Ingold (2003) "Decision-Making," in A. Ingold et al. (eds), *Yield Management: Strategies for the Service Industries*, 2nd edn (London: Continuum), pp. 111–30.

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Part IV
Sectoral pricing

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8

Revenue Marketing and its Application Within the Hospitality Industry: History and Future Development

Miguel B. Baltazar

Introduction

Revenue Management (RM) is concerned with demand-management decisions and the methodology and systems required to make them (Talluri and Van Ryzin, 2004). RM is specifically about the determination of both the profit-maximizing prices and the optimal allocation of inventory-constrained products to different customer segments. The progenitors of the application of this science were the airlines, and in particular American Airlines (AA). In 1989, American Airlines, under the leadership of Robert "Bob" Crandall, began to use one of the first Yield Management systems. Smith, Leimkuhler, and Darrow (1992) quotes Crandall as saying, "We estimate that RM has generated $1.4 billion (US dollars) in incremental revenue for American Airlines in the last three years alone. This is not a one-time benefit. We expect RM to generate at least US$500 million annually for the foreseeable future. As we continue to invest in the enhancement of DINAMO (Dynamic Inventory Allocation and Maintenance Optimizer system) we expect to capture an even larger revenue premium."

However, according to Cross (1998), American Airlines were not the first to apply Yield Management principles. Earlier examples and proof of the generalization of the adoption of these practices are those of a couple of start-up airlines carriers in the 1970s. Robert Cross (1998) cites PeopleExpress and Texas International as the precursors of fare control.

Following this first generation of what was then generally termed Yield Management, the hotel business began to adopt these practices. The hotel business faced a similar economic model to that observed in the airlines industry: high sunk and fixed costs, very low variable costs per inventory unit sold, a strong and economically competitive environment

with variable demand, accurate customer information with negligible cost of information, highly perishable fixed inventory and multiple rates. This fact would categorize the industry as the perfect candidate to lead the second generation of business adopting what has been denominated as Yield Management. Kimes (2003) points to the year 1988 as "a date which roughly marks the beginning of revenue management in the hotel industry." At this time, the hospitality industry became one of the leaders in the development of revenue management application, just behind the airlines industry. "In the late 1980s revenue management was in the early stages of development, and the major North American hotel chains (notably, Marriott, Hilton, Holiday Inn, and Sheraton) had started what would now be considered rudimentary revenue-management systems" (Kimes, 2003). As early as 1993, Lieberman writes that "Yield Management has become an accepted part of the hotelier's lexicon."

The importance of Revenue Management (RM) as a best practice comes from the fact that many industries practice some variation of this method, whether or not they define it as such. The car rental business, cargo, and radio/TV broadcasting (advertising space) would follow these airlines' best practices. More recently, other industries have adopted similar methods – they can now be found in sectors such as energy, telecommunications, manufacturing, gambling, banking/financial services and a very new business model providing traffic forecasting services to on-the-road GPS users.

It is important to study this area of RM because, so many years after its first application, it is still often considered to be an uncommon business practice which is slowly being applied and integrated within Bachelors' and Masters' level business education curriculums. Thus, it is important to discover the theoretical and application basis of this science. By developing an understanding of RM, one can attempt to contribute positively to the further expansion of knowledge and the validation of Revenue Management techniques into real-life business applications. This chapter seeks to raise awareness of RM, in particular amongst hospitality business professionals.

Defining Revenue Management (RM) and its application

Yield Management is the application of information systems and pricing strategies to allocate the right capacity to the right customer at the right place at the right time (Kimes, 2001b). Yield or Revenue Management case studies and articles are multidisciplinary in terms of pricing, but is often classified under the Operations Research (OR) and management

science field of study. Desiraju and Shugan (1999) point out that literature is dominated by operations researchers. However, RM differs from other OR applications, such as Total Quality Management (TQM) or Six Sigma disciplines, because it is concerned not only with efficiency and cost reduction, but also indirectly targets revenues and, at the bottom line, it contributes to profit maximization.

In the last decade or so, several authors have moved from the term Yield Management to Revenue Management (RM) or to a combination of the two – Yield and Revenue Management (YRM). Lieberman (1993), Kimes (2003) and Talluri and van Ryzin (2004) refer to Yield Management as being synonymous with RM. Most theorists and airline companies began by using the term Yield Management since the application of this science was limited to both overbooking and pricing decisions in the airlines industry. For example, Steven Pinchuk (2002) attempts to differentiate YM from RM, linking this shift to the evolution of the concepts:

> The airlines needed to analyze their markets, create new products that targeted real market segments, fill all their seats every day and decide where to position their assets based on the preceding considerations. This took a great deal of analysis. The airlines focused on inventory control first since this a mainly manual process that was already being practiced in varying degrees. Next came the introduction of YM, which added forecasting and then later optimization models, which made this much more of a predictive and controlling discipline. Now YM is slowly becoming RM, as YM techniques are more frequently used outside of typical inventory control and YM situations to influence demand or pricing. Unlike YM, RM reaches out beyond inventory controls.

According to Smith, Leimkuhler, and Darrow (1992), one of the most notable definitions of Yield Management was first mentioned in the 1987 annual report of American Airlines as "selling the right seats, to the right customers at the right prices." In 1998, Kimes and Chase revealed what they called a "modified definition of Yield Management" developed from this previous definition. They combined the former definition with a four element – time. They define it as "selling the right capacity, to the right customers, at the right time for the right prices" (Kimes and Chase, 1998).

It is also possible that the airlines industry did not used the term Revenue Management because it was a term already used in several companies' accounting departments, so they needed something new to differentiate it. Their goals were, on one side, limited to maximizing

yield by accepting more orders than capacity in the expectation that some of these customers would not collect the product. On the other side, ensuring that high-paying customers would continue to purchase premium tickets by accepting "only late-bookings high-yield passengers" (Phillips, 2005), discounting a very limited number of seats which would otherwise remain unsold. This body of knowledge denomination shift is probably the result of to the progression of this science practice and adoption, but it refers essentially to the same problem. Robert Phillips (2005, p. 140) states that airlines improved their revenue metrics when they began looking not only into the load factor (or into occupancy in the hotel industry), but also into the yield or revenue per passenger mile. He further explains that "The goal of managing bookings should be to increase yield – hence the term *yield management*, which was the original name for what is now also called *revenue management*."

Robert G. Cross (1998), regarded as the original American English author in this field of study and the author of *Revenue Management – Hard-Core Tactics for Market Domination*, defines RM as "the art and science of predicting real-time customer demand at the micro market level and optimizing the price and availability of products." Cross (1998) states that "Yield and Revenue Management helps balance supply and demand. It allows a company to 'forecast' by making decisions based on knowledge and not just assumptions. When discussing consumer behavior, it is essential to predict and to exploit all opportunities arising in the marketplace. Better forecasts lead to better business decisions, and better business decisions mean more profits." In other words, RM considers what prices to set and when to restrict inventory availability in order to maximize return. According to the same author, price differentiation within RM is based on two issues: understanding what the customer is willing to pay and having the seller charging by the value perceived by that customer segment. Cross (1998) refers to the power of RM as allowing a company to focus on revenue by developing a set of short term tactics and strategies that converts market uncertainty into probability, and probability into profit.

Talluri and van Ryzin (2004, p. 524) outline that room revenues are most hotels' primary source of revenue, but also that "hotels also generate significant revenues from secondary sources" and, for this reason, "the value of a customer to the hotel may be hard to determine exactly." RM uses probable customer behavior taken from historical data and statistical analysis to get the price optimized. Phillips (2005, p. 124) refers to the example of the airlines business travelers being typically: less price sensitive, later bookers, less flexible, and less accepting of restrictions.

The author also states the contrasting characteristics of leisure travelers as being: highly price sensitive, booking earlier, more flexible with regard to departure and arrival times and more accepting of restrictions such as Saturday night stopovers.

In the hotel business, as in other businesses, discounts to leisure travelers are given through the imposition of advance purchase (booked well in advance of departure) and length-of-stay (usually includes weekend) requirements. Other segmentation methods used in hospitality include information relative to historical auxiliary spending of each market segment, offering discounts based on the service level (for example, slow or express laundry service delivery) or based upon the best sales channel – in terms of volume, cost and target market. Categorizing or clustering demand and charging different prices and products to each customer based on known or assumed information is part of the RM practice. Market segmentation is the key to market-based pricing and revenue maximization (Cross, 1998). One could even argue that there is no practice of RM if there is no proper market segmentation.

Talluri and van Ryzin (2004) discuss more elaborate definitions of RM. In one of their descriptions, they define modern RM as being "the process of managing demand decisions with science and technology implemented with disciplined processes and systems, and overseen by human analysts." They also state in the same book that "the combination of science and technology applied to the age-old demand management is the hallmark of modern RM." These same authors also see RM as sales decisions (or demand-management decisions), the methodology and systems required to make them. Within the authors' explanations of RM, they distinguish between three different categories of sales decisions that make up the Revenue Management determinations: structural, price and quantity. Structural decisions are strategic decisions concerning issues such as what to sell and how to do so. Structural decisions examples include how to differentiate the attributes of a product to target different customer segments and how to bundle products or what price structure to set. Being strategic, these decisions are generally kept fixed over a longer period of time. Subsequently and aligned with these long-term decisions, daily price and quantity decisions are taken aiming at the optimization of revenues. The latter involve decisions such as: when to give discounts, what price to charge at a particular time, what part of the capacity to reserve for each customer segment (normally denominated in RM as displacement analysis) and whether to accept or reject a specific sales contract. Talluri and Ryzin (2004) considers the notion of "*displacement cost* as central to the theory of RM".

In Phillips (2005, p. 120), RM is defined as "the strategy and tactics used by a number of industries – notably the passenger airlines – to manage the allocation of their capacity to different fare classes over time in order to maximize revenue." The author goes on, elaborating on how RM started from being based on allocating capacity to the different fare classes and not on setting and updating rates. It is believed by Phillips (2005) that, even if there are certain conditions when RM applies on its purest terms, the techniques can be applicable to all situations when a seller needs to understand how to allocate its fixed inventory of products to different customers and channels liquidated multi price solutions. The author states that the earliest generation of airline RM systems "focused on maximizing expected revenue hence the name revenue management." Phillips (2005) elaborates on five different conditions in which RM is applicable, without mentioning that these were earlier outlined by Kimes (1989):

1. "The seller is selling a fixed stock of perishable capacity"
2. "The seller offers a set of fare classes, each of which has a fixed price"
3. "The seller can change the availability of fare classes over time"
4. "Customers book capacity prior to usage"
5. "High-fare customers book later than low-fare customers"

Kimes (2004) builds upon the above-mentioned RM definitions by remarking that "Yield and Revenue Management can also be defined as the application of information systems to allocate the right capacity to the right customer at the right place at the right time." In respect of this definition, the authors also forget to mention Kimes' (1989) earlier contribution and definition of RM. Kimes (2004) further explains that the "determination of 'right' basically entails achieving both the most contribution possible for the hotel while also delivering the greatest value or utility to the customer. Revenue Management has meant setting prices according to predicted levels of demand so that price-sensitive customers who are willing to purchase at off-peak times can do so at a favorable price while price-insensitive customers who want to purchase at peak times will be able to do so."

Even though there are a large number of definitions of RM, one can make one further attempt to formulate one more definition that combines a number of these earlier notions. It can be stated that it is the process of maximizing returns on a limited inventory through proactive and analytical methods, dynamic daily tactics aligned with long-term

strategies. RM is based on a demand and supply relationship and it aims to get close to the "perfect market knowledge," a problem of economic science, where supply (price and capacity allocation) optimally matches and evaluates segmented demand. It can be said that RM has an important role which is not limited to the business areas of planning dynamic pricing, capacity management or sales and marketing. Its multidisciplinary role also extends to the areas of product development (for example, forecasting the demand for a certain new product), operations (for example, rooms or restaurant operations management), advertising (for example, influence in product development or promotional packages), Supply Chain Management (SCM) in addressing supply decisions, Information Technology – RM information systems being categorized as Decision Support Systems (DSS) – and the rapidly developing area of electronic distribution systems. The rare academic case studies published specifically in the area of RM (for example, Harvard Business Case Studies) are often categorized within the knowledge domains of pricing strategy, capacity planning, market segmentation, inventory management or SCM.

A brief RM history: RM increasing application growth

Revenue Management's introduction into the business world is widely recognized as originating with the airlines industry – a sector that currently makes extensive use of new technologies. In the early 1970s, its use was restricted to large companies such as long-established airlines (often called legacy airlines), but today it is even accessible to small entrepreneurs.

However, Cross (1998) refers to the Austrian F. A. Hayek as being the economist who in 1945 "laid the theoretical groundwork for modern Revenue Management in 'The Uses of Knowledge in a Society'." Cross further explains Hayek's theory in a simple form as meaning "having market information your competitor does not have and using it to your advantage." But the proceedings of the second AGIFORS Symposium (1972), followed by the later research by Smith, Leimkuhler, and Darrow (1992), Kimes and Chase (1998) and Peter C. Bell (August 2004), all refer to another primary academic reference on RM dating from the early 1960s: Taylor, "The Determination of Passenger Booking Levels." In this research work, the author recognizes the desirability of airline companies to sell more airline seats than capacity anticipating "no shows." This technique is widely used by RM to compensate "no-shows" or cancellations and is denominated "overbooking."

McGill and Van Rysin (1999) and other authors such as Bill (August 2004) refer to the importance of another primary reference on RM: 1972 Littlewood's two-fare, seat inventory control rule. Bill (August 2004) further explains other aspect of Littlewood's published theories while working for British Airways (at the time BOAC):

> Developing the concept of accept/reject decision-making over time in the real world where customer arrivals are stochastic leads to Littlewood's rule. This rule says that you should keep accepting low-price reservations as long as the price you receive is greater than the expected revenue from holding onto the unit (which is the higher price multiplied by the probability of selling the unit at the higher price). (Peter C. Bell, August 2004)

However, a considerable amount of the application of these groundbreaking theories faced an impediment to their application in the shape of government rules and regulations. The US Airline Deregulation Act of 1978 had the objective of promoting competition within the industry. Airlines were given some choice over the markets in which they would compete. Airlines were also affected by the increase in oil prices in the mid-1970s. This caused their fuel costs to rise sharply and their profits to fall. Large North American carriers such as Pan Am and Eastern Airlines left the industry because they could no longer resist these impacts. However, at this time the total number of players in the airlines industry increased sharply – from 30 US carriers in 1978 before deregulation, to 49 in 1985. This market pressure increase is referred to by the US General Accounting Office (1997) as cited in Duchenne et al. (2004).

Kimes and Chase (1998) state that the "deregulation of the American airline industry was the major impetus for the development of yield management. Before deregulation in 1978, major carriers offered one-price service between cities." Both Phillips (2005, p. 121) and Talluri and van Ryzin (2004, p. 6) explained that before the regulation of US airlines, all of the domestic schedules and fares were firmly controlled by the Civil Aeronautics Board (CAB). Phillips (2005, p. 121) highlights that the focus was on selling seats – no matter what business mix existed in the market – to fill to the inventory capacity: "without direct control over fare, the point of most airline marketing was to fill the planes." This is understandable if we consider that, prior to deregulation, the overwhelming majority of airlines were state controlled and heavily subsidized – therefore there was neither competition nor much incentive to make profits. Phillips (2005, p. 121) explains that although several airlines (such as World Airways) requested permission to apply lower fares,

the CAB always turned them down. Phillips (2005) remarks that performance was only measured by looking into the load factor or at the break-even load factor which would only be achieved when an airplane was 75 percent full.

The deregulation of the US airline industry in 1978 triggered a fierce competition based upon prices that exposed companies to market forces. Airlines faced the dilemma of being forced to match their competitors' prices, but at the same time, not wanting to let go of those passengers who were still willing to pay a higher price. According to Phillips (2005), one of the first airline companies to appear after the airlines deregulation was PeopleExpress, a "no-frills" company where the clientele had to pay extra for baggage handling and onboard meals. This company targeted a price-sensitive clientele who were then unserved, offering connections to different locations. Phillips (2005) remarks that "the company enjoyed phenomenal growth the first four years until 1984 when they start serving a key market of American Airlines." Talluri and Ryzin (2004) remarks that PeopleExpress were offering fares that were as much as 50 to 70 percent lower than the major carriers. However, Talluri and Ryzin (2004) explain that these larger companies "offered more frequent schedules, service to more city pairs and an established brand name and reputation." As a result, the demand shift was limited to price-sensitive customers and would not be sustained in the long run.

In addition, Cross (1998, pp. 118–25) identifies American Airlines' (AA) Yield Management system for causing the downfall of PeopleExpress by applying a strategy called "Ultimate Super Savers." Other traditional airlines joined this competitive pricing strategy at the same time that they made considerable investment in computerized information systems. The rapid development of information communication technologies (ICT) and the expansion of the Internet have had a profound effect on the way in which various travelers and travel operators, as well as transport operators and providers, deploy and exploit their products and services in the travel and tourist marketplace (Buhalis, 1998). Talluri and Ryzin (2004, pp. 8–9) explain that the American Airlines YM systems were the first to be implemented in full scale in the airlines industry and were given the acronym DINAMO – Dynamic Inventory Allocation and Maintenance Optimizer system. The authors further explain that these systems were fully implemented in 1985 alongside the AA "Ultimate Super-Saver Fares" campaign. AA had a tradition of investing in technology research and being innovative. According to Smith, Leimkuhler, and Darrow (1992) and the AA website, in the 1960s, and in collaboration with IBM, the company had launched the first electronic

booking system, named the Semi-Automated Business Research Environment (SABRE). In May 1981, AA was also the first airline to develop a frequent flyer program. The CEO Robert Crandall was largely responsible for the introduction of all of these Yield Management strategies (Danna, 1999).

Apart from offering a brief discussion of the history of pricing that went as far back as the seventeenth century, Phillips (2005) seems to approach the historical background of the RM topic in the same manner as the other two main-cited book authors – Talluri and van Ryzin (2004) and Cross (1998). Phillips (2005) concludes his historical perspective of RM by mentioning that in the 1990s "carriers such as United, Delta, and Continental invested millions of dollars in implementing computerized revenue management systems and establishing revenue managing organizations. As world aviation markets were increasingly deregulated, carriers in Europe and Asia began adopting revenue management." PeopleExpress finally collapsed in September 1986.

Cross (1998) mentions that, following his company's bankruptcy, Donald Burr, PeopleExpress's CEO and founder, had declared: "We had great people, tremendous value and terrific growth. We did a lot things right. But we didn't get our hands around the Yield Management and automation issues." Contrasting with this "loser" perspective, AA's Bob Crandall was cited by Cross (1998) as saying: "I believe that Yield Management is the single most important technical development in transportation management since we entered the era of airline deregulation in 1979." The combination of yield-enabling technologies (RM systems) using business intelligence with dedicated people and consistent processes makes for a successful model of this science application. Smith, Leimkuhler, and Darrow (1992) summarized three major changes that both motivated and shaped the development of Yield Management:

- The implementation of a computer reservations system (SABRE) in 1966, which had the capability of controlling reservations inventory;
- The introduction of (AA) super-saver discount fares in 1977;
- The deregulation of airline schedules and prices in 1979.

In terms of its broad application outside the airline industry, Yield Management has found its place in business because of increasing levels of global competition and the aims of service suppliers to remain competitive in a changing market. In academic RM studies applied to the hotel business, Kimes (1989) set the tone for the hospitality industry: "yield management is becoming part of the standard operating procedure

for many hotels with sophisticated electronic property-management systems." In 1990 Dunn and Brooks, referring to the hotel industry, asserted that "Yield management has received considerable recognition from industry professionals as a sophisticated marketing tool." In the same year a *Cornell Hotel and Restaurant Administration Quarterly* article entitled "Yield Management Magic?" revealed that many hotels had already installed Yield Management Systems: "In the past 16 months L & H (with Eric Orkin) has installed 32 systems, more than half of these at small, independently owned hotels." Cross (1998) mentions hotels, rental car businesses and railroads as being among the second-front application adopters of the airlines model. The author highlights the Marriott chain as being one of the pioneers of RM concepts in the hospitality industry. In fact, this large hotel company started to develop their own RM system called "One Yield" during the 1990s (Overby, 2005).

There is an old saying that probably applies to the core reason why the hospitality started applying RM: "necessity is the mother of invention." As was the case in relation to airlines, one can dare to suggest that the US hospitality industry started to adopt RM when profitability performance rates were declining. According to Corgel (2003):

> Abnormally wide swings in hotel market performance observed during recent decades occurred because of shocks to the economy and hotel markets. These events either impacted the supply of hotel rooms, demand for hotel room nights, or both. Government intervention of the early 1980s, for example, artificially inflated the supply of hotels. With occupancy already below normal levels in the late 1980s, the recession and Gulf War in the early 1990s stymied the market recovery.

Hotel companies were registering a general crisis – an increase of market pressure – and were eager to increase their profitability levels by smoothing these market swings. As Cross (1998, p. 64) observes, "the hospitality industry provides an example of another successful, relatively low-tech approach to using price rather than capital to balance supply and demand." The application and adoption of an airlines pricing and inventory allocation best practice by the hospitality industry motivated a shift of the overall business target from high volumes of bookings to high profitability of bookings. Revenue Maximization is an attractive goal since it increases the amount of money flowing from existing demand (Dunn and Brooks, 1990; Regan, 1989). Even enjoying relatively low technology levels at that time to track demand/supply swings, the hospitality business slowly started to put profitability first, something that

is summarized in the phrase: "putting heads in beds." In other words, following the airlines example, hotels start using the measure of revenue per available room (RevPAR). "Yield management is a proven technique for maximizing revenues. It involves applying basic economic principles to pricing and controlling your rooms inventory for the purpose of maximizing revenues" (Relihan III, 1989). At that time, this same author was already predicting that "yield management will change our orientation to the entire sales process and in particular to the pricing of hotel rooms."

If service products are so often not standardized and mutate, why should not prices be dynamic? Historically and intuitively, hotelkeepers have always charged different rates for different room types based on demand period or occasion, competition, competitive advantages or other factors. However, the full application of RM basics was never applied in a consciously proactive and systematic manner. What makes contemporary yield management so different from traditional pricing practices is the frequency and scope of the decision-making process (Relihan III, 1989).

Most lodging properties sell different products and target different clientele, buyer or demand based. In a coastal city hotel, the beautiful bay view rooms are not the same as the rooms facing the parking lot at the back of the property. The rooms located within the business floor, near the hotel business center, do not have the same value for a leisure or business customer. A good in-house spending type of customer (for example, a gambler staying at a Casino Hotel), does not have the same value as a member of an excursion group arriving late and just staying overnight. The value perception is different to both the demand side (guests) or to the supply side (hotel). Each deal offered, even though competitive, should reflect this disparity and value. In its definition of RM, Jain and Bowman (2005) allude to this fact: "In the hotel industry, yield management or revenue management (RM) is a business practice of making a rational disciplined decision for maximizing revenue while managing risk under current and anticipated market conditions in a dynamic micromarket condition."

On the inventory management side of RM, why should hoteliers allocate rooms to lower revenue-generating clients if the forecast is to have enough demand of a higher-generating type of client? It also needs to be understood that revenue does not come exclusively from the product price charged, but also involves auxiliary revenue that a client will generate by acquiring a certain product. For example, a gambler in a casino hotel might generate much more revenue from his recreation activity in the hotel than the straight price of his room. Phillips (2005,

Table 8.1 Ancillary products and services in some revenue management industries, after Phillips (2005)

Industry	Ancillary products and services	Importance
Passenger airlines	Duty-free sales, beverages sales	Low
Hotels	Food and beverage, minibar, telephone fees	Medium
Rental cars	Insurance, gasoline	Medium
Cruise lines	Gambling, onboard sales	Medium to high
Freight transportation	Sorting, call before delivery, special handling	Medium
Sporting events, theater	Food and beverage, merchandise sales	High
Hotel/casinos	Gambling	Very High

pp. 138–9, table 6.10) establishes an ancillary products and services scale of importance table for several RM industries:

Phillips (2005) stresses the importance of estimating this ancillary contribution for each booking request "based on the product, product, and channel." If the author (Phillips, 2005) ranks the ancillary products or services as currently being only moderately important, the trend might very well be for this importance to increase in future years. This trend may reflect a generally higher level of competitiveness in world markets, with new hotel services being offered in an attempt, on the one hand, to differentiate their service (in terms of prices and products) from competitors and, on the other hand, not to be labeled as a commodity product.

There have also been a few non-academic publicized failures in applying RM – for example, the case of its application to the vending machines business by Coca-Cola. According to Peter Bell (2000), Coca-Cola was reportedly working on a vending machine that automatically raised the price of a soda when the temperature rose. The reporting of this development created a negative reaction on the part of customers and was later contested by the company.

Despite these customer-related issues, most of the RM systems vendors guarantee a substantial increase in revenues while maintaining or improving the level of service to customers. For example, Marriott hotels improved its revenues by more than $100 million annually simply by using RM Systems (RMS) methods (Cross, 1997). In addition, Dubé, Enz, Renaghan and Siguaw (2000) mention a further development of

the Marriott application of revenue management systems: integrated across-properties RM systems. It is recognized as a best practice; David Babich, Marriott International vice president of revenue management, is reported to have evaluated this practice as bringing "hundreds of millions of dollars," anticipating a 1–3 percent increase in revenues. When Cross (1997) refers to his nine steps "to establish a successful RM program in any environment," he presents a comparative chart and explains that RM have a significant payoff advantage comparative to other IT investments with annual returns in excess of 200 percent. Cross (1997) further strengthens his point by stating that "The average gross annual return on investment from all information technology systems is 81%, according to a study conducted by Erik Brynjolfsson of the Massachusetts Institute of Technology." RM systems research and vendors support and, in some cases guarantee, a return on RM systems investment which is at least between 3 and 6 percent (Haley and Inge, 2004). Apart from a pricing and marketing best practice, if further RM research and practice also prove this financial gain, the future of RM is assured.

However, in certain environments, consumers still have the perception that dynamic pricing practices are discriminatory and unfair, and demand RM change. The mentalities of both customers and industries have to be educated. Although studies conducted by Kimes (2002) suggest that there appears to be a wider acceptability of RM practices within the airline industry and the hospitality industry – mainly because of the fact that customers have become used to these practices. Also, focusing solely on RM practices might lead to revenue gains in the short run. But isolation of these customer perceptions might lead to a long-term decline in business revenues, and attempts to label RM as a discriminatory pricing practice – and therefore in some sense either illegal or unethical.

Since previous studies have focused largely on western customers, relatively little is known about how people in other cultures view Revenue Management (Choi and Mattila, 2006). In many hotel brand cases, it is an added complication to change the culture of a hotel chain which might have multiple properties geographically distributed around the world, open 24/7 all year round, in which several hundreds of overworked managers and staff work – mostly a low-skilled, low-waged labor force with a high turnover, and communicating in a multitude of languages.

However, there should be no illusions: hospitality is a very conservative industry, and has proved slow to adopt technology. It took more than 20 years to adopt an airlines' best practice – RM. If it is so difficult

to change yourself, what are the chances of really changing the minds of others – clients. Change can be difficult and it may also be both painful and costly. However, if we believe in this change, then it is worthwhile. So after all, change might well be on the shoulders of educators who study and understand RM. In this line of ideas and to conclude this section, the following quotation from Mohandas K. Gandhi (1869–1948) is relevant to this argument: "You must be the change you wish to see in the world."

Future opportunities for hospitality RM

As we saw in the introduction to this chapter, the application of RM practice and systems has been extended to non-traditional industries. It can be used in several business models where the following simple conditions are met (Phillips, 2004): the seller is selling a fixed stock of perishable capacity, there is a relatively fixed capacity, segmentation into different market segments is possible, the inventory of the product is perishable, the products can be sold in advance (before they are actually consumed), there is a fluctuating demand, the marginal sales cost is low and the marginal production cost is high. Over time, RM has developed into a sophisticated practice as researchers use complex mathematical algorithms – allied to technology – in order to allocate capacity, set prices and/or forecast demand (Ng, 2008).

RM has been focusing on increasing value by maximizing its profitability. Yield-oriented research applied to the hospitality industry has primarily centered on the implementation process within the accommodation and meetings sectors. More recently, there have been efforts to readdress this imbalance with research that has broadened the application of this science to the areas of restaurants and catering (Kimes, 1989; Orkin, 1990) and, more recently, to electronic distribution (Choi and Kimes, 2002).

Talluri and van Ryzin (2004) explain that many industries dealing "with demand variability, uncertainty, and customer heterogeneity are potential future adopters of RM." With new technologies increasingly dominating business process and distribution in particular, enterprises will tend to adopt more software systems solutions.

In addition to the RM first adopters, today there are a mix of products and services that have been using RM for some time. Cinemas and theaters, golf courses, electricity, taxis, public transportation, newspaper and magazines, advertising, fashion, manufacturing, quick service restaurants, supermarkets, sport events, insurance, brokerage

and banking services, concerts or theaters, telecom providers are just some examples of business models that have already been using RM for some time. For example, in the 1980s the US electric suppliers started to set electricity prices in relation to demand (Burger and Fuchs, 2004). Lieberman (1991) extends the list of industries where its inventory or sales opportunities "evaporate at the end of the day": theme park admittance (for example, Disney Fast Pass), cruise berths (for example, Royal Caribbean Cruise Lines), hospital resources, radio or television advertising time. The common conditional denominator in all of these enterprises is: fixed capacity and perishable service or product. Apart from the successful case of AA discussed earlier, articles of Smith, Leimkuhler, and Darrow (1992), Geraghty and Johnson (1997) and Cross's book (1998, p. 191) introduce another successful RMS application case: National Car Rental. These authors explain how National Car Rental's first year of RMS implementation increased revenues by $56 million and led directly to it avoiding liquidation in 1994. Phillips (2005) adds that "there are numerous efforts to adapt revenue approaches to the needs of new industries, ranging from oil and gas pipelines to health care to made-to-order manufacturing." The cost of technology has fallen and is now used not only by big companies, but also by small and medium-sized firms. To provide a couple of examples, Ideas and PROS (reputable RM software companies in the hospitality field of business) have RM systems solutions for independent hotels that have as few as 50 rooms. Regarding this general RM application, Robert Cross' (1998) last chapter of his book opens a few windows on what is probably the future in terms of RM. Two areas that can serve as particular scenarios for future research are the crossing of RM with Customer Relationship Marketing (CRM) and the increasing role which RM plays in the online distribution arena. Talluri and van Ryzin (2004) expand further on future development of RM, exploring the reasoning behind this phenomenon and analysing its consequences. They also observe that the hospitality industry is changing toward a more rapid adoption of technology, putting forward several supporting examples in the growing adoption of RM.

Revenue Management can be applied to the backbone of the hospitality industry, the combination of hospitality operations and commercial activity: real estate, renting or timeshare operations. For example, hotel condos or apartment rentals are often priced according to the size and the amenities that are offered in addition to the amenities that are offered in the complex, just as in any hotel. There are times, such as summer in a resort market, when the apartment business is cyclically booming as the result of high demand – for example, in beach resort destinations. Many

apartment complexes might choose not changing the price but, during certain low periods of demand, they might offer other incentives to attract people to their complex. These incentives might include: referral payback fees, free rent for the first month, no application fee, discounts on local business, and even giving a few months' use of the facilities. One can believe that all these can be considered a RM tactic or price fence on the actual overall apartment rental price. Price fences are certain rules that are normally applied during high periods of demand, which go together with the price, allowing companies to target a different market segment type of customer during different periods of demand. There are two types of these rate fences that companies can use to customize their prices: physical and non-physical (Hanks, Noland, and Cross, 1992). The physical rate fences include physical location, furnishings, the presence of amenities or view, while non-physical rate fences include time of consumption, transaction characteristics, buyer characteristics and controlled availability (Dolan and Simon, 1996). These can prevent non-price-sensitive customers from diverting to the lower rates. Dana (1999) cites a portion of the AA CEO letter to the company's customers in the *American Way* magazine of 1991, as saying: "Because the airline business is both extremely complex and widely misunderstood. . . it has generated a number of myths – among them the notion that business travelers subsidize pleasure travelers. . . To the extent that any market segment can be said to be subsidizing another, it is pleasure travel which is subsidizing business travel – not the other way around."

The sales of luxury lodging services have been more conservative in adopting RM tactics and strategies. This is partially the result of the fact that although the interaction of demand and supply drive prices higher or lower, price points have a marginal impact upon demand. On the other hand, what skeptics might be calling "speculative" short-term price bumps or price-discriminatory actions caused by increases in supply, can only be sustained if demand takes into account the rationale behind this price differentiation – for example, an event in town. Otherwise, there is the risk that demand might not materialize or misunderstand this price differentiation as a question of lack of fairness (Kimes, 1994) or change in the quality of luxury product consumers' perception. Regarding this last issue, the erosion of price integrity is often one argument which luxury hotel brands use to limit their discounting of prices.

The restaurant and catering business

Even though the restaurant industry has a higher variable cost percentage than traditional Revenue Management industries, potential revenue

gains can be substantial (Hanks, Noland, and Cross, 1992). Before this work, Orkin (1990) would point to a new area of application within hospitality which would gain academic research interest in the late 1990s (Noone et al., 2007; Kimes, Chase, Choi, Lee and Ngonzi,1998 or Quain, Sansbury and Quinn, 1999), the restaurant business. This relatively new application of RM within the hospitality industry is currently expanding rapidly. Revenue Management has only relatively recently gained the attention of the restaurant industry (Kimes, 1999). Among the fastest-growing market chains geared toward casual dining are such well-known names as T.G.I. Friday's, Chili's or Wagamama. These establishments use a number of measures in order to help estimate how many people they can seat during meal times, better manage their seats inventory and consequently increase their Revenue per Available Seat Hour (RevPASH). This system is useful in helping to estimate the waiting time for guests when the restaurant is full or to adapt their tactics according to that same occupancy forecast. RM will help restaurants to increase their revenues by better managing their capacity, but also better managing their portfolio prices. By understanding, for example, when to shift demand to the bar during a particular time of the day, restaurateurs may set a time when special discounted offerings are in place (for example, Happy Hour or "Early Bird" promotions) or may up sell appetizers or entrees while guests wait for their table. Kimes (1999) explains that one problem with restaurants' use of Revenue Management is the human time or variability factor which influences the time it takes guests to eat or the time that a guest will remain seated at their table after the meal is complete. However, companies using Revenue Management have reported revenue increases of between 2 and 5 percent. The process of targeting different types of customers with different products works the same way in the restaurant business. In this industry Revenue Management has meant the setting of prices according to predicted demand levels so that price-sensitive customers who are willing to purchase at off-peak times can do so at favorable prices, while price-insensitive customers who want to purchase at peak time will also be able to do so. The application of Revenue Management has been mostly deductive when it is applied to operations that have relatively fixed capacity, demand that is variable and uncertain, perishable inventory, appropriate cost and pricing structure, and varying customer price sensitivity (Kahaneman, Knetsch, and Thaler, 1986, p. 288). Restaurants are obviously included and they use two strategic levers for implementing revenue management: duration control and demand-based pricing (Kimes and Chase, 1998, p.162). Reducing dining time, especially during peak periods, can add considerable

revenue for the restaurant. Managing meal duration, however, can be far more complex than manipulating the price. Restaurants have been willing to try managing duration by changing their service delivery process, but have been reluctant to apply demand-based pricing because of fears of possible customer dissatisfaction (Still and Decker, 1999, p. 24). While restaurants do use demand-based pricing when offering promotions such as Happy Hours and "Early Bird" specials, they have been reluctant to vary price by time of day, day of week or table location. Restaurant managers may well have support for their fears in the fairness literature. Restaurants are often reluctant to use demand-based pricing because of potential customer backlash. If increased prices cannot be justified either by increased costs or through certain conditions, customers may view such pricing policies as unfair. This issue of fairness has been studied extensively (Hanks, Noland, and Cross, 1992). Fenced prices are designed to allow customers to segment themselves based upon their willingness to pay, their behavior and needs. Fences offer consumer-discounted prices (for example, restaurant promotional programs to boost demand such as those mentioned previously), but impose rules and regulations at every level of discount to balance the perceived value for the different market segments, and to avoid automatically offering a discount to customers who are willing to pay a higher price (Hanks, Noland, and Cross, 1992). In a restaurant setting, physical rate fences might include table location (a better table commands a better price), view (tables with a good view cost more), or amenities (tables in a private room with flowers cost more). "Non physical rate fences might include time (weekend dinners might cost more or meal consumed before 6pm might cost less), transaction characteristics (customers who make a reservation a month in advance might pay less), buyer characteristics (frequent customers might pay less, or get free of charge extras) or controlled availability (customer with coupons will pay less)" (Dolan and Simon, 1996).

Hotel and restaurant brands network RM

Modern hotels and restaurants now have a range of software systems which interface easily, facilitating the automation of processes, increasing efficiency and cutting the costs of many services (for example, interfacing Property Management Systems (PMS)/Point of Sales (POS) integrating online reservations and seating management /Central Reservation Systems (CRS)/GDS interfaced with other IT systems). Recent developments in the theory and application of RM are reflected in the most recent versions of RM software systems. When we consider the

major suppliers of RM systems to the hospitality industry – such as Ideas, Optims or Pros – it is possible to identify the new features and areas of application. New developments entail the application of RM across different hospitality brands, across different properties, clustering RM at a regional level, RM applied to the catering and meetings/banquet spaces. Recent hospitality RM systems increase their interface capability with other systems, internally (for example, with the Sales & Catering system as it is the case of TopLine Prophet from Opus2) and externally (for example, with IDeaS V5 Revenue Management solution with a "Multiple Property View" or by providing links with companies offering real-time hospitality competitive market reports such as TravelClick). Talluri and van Ryzin (2004) allude to customer segments choices "at models of individual-choice behavior" and nesting order theory applicable to the hospitality RM systems.

Dynamic electronic distribution

The booming of e-commerce is cited for the growth of RM in both Talluri and van Ryzin (2004, p. 178) and Phillips (2005, p. 7). Phillips (2005) is radical in this respect: "E-commerce both necessitates and enables pricing and revenue optimization." He refers to the Global Distribution Systems (GDS) as the "Internet before the Internet" as these systems allowed the airlines to be pioneers in electronic distribution, in terms of interaction and transaction. In terms of pricing, it brought a transparency and increased the velocity of transactions. Phillips (2005, p. 12) predicts that the Internet "will deliver ever richer views of customer response and behavior. As a result, the need for pricing and revenue optimization systems to support online pricing and sales will become ever more urgent." It is true that in 1998 the volume of e-commerce was not that significant, although several sources refer to the period around 1990 when Amazon and E-bay started as brilliant incipients. However, in contrast to Talluri and van Ryzin (2004) and Phillips (2005), Cross (1998) does not refer to e-commerce except to note how Internet companies could also use – and benefit from – RM. Internet-based commerce is growing rapidly (O'Connor, 2002). Several authors, including O'Connor (2002), Malhotra and Desira (2002) and Madu and Madu (2002), consider that the Internet is playing a very important role in the evolution and development of distribution systems in the tourism and hospitality industry. In terms of the future of e-distribution, van Ryzin (June 2000) has called it "The brave new world of pricing" in an article written for the *Financial Times*. The Internet as an increasingly important channel

of hospitality distribution is bringing about price transparency, but it is also changing traditional RM applications.

As quantitative data gains importance in marketing analysis across industries, it will also be interesting to follow revenue metrics evolution and the RM role in terms of product or service development. When several hotel properties are already measuring their space profitability in terms of revenue per square meter (an evolution from the departmental RevPAR metrics), management might realize that other or new business models would be more profitable than the current ones and, as a consequence, they renovate the use of those spaces. By working closely with reservations teams, revenue managers might be called upon to give their opinion about the better use of hotel space.

It can be argued that it is easier for them to identify weak spots within facilities or services. They can also identify a particular reason why the hotel is losing business or suggest an alternative, more profitable revenue generator. For instance, without looking into the finance details or the legal technicalities of pursuing a liquor license, if, for example, one property is experiencing resistance from guests because of a missing lounge bar for welcome drinks, the revenue manager might suggest a conversion of a lobby shop into this type of space. This conversion of space use, which we could call product development within a hotel, might result in a better reservations conversion and can result in improved profitability. Based on talks with RM systems suppliers, future RM systems applied to the lodging industry (such as the next version of IDeaS Revenue Management solution) are being developed to facilitate restaurant, catering and even function rooms RM.

Function space dynamic pricing

In essence, hotels are in the business of generating revenue from space (and capacity). Guest rooms, restaurant seats, and function rooms are the scarce resource of hotels, in much the same way as seats are the scarce resource of the airline industry (Orkin, 1988). If internally hotels these days are consistently applying RM in the lodging using electronic systems, function space management is still today a largely underdeveloped area for its application. In respect of RM research, Kimes and McGuire (2001) note that it has given little consideration to hotel function space. But such matters are about to change. Engineers working for Ideas and other Revenue Management system vendors are currently in the process of designing the first computerized proprietary hotel RM systems for function space rental – and these should soon appear on the market. However, Kimes and McGuire (2001) also recognise that it is

not simply a question of having new technology. To apply RM to this hotel operational area, "requires a revision in the way most hotels traditionally have viewed function space sales." They suggest strategies "to increase revenue per available square foot ($RevPAF^2$)," differentiating the rates according to the physical characteristics of the room space, to customers and transaction characteristics, to the level of service and, finally, controlling availability. This same article (Kimes and McGuire, 2001) also presents case studies about the application of RM at the Raffles City Convention Center at the Swisshôtel Stamford and the Raffles Plaza in Singapore. Kimes (2004) also presents and analyses another case of a fictitious large convention hotel and its Sales and Marketing managerial dilemmas in terms of capacity and pricing.

Crossing RM with CRM

Another RM development which may be foreseen in the near future is to better incorporate/interface RM with all other relational databases, to better select or discriminate customers service prices and product availability considering guests' past track in-house spending or habits. In a ground-breaking article on the application of RM in the industry, Orkin (1988) concluded by stressing that: "Your knowledge of the profit margins for each market segment gives you the basis for strategic decisions that will carry your property through the '90s." Talluri and van Ryzin (2004) also stress the importance of measuring secondary sources of revenue in order to determine customer profitability. However, these two authors note that "additional sources of revenue are often not accounted for in hotel RM systems, though some RM systems work with the average net revenue for each rate product."

By May 2005, both the *Wall Street Journal* (Saders, 2005) and the *Financial Times* (Smith, 2005) reported news of how Harrah's – currently the world biggest hotel casino company in terms of room numbers – is a leading hospitality company integrating CRM with the RM using data-mining techniques to extract information from its Total Rewards loyalty program "Total Gold/Diamond/Platinum frequent-gambler card" usage. The extracted data are used in building their clients' database to retrieve accurate information on the value of each player, but also to further increase future sales (for example, better targeting promotions of off-peak periods to those customers who have a higher likelihood to accept) and to improve customer service through customization. The *Financial Times* (Smith, 2005) states that Harrah's Entertainment' Total Rewards Program has already spent more than half a million dollars on this strategy in order to combine its database marketing efforts. Talluri and Ryzin

(2004) adds that "When a customer calls Harrah's for a reservation, the system automatically generates a customized room rate based on the customer segment of the caller. Harrah's has up to 64 segments and each segment has a code." Phillips (2005, pp. 9 and 139) refers to this same company as providing an example of a CRM system and, in particular, as a process to track, segment and anticipate the expected contribution of 28 million customers. Cross (1998) states, "As entropy in the market place continues to increase, the key to future success is dynamic decision making on the micro market level."

With the development of these and other sales-transaction data systems, we might see increasing numbers of industries and companies combining pricing and marketing in a way which will increase its effectiveness in terms of pricing and will bring about more coherent sales strategies. Talluri and Ryzin (2004) mention that "for quantity-based RM, the most widely used transactional data source is the reservations database." The authors further explain that "forecasts may be based on either the aggregate bookings or individual customer booking records." However, they underline the growing importance for forecasting of using individual customer records which could include details of capacity usage and ancillary spending (for example, dining expenses and details regarding preferences). Two major trends are evident in an analysis of the current developments of RM systems: its increasing role in the new e-business arena with RM applications interfacing with the various Electronic Distribution Channels and transversely crossing CRM not only into predicting customer behavior but also as an instrument of personalization. Phillips (2005, p.8) notes that "CRM systems provide the (information about) rich customer and transaction history that pricing and revenue optimization systems need to evaluate customer response and update pricing recommendations." In other words, one could say that CRM will allow hotels to make better use of its guest's historical records into future relationship and transactions pricing or inventory allocations. This might be expressed in non-academic language as "Squeezing money from the rich clients' pockets and giving discounts to the poor!" It is what might be described as a dynamic micro-market segmentation pricing approach.

The future

Robert Cross (1998, p. 191) refers to several cases of the successful implementation of the RM system as being responsible for significant financial growth. The future of RM depends upon more reports of successful practitioners' stories of these systems and procedures application.

Cross (1998, p. 251) specifically addresses the future of RM "machines," as he calls them, as having the ability to "predict competitive responses and automatically respond to market conditions..." And the author further explains that "these new tools will not only make it easy to access the necessary information, they will have the intelligence to anticipate the questions managers should be asking..." One can foresee that new RMS will probably free up operational application giving time to a more strategic application.

All these and other future RM development opportunities will also bring RM challenges: the ability to use these systems effectively. First, returning to the failure of PeopleExpress, sound revenue management expects a necessary focus on automation-related issues. Secondly, the implementation of RM requires considerable data analysis and training efforts both externally – in terms of dealing with the clientele – but also internally – in respect of management and staff. These tasks take not only time and commitment, but also involve a considerable investment, a complex process and mentality change. On this issue, Cross (1998, p. 234) writes, "Public acceptance of pricing structures created by RM will be measured by acceptance in the marketplace." Apart from training, the Achilles' heel of RM might very well stand on customer-related issues and the way in which these will be dealt with will determine the pace of RM adoption by other businesses or its acceptance by clients. Talluri and van Ryzin (2004, p. 620) similarly point out that "poor organizational planning is often the reason cited for the failure of RM implementation, and poor training is frequently blamed for subsequent inadequate performance."

"Because RM systems are expensive, time consuming to implement, and require organizational changes that are disruptive to normal operations, it is natural for senior management to question whether the benefits justify the costs," write Talluri and van Ryzin (2004, p. 608). Several RM systems suppliers use the short payback as their main sales argument period because almost all of the revenue increases generated (often guaranteed) go straight to the bottom line. However, this argument might not be convincing enough. On one side these systems vendors have to overcome resistance to change from an industry that has historically been seen as "laggers" in terms of adopting technology. On the other side, to fully access the benefits of RM systems, clients often have to contract the acquisition of the systems and wait until the ground work implementation process is completed.

Another recent development was the development of a new traveler empowerment website service: www.farecasting.com. This winner of the

best website of 2006 in the category of travel planning according to the magazine *Businessweek*, provides forecasting services. With this new tool or service being provided to travelers in process of booking their flights, they have now the possibility to fight back against dynamic pricing, it is time for some RM on the clients' side. Previously called in a Shakespearean way "to book or not too book," this new company website hands customers a little more power in terms of the dilemma associated with dynamic pricing. Customers, especially price-sensitive leisure ones, with some flexibility surrounding the dates on which they can travel, now enjoy the possibility, almost free of charge, of looking into 30-day period predictions about the trend line evolution of prices. The founders of this company say that they update their forecast three times a day (10 a.m., 12:30 p.m. and 3 p.m. ET) by examining 115 indicators. It would be interesting to know if the company takes into consideration external macro and micro factors that can have an influence on prices – such as world oil prices, dramatic changes in the weather, new routes or transportation players. At the time of writing, this service is currently only available in a few US cities to B2C, but at the current expansion rate, many questions come to mind: Is it possible that worldwide Travel Agencies (TA), other than Orbitz.com who they work with already, or Tour Operators (TO) multinationals are aware of this new service? Will farecast.com expand their business model to the B2B in the future, providing hospitality services bulk buyer's forecasting capability? Will TO and TA continue to develop their own capability to buy under dynamic pricing conditions or will they outsource, creating partnerships with these type of providers?

On the suppliers' side, air airlines, hotels, and cruise companies welcoming this new customer service as a new intermediary in the distribution chain, because it will inevitable mean that some customers will end booking through the suggested links? Is RM becoming ever more complex? In her brand new book, Ng (2008) states that as early as 1998, the Bank of England argued "price complexity may be useful to service firms, as the customization (versus commoditization) of a service arising from a more direct contact with buyers may result in the buyer being less able to compare prices and consequently, provide more market power to the firm." Ng (2008) also adds that one single department does not dictate pricing policies as "top companies now ensure that their pricing policies are decided by departments that are stakeholders of the pricing decision."

What is the perception of travelers across markets in relation to dynamic pricing? Is this new service a sign of rebellion from travelers

tired of these dynamics and complexity? Will it complicate still further the tasks of RM software systems engineers and marketers? Will the marketers' segmentation process (as the basis of this dynamic pricing segmentation) discriminate even more segments, giving rise to a new generation of, not only price-sensitive but also savvy and educated travelers – who understand and use forecasting and statistics – to be contrasted with all the "uneducated" ones? How is this potential buyers' forecasting service going to influence future Business to Business (B2B) and Business to Consumer (B2C) demand? Could TA's or TO's become the new generation of RM application incorporating dynamic pricing experts? Hospitality customers and distributors will tell. One thing seems to be certain: on the one hand, this is another sign of commoditization within air travel which might very well have an effect on hotels and other suppliers in the near future. On the other hand, there is a new development in RM usage: on the demand side.

In a recently published book on RM entitled *The Spread of Yield Management Practices*, Fabiola Sfodera (2006) advances two out of four scenarios which may potentially limit the development of RM in the future. One of the negative scenarios sees the non-applicability of RM: "Should price discrimination be in conflict with the essence of the hospitality and welcoming of the hotel, yield management becomes inapplicable." In another negative scenario, "yield management loses its strategic connotation to become a simple technique to apply in support of the reception or booking staff" and its role is reduced to "an instrument in support of the definition of prices."

To end this section on a positive note, we have seen that RM is the application of a number of straightforward economic and statistical principles that industries need to understand fully. Van Rysin (2005) predicts that the future of RM depends upon it being more demand and customer-centric. Lieberman (1993) refers to Yield Management as "an evolving process that can increase a hotel's revenues and enable it to deliver products that are better suited to its customers' needs." If there seems to be an enormous gulf between Lieberman and van Rysin, both authors seem to agree that the implementation of RM models is not going to become any easier – rather, it will become more complex, customized, proactive and strategic. As Jonason and Holma (2004) state, "new pricing strategies have to be clever, creative and innovative." Scholars committed to exploring the expertise of this area of knowledge, together with RM practitioners, have an increasingly important role to play in aligning the interests of customers and companies – something which might determine the future development of RM.

Table 8.2 Mapping some of the factors which contributed to the advent of RM systems in hospitality

More professionalism in the hospitality industry

- Decisions are getting more complex with the business world with the globalization trend often demanding the involvement of Decision Support Systems (DSS) e.g. forecasting demand
- Several certified courses and specific training on RM

Marketing developments:

- Globalization is increasing markets' general competition levels
- Mass micro customization as a trend
- Hotels getting a commodity; not much hospitality brands' service differentiation is offered. RM is contributing to an increasing customization being offered
- Companies need to measure better their sales, marketing and IT Return On Investment (ROI)

Technology improvements:

- Increase friendly use and decrease complex technical usage
- Improve functionality
- Reduced costs and efficiency of DSS
- Increasingly fast-changing markets demand dynamic systems
- From stand-alone systems to poly-systems with integration, connectivity, interface possibility with other internal and external systems, e.g. POS or GDS
- More economical systems allowing better returns on investment (ROI)
- New channels of distribution, e.g. one of the most relevant being the Internet
- Technology and specifically RM systems less restricted to operations (tactical), but has grown to the management strategic level adopting DSS
- Other.

RM science development into:

- Arriving at better product decisions
  - Better pricing
  - Better target e.g. displacement analysis.
  - Increasing sales
- Increasing need to get more market info
  - Better managing sales or reservations
  - Better understanding demand versus supply
- Improving productivity
  - New goals
  - New metrics
- Perform better with – close to optimal – planning and allocation of resources (e.g. personnel)

Successful cases of RM practices and RM systems leading to expanding usage in different industries

- The airlines best practice cases of American Airlines, Royal Caribbean Cruises and National Rent-a-car ad failures of People Express
- Academic and practitioners increasing recognition of RM as an OR best practice in inventory and pricing
- Consumers are getting used to these new pricing and inventory practices.

Conclusion

This brief review of the literature reveals successful RM practices in several industries and also the significant potential for further advances of these practices in the hospitality, contributing to maximizing both profitability and customer satisfaction. Recently published research on RM systems' casuistry evaluation methods and RM systems development supports the successful usage of RM applications.

This study has made an effort to reconcile the new and older RM theories pertaining to past and future RM development. It started by reviewing literature on the definition of RM, it gave a brief historical overview of RM starting from the airlines and migrating to other generations of industries, including the hospitality industry. Finally, "Future opportunities for the hospitality RM" section tried to give some insight into recent hospitality RM development which will shape its future application.

As Talluri and van Ryzin (2004) cautiously and modestly remark, their book provides "a snapshot of current RM practice." These two authors further predict that "continuing innovations in business models and technologies will no doubt keep RM an evolving discipline for many years to come."

Taking into account all of these remarks, along with the work of many authors, one can say that RM is certainly a product of change – change, in terms not only of pricing, but also of marketing, technology and information systems, mentalities and professionalism level within each industry.

In a conclusive and summary format of the readings for this study, the author has included an attempt to map some of the factors that contributed to the advent of RM systems in hospitality (Table 8.2).

References

Anonymous (1990) "Yield Management Magic," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 5, No. 31, p. 15.

Bank of England Quarterly Bulletin (1998) *Inflation and Growth in a Service Economy*, November.

Bell, P. C. (2004) "Revenue Management – Innovative Education: Revenue Management for MBAs," *OR/MS Today*, Institute for Operations Research and the Management Sciences (INFORMS). http://www.lionhrtpub.com/orms/orms-8-04/bell.html. Accessed September 5, 2006.

Buhalis, D. (1998) "Strategic Use of Information Technologies in the Tourism Industry," *Tourism Management*, Vol. 19, No. 5, pp. 409–21.

Burger, B., and M. Fuchs (2004) "Dynamic Pricing – a Future Airline Business Model," *Journal of Revenue and Pricing Management*, Vol. 4, No. 1, pp. 39–53.

Capiez, A. (2003) *Yield Management: optimisation du revenu dans les services* (Paris: Lavoisier, Cachan cedex).
Choi, S. and S. E. Kimes (2002) "Electronic Distribution Channels' Effect on Hotel Revenue Management," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 34, No. 5, pp. 23–31.
Choi, S. and A. Mattila (2004) "Hotel Revenue Management and its Impact on Customer's Perception of Fairness," *Journal of Revenue and Pricing Management*, Vol. 2, No. 4, pp. 303–14.
Choi, S. and A. Mattila (2006) "The Role of Disclosure in Variable Hotel Pricing," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 47, No. 1, pp. 27–35.
Corgel, J. J. B. (2003) "Predictive Powers of Hotel Cycles: Real Estate Issues," *The Counselors of Real Estate of the National Association of Realtors*, Vol. 28, No. 4.
Cross, R. (1997) "Launching the Revenue Rocket," *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 38, No. 2, pp. 2–13.
Cross R. (1998) *Revenue Management: Hard Core Tactics for Market Domination* (New York: Broadway Books).
Dana, J.D., Jr., (1999) "Using Yield Management to Shift Demand When the Peak Time is Unknown," *RAND Journal of Economics*, Vol. 30, No. 3, pp. 456–74.
Desiraju, R. and R. M. Shugan (1999) "Strategic Service Pricing and Yield Management," *Journal of Marketing*, No. 63, pp. 44–6.
Dolan, R, and H. Simon (1996) *Power Pricing* (New York: Free Press).
Donaghy, K., U. McMahon-Beattie and D. McDowell (1997) *Yield Management Practices: Yield Management. Strategies for the Services Industries* (London: Cassell).
Dubé, L., C. A. Enz, L. M. Renaghan, J. A. Siguaw (2000) "The Key to Best Practices in the U.S. Lodging Industry," *Cornell University School of Hotel Administration, The Center for Hospitality Research. American Hotel Foundation*, pp. 178–9, 160–1.
Dunn, K. D. and D. E. Brooks (1990) "Profit Analysis: Beyond Yield Management," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 11, No. 31, pp. 80–90.
Geraghty, M. K. and E. Johnson (1997) "Revenue Management Saves National Car Rental," *Interfaces*, Vol. 27, No. 1, pp. 107–27.
Haley, M. and J. Inge (2004) "Revenue Management: It Really Should Be Called Profit Management," *Hospitality Upgrade Magazine*.
Hanks, R., P. Noland and R. Cross (1992) "Discounting in the Hotel Industry, a New Approach," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 33, No. 3, pp. 40–5.
Hayek, F.A. (1945). "The Uses of Knowledge in a Society," *American Economic Review*, Vol. 35, pp. 519–30.
Jain, S. and H. B. Bowman (2005) "Measuring the Gain Attributable to Revenue Management," *Journal of Revenue & Pricing Management*, No. 4, pp. 83–94.
Jonason, A. and B. Holma (2004) "Innovative Pricing: a Case of Pricing for Profits on the Mobile Internet," *International Journal of Information Technology and Management*, Vol. 3, No. 1, pp. 105–15.
Kahneman, D., J. Knetsch, and R. Thaler (1986) "Fairness and the Assumptions of Economics," *Journal of Business*, Vol. 59 pp. 285–300.
Kimes, S. E. (1989) "The Basics of Yield Management," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 33, No. 4, pp.14–19.
Kimes, S. E. (1994) "Perceived Fairness of Yield Management," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 35, No. 1, pp. 22–9.

Kimes, S. E., R. B. Chase, S. Choi, P. Y. Lee, and E. N. Ngonzi (1998) "Restaurant Revenue Management: Applying Yield Management to the Restaurant Industry," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 39, No. 3, pp. 32–9.

Kimes, S. E. and R. Chase (1998) "The Strategic Levers of Yield Management,"*Journal of Service Research*, Vol. 1, No. 2, pp. 156–66.

Kimes, S. E., (1999) "Implementing Restaurant Revenue Management," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 40, No. 3, pp. 16-21.

Kimes, S. E., D. I. Barrash and J. E. Alexander (1999) "Developing a Restaurant Revenue-Management Strategy," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 40, No. 5, pp. 18–29.

Kimes, S. E. (1999) "Implementing Restaurant Revenue Management: a Five Step Approach," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 4, No. 5, pp. 16–21.

Kimes, S. E. (2001a) "Yield Management," *The Center for Hospitality Research at Cornell University*, CHR Reports (Ithaca, New York: Cornell University).

Kimes, S. E. (2001b) "A Strategic Approach to Yield Management," in A. Ingold, I. Yeoman, and U. McMahon (eds), *Yield Management: Strategies for the Service Industries*, 2nd edn (London: Continuum).

Kimes, S. E. and K. A. McGuire (2001) "Function-space Revenue Management: a Case Study from Singapore," *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 12, No. 42, pp. 33–46.

Kimes, S. E. (2002) "Perceived Fairness of Yield Management," *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 43, No. 1, pp. 21–30.

Kimes, S. E. (2003) "Revenue Management: a Retrospective," *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 44, Nos 5/6, pp. 131–8.

Kimes, S. E. (2004) "The Wedding Bell Blues," in I. Yeoman, I. and U. McMahon-Beattie (eds), *Revenue Management and Pricing: Case Studies and Applications* (London: Continuum), pp. 24–31.

Lieberman, W. (1991) "Making Yield Management Work for You: Ten Steps to Enhanced Revenues," *Travel, Tourism and Hospitality Bulletin*.

Lieberman, W. (1993) "Debunking the Myths of Yield Management," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 2, No. 34, pp. 34–41.

Littlewood, K. (1972) "Forecasting and Control of Passenger Bookings," *AGIFORS Symposium Proceedings Organized by American Airlines*, Vol. 12, pp. 95–117.

Madu, C. N. and A. A. Madu (2002) "Dimensions of E-quality," *International Journal of Quality & Reliability Management*, Vol. 19, No. 3, pp. 246–58.

Malhotra, N. And C. Desira (2002) "Hotel Internet Distribution Channels," *HVS International Journal*, www.hvsinternationl.com. Accessed September 12, 2006.

McGill, J. I. and G. J. van Ryzin (1999) "Revenue Management: Research Overview and Prospects," *Transportation Science*, Vol. 33, No. 2, pp. 233–56.

Ng, I. C. L. (2008) "The Pricing and Revenue Management of Services: a Strategic Approach," *Routledge Advances in Management and Business Studies*.

Noone, B. M., S. E. Kimes, A. S. Mattila, and J. Wirtz (2007) "The Effect of Meal Pace on Customer Satisfaction," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 48, No. 3, pp. 231–45.

O'Connor, P. (2002) "An Analysis of the Online Pricing Strategies of International Hotel Chains," in K. Woeber, A.J. Frew and M, Hitz (eds), *Information and Communication Technologies in Tourism* (New York. Springer-Verlag).

Orkin, E. B. (1988) "Boosting Your Bottom Line with Yield Management," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 2, No. 28, pp. 52–6.
Orkin, E. B. (1990) "Wishful Thinking and Rocket Science," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 39, No. 4, pp. 15–20.
Overby, S. (2005) "The Price Is Always Right". *CIO Magazine*, http://www.cio.com/archive/021505/eva_marriott.html?printversion=yes. Accessed April 23, 2006.
Phillips, R. (2005) *Pricing and Revenue Optimization* (Stanford: Stanford University Press).
Pinchuk, S. (2002) "Revenue Management, Marketing, Pricing & Product Development," *Journal of Revenue and Pricing Management*, http://www.henrystewart.co.uk/journals/jrpm/index.html. Accessed August 30, 2006.
Popescu, I. (2003) "Teaching Dynamic Pricing and Revenue Management," *Euro Informs*, Istanbul, Turkey.
Quain, W. J., M. Sansbury, and D. Quinn (1999a) "Revenue Enhancement, Part 3: Picking Low-hanging Fruit – A Simple Approach to Yield Management," *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 40, No. 2, pp. 76–83.
Quain, B., M. Sansbury and S. M. LeBruto (1999b) "Revenue Enhancement, Part 4: Increasing Restaurant Profitability," *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 40, No. 3, pp. 38–47.
Regan, R. C. (1989) *Hotel Revenue Management* (Seattle: Revenue Dynamics).
Relihan III, W. J. (1989) "The Yield-Management Approach to Hotel-Room Pricing," *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 5, No. 30, pp. 40–5.
Saders, P. (2005) "When the Chips Are Down, Now Casinos Know, Too," *The Wall Street Journal Europe*, Networking section, p. 5.
Schonberger, R. J. (1996) *World Class Manufacturing — The Next Decade: Building Power, Strength, and Value* (New York: Free Press).
Sfodera, F. (2006) *The Spread of Yield Management Practices: the Need for Systematic Approaches* (Heidelberg: Physica-Verlag).
Sill, B. and R. Decker (1999) "Applying Capacity Management Science: the Case of Brown Restaurants," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 40, No. 3, pp. 22–30.
Smith, B. C., J. E. Leimkuhler and R. M. Darrow (1992) "Yield Management at American Airlines," *Interfaces*, Vol. 22, No. 1, pp. 8–31.
Smith, J. S. (2005) "Why Harvard Lost out to Vegas," *Financial Times*, May 8, p. 13.
Talluri, K. and G. J. van Ryzin (1999) "A Randomized Linear Programming Method for Computing Network Bid Prices," *Transportation Science*, Vol. 33, pp. 207–16.
Talluri, K. and G. J. van Ryzin (2004) *Theory and Practice of Revenue Management* (Dordrecht: Kluwer Academic Publishers).
Taylor, C. J. (1962) "The Determination of Passenger Booking Levels," *Proceedings of the Second AGIFORS SYMPOSIUM, American Airlines*. Vol. 2, Fregene, Italy.
van Ryzin, G. J. (2000) "The Brave New World of Pricing," in Survey: Mastering management. *Financial Times*, October 16.

9

Transfer Pricing for Internal Services and Products: the Link Between Accounting and Marketing

Christine Mitter and Florian Siems

Introduction

According to OECD estimates, approximately 60 percent of international trade occurs within firms (Atkinson et al., 2007, p. 596). Consequently, the majority of multinational transactions is intra-firm trade.

Due to globalization and/or business growth centralized control is physically and practically impossible. Therefore, many companies have developed divisional organizations with responsibility centers, ranging from cost centers, revenue centers or profit centers to investment centers (Anthony and Govindarajan, 2006, p. 128; Horngren et al., 2006, p. 764).

As a result of decentralization, these responsibility centers or subunits have been empowered with decision-making authority in order to exploit benefits such as greater and faster responsiveness to local needs, increase in the motivation of subunit managers and higher flexibility and ability to adapt to changes (Coenenberg, 2003, p. 522; Horngren et al., 2006, p. 762). Since the responsibility centers are economically autonomous, including responsibility for the subunit's performance, the internally exchanged goods and services have to be priced – no matter if intra-firm trade takes place between cost centers of one firm, between clearly separated plants, divisions or business units or between legally independent operations of a group of companies.

"A transfer price is the price one subunit (. . .) charges for a product or service supplied to another subunit of the same organization" (Horngren et al., 2006, p. 764). The transfer price is recognized as revenue by the subunit providing goods or services (selling subunit) and as a cost or

expense by the receiving responsibility center (Morse et al., 2003, p. 576). Transfer prices affect:

- the level of activity within subunits,
- the rate of return on investment by which each responsibility center is judged, and
- the total profit that is achieved by the firm (Hirshleifer, 1956, p. 172).

Thus, the problem of pricing the internally exchanged goods and services becomes of major importance.

Transfer pricing has been a subject of intense debate in Management Accounting: The discussion of inter-company pricing had already started early in the previous century (Schmalenbach, 1909) and usually a full chapter or subchapter in Management Accounting textbooks is dedicated to this topic (see, for example, Horngren, Datar, and Foster, 2006 or Atkinson/Kaplan/Matsumura/Young, 2007 for the US literature; or Ewert and Wagenhofer, 2005 or Weber and Schäffer, 2006 for the German-speaking literature). Yet transfer pricing has been widely neglected in the Marketing literature to date. This chapter seeks to combine insights from Management Accounting and Marketing and shows how marketing expertise in price management and pricing strategy could be applied to transfer pricing.

The remainder of this chapter is organized as follows. In the next two sections transfer pricing is analysed from an accounting point of view: the functions of transfer prices and the different approaches to transfer pricing are described. The main theoretical findings concerning the appropriateness of the different transfer pricing methods are summarized. Based upon these findings, we discuss whether and to what extent (external) pricing mechanisms can be applied to transfer pricing and how external pricing strategies can be used in the internal context as well. A summary concludes the paper.

Functions of transfer prices

Management Accounting has to fulfill two basic requirements. It has to aid managerial decisions throughout an organization by providing relevant information for these decisions and it has to guide the behavior of a company's managers and employees (Pfaff, 1995, p. 439; Wolfsgruber, 2005, p. 29).

Due to the above mentioned developments, many companies are organized in more or less autonomous subunits. This implies that many

decisions are delegated to these autonomous responsibility centers and that the monitoring of these entities is difficult and costly (Jensen and Meckling, 1976, p. 305; Fama, 1980, p. 288; Fama and Jensen, 1983, p. 301). Consequently, decisions throughout the organization have to be coordinated. As long as the interests of the company and the subunits are congruent, this information asymmetry is not a problem (Harris, Kriebel and Raviv, 1982, p. 605). If this is not the case, however, conflicts arise and the subunits' goals have to be aligned with the overall goals of the organization.

Transfer prices are one way of aligning these goals (Schultze and Weiler, 2007, p. 103). In the case of interdependencies, transfer prices ensure that scarce resources are companywide used in the best way and that the impacts of one subunit's decision on other subunits (externalities) are taken into account. Thus, one function of transfer pricing is to induce each subunit to act in the organization's interests and to maximize the profit of the firm as a whole (coordination and control function) (Choi, Frost, and Meek, 1999, p. 449; Anthony and Govindarajan, 2006, p. 230).

The second main function of transfer prices concerns the measurement of subunit performance (Choi, Frost, and Meek, 1999, p. 449; Anthony and Govindarajan, 2006, p. 230). In decentralized organizations with autonomous subunits this is of crucial importance as the subunit's performance forms the basis for many decisions and is used to evaluate the performance of division managers. Transfer prices create revenues for the selling subunit and costs or expenses for the buying division, facilitating the disentangling of the separate performance elements (Wagenhofer, 2006, p. 6023).

In multinational firms with a high level of intra-firm trade involving cross-border transactions, the practice of tax optimization within the group through transfer pricing is gaining in importance. In order to avoid excessive income shifting, national tax authorities and the OECD have developed several guidelines and regulations concerning the determination and accepted level of transfer prices. Hence, observing these rules and avoiding tax disadvantages is another function of transfer prices. In the following this chapter concentrates upon the function of performance measurement and the function of ensuring that divisional and organization goals are congruent. For detailed discussions of tax influences on transfer prices see Conover and Nichols (2000), Bartelsman and Beetsma (2003), and Clausing (2003).

Evidently, the different functions of transfer prices are prone to conflicts. It is impossible to achieve all of the above mentioned goals with one category of transfer prices. In particular, conflicts are immanent between the function of performance measurement and the goal of

motivating, coordinating and controlling the company's subunits in order to optimize the performance of the company as a whole (Solomons, 1973, p. 166). Focusing upon one particular function leads to the relative neglect of another function. Thus, the determination of transfer prices requires that the specific pros and cons of one certain transfer pricing system are weighed regarding the importance of the different functions in this company (Wagenhofer, 2006, p. 6023).

Transfer pricing approaches

Basically, there are three main approaches to transfer pricing:

- market-based transfer prices
- cost-based transfer prices
- negotiated transfer prices.

Market-based transfer prices

External market prices are used when goods or services are exchanged within the company. Market prices provide an independent and objective valuation of the transferred product or service. However, for optimal results the following conditions have to be satisfied (Wagenhofer, 1994, p. 88; Ewert and Wagenhofer, 2005, p. 588; Horngren, Datar, and Foster, 2006, p. 768; Weber and Schäffer, 2006, p. 202):

- the existence of a market and a uniform external price for the exchanged product or service
- the market for the transferred intermediate product or service has to be perfectly competitive, thus implying that the market price cannot be influenced by decisions of the buying and/or selling subunit
- there are only minimal price fluctuations and no distress prices
- interdependencies of subunits are minimal and
- there are no additional costs or benefits to the company as a whole from buying or selling in the external market instead of transacting internally.

In this manner goal congruence is achieved and the performance of each subunit is shown without distortion. Thus, no conflict exists between the function of performance measurement and the coordination and control function.

However, such competitive markets seldom exist. Furthermore, the assumption that subunits are indifferent between buying and selling in

the external market and transacting internally is problematic. It implies that there are no synergies. But without synergies there is no reason for being part of or being allied to a group of companies (Ewert and Wagenhofer, 2005, p. 589; Schultze and Weiler, 2007, p. 105).

Despite these problems, theorists argue in favor of market-based transfer prices. "If the market price exists or can be approximated, use it" (Anthony and Govindarajan, 2006, p. 235).

Cost-based transfer prices

Costs form another alternative for the basis of transfer prices, especially if market prices are unavailable, inappropriate or too costly to obtain. Cost-based transfer prices are usually easy to implement because the necessary costs are already available in the accounting system (Horngren, Datar, and Foster, 2006, pp. 769 and 773). However, there is no consensus on which type of costs should be used.

Full versus variable costs

Full cost-based transfer prices represent relevant costs for long-run decisions. They facilitate external pricing based upon variable and fixed costs and they are the least costly to implement and administer (Horngren, Datar, and Foster, 2006, p. 771). Assuming identical profitability levels of the subunits, the buying division's situation is no different than if it had produced the intermediate product or service itself. Yet full costs raise the question of how to allocate indirect costs. This allocation is always arbitrary to a certain extent so that the receiving subunits are debited fixed costs they are not responsible for and cannot control (Weber and Schäffer, 2006, p. 202). This can lead to motivational problems and can cause adverse effects on the achievement of the overall goals of the company.

The determination and evaluation of a subunit's performance is another problem of transfer prices based on full costs. Since only the costs of the selling division are settled down, it always reports zero income, whereas the complete earnings of the internal transactions are accounted to the buying subunit. On the other hand, the transfer price is recognized as a variable cost by the receiving responsibility center, which distorts the basis for corporate decision-making and veils the actual cost structure (Kaplan and Atkinson, 1998, p. 457; Wagenhofer, 2006, p. 6025).

A two-step-pricing approach can mitigate the above mentioned drawbacks (Anthony and Govindarajan, 2006, p. 236). This approach charges

the buying subunit with the variable cost, in addition to a periodic assignment of the supplying division's committed costs, which reflects the buying subunit's share of the supplying division's capacity. This way the original cost structure is maintained while the disadvantages of posting only the variable costs to the receiving division (see further below) are reduced or off-set by the periodical assignment.

If there are no capacity constraints, no external market for the intermediate product and the headquarters are well informed (Coenenberg, 2003, p. 546; Ewert/Wagenhofer, 2005, 598), marginal costs induce decision makers to choose the optimal level of transactions (Hirshleifer, 1956, p. 185). In this case, the transfer price fulfills the coordination function and aligns the subunit's goals with the overall goal of the company, thus ensuring goal congruence. However, the dilemma here is that the supplying division will always record a loss. The buying subunit, on the other hand, reports earnings that are only partly the results of its own efforts. Therefore, this approach is not applicable for performance measurement (Coenenberg, 2003, p. 547).

Mark-ups

There is much debate over whether to use mark-ups in transfer prices. Mark-ups can be added to variable costs and full costs. The idea behind these cost-plus approaches (Eccles, 1986, p. 184; Choi, Forst, and Meek, 1999, p. 453) is to treat buying subunits like external customers. Mark-ups are intended to provide selling divisions with a return for unallocated corporate-level costs and investment incentives (Atkinson, Kaplan, Matsumura, and Young, 2007, p. 597). If cost-plus transfer prices resemble market prices or internally negotiated prices, each division's performance should be determined correctly (Eccles, 1986, p. 175).

Since transfer prices are recognized as variable costs by the receiving subunits, the basis for corporate decision-making and the actual cost structure are distorted as well, in this case misdirecting decision making (Wagenhofer, 2006, p. 6026). The problem is worsened in the case of full-cost-plus since the allocation of fixed costs is necessarily arbitrary (Abdel-khalik and Lusk, 1974, p. 21).

It has been proved that cost-plus approaches can be the optimal solution to coordination problems if the selling division has private information about its productivity. In this case, the mark-up ensures that the subunit with higher productivity uses this advantage for the benefit of the whole firm (Amershi and Cheng, 1990; Vaysman, 1996; Wagenhofer, 1992).

Actual versus standard costs

Another point of debate is whether to use actual or standard costs. Actual costs favor the supplying division. Since transfer prices exactly match the incurred costs, the selling subunit has no incentive to control costs because it can always recover them. This way, cost inefficiencies would get passed along to the buying division as part of the transfer price (Horngren et al., 2006, p. 770; Anthony and Govindarajan, 2006, p. 235).

Standard costs overcome this problem because only the budgeted costs are charged to the receiving subunit. In this manner, the risk of variations in the produced quantity and cost deviations remain with the selling division, motivating an efficient use of the company's resources. One disadvantage of standard costs is that the buying subunit is isolated completely from incurred deviations. Therefore, it has no incentive to adapt to changes, even though these adaptations might be in the interest of the company as a whole (Eccles, 1986, p. 162; Ewert and Wagenhofer, 2005, p. 597).

Negotiated transfer prices

Negotiated transfer prices (Atkinson et al., 2007, p. 601) are the result of discussions between supplying and receiving divisions. On the one hand, negotiated transfer prices reflect the controllability inherent in responsibility centers since each division is ultimately responsible for the transfer price it negotiates. The subunits can use their superior information, which can also benefit the firm (Wagenhofer, 1994, p. 84). On the other hand, debates are time-consuming and can lead to several conflicts and dysfunctional behaviors (Kaplan and Atkinson, 1998, p. 461). Moreover, the negotiated prices reflect the relative negotiating skills of the parties involved, rather than prices that are in the best interests of the whole firm (Abdel-khalik and Lusk, 1974, p. 16). Thus, negotiated transfer prices do not necessarily ensure goal congruence (Ewert and Wagenhofer, 2005, p. 619). The same is true for the determination of divisional performance. As the result of negotiations is unclear, earnings and performance may not be allocated in the optimal manner (Coenenberg, 2003, p. 559).

Whether cost-based or negotiated transfer prices fulfill their functions better depends to a large extent upon the company's specific situation and environment (Baldenius, Reichelstein, and Sahay, 1999; Baldenius, 2000).

Table 9.1 Functions and limitations of the basic transfer pricing approaches

Functions and limitations	**Market-based**	**Cost-based**	**Negotiated**
Goal congruence	Yes, when markets are competitive	Not always, only under certain conditions	Not necessarily
Measurement of subunit performance	Yes, when markets are competitive	Difficult unless cost-plus approach is used and even then is somewhat arbitrary	Not necessarily
Limitations	Markets may not exist, may be imperfect or in distress	Motivational problems if based on full costs	Prices reflect the relative negotiating skills, bargaining takes time and may lead to conflicts

Table 9.1 summarizes the theoretical findings concerning the three basic transfer pricing approaches and their abilities to ensure goal congruence and measure subunit performance correctly. It also shows their main limitations.

Empirical results

As shown, there is no best solution concerning the determination of transfer prices. In practice, many different approaches are used. Table 9.2 provides an overview of the results of empirical studies in different countries. The results of these studies have to be interpreted with caution because there is sometimes an overlap of transfer pricing systems. For example, a company can use market prices as a negotiation basis for price determination. In this case, the allocation to one category is difficult. Furthermore, some companies will use more than one pricing scheme simultaneously.

Nevertheless, the empirical results indicate that cost-based approaches are the most preferred method of transfer pricing. Especially full-cost transfer prices are common.

A marketing perspective on transfer pricing

It has been shown that transfer prices can be used to guide the behavior of a firm's managers and employees. A well-designed transfer pricing system would enable subunits "to maintain their autonomy while making

Table 9.2 Transfer pricing approaches in practice

Author (Year)	Sample	Country	Market-based (%)	Cost-based (%)	Negotiated (%)	Others (%)
Drumm (1973)	24 industrial companies	Germany	46	46		8
Tomkins (1973)	67 companies	United Kingdom	48	31	21	
Vancil (1979)	239 companies	United States	31	47	22	
Atkinson (1987)	152 companies	Canada	30	57	7	6
Weilenmann (1989)	80 companies	Switzerland	24	41	35	
Scholdei (1990)	49 companies	Germany	40	57 (variable costs: 1%; Two-step-pricing: 6%; full cost: 33%; full cost plus markup: 17%)		3
Drury/Braund/ Osborne/Tayles (1993)	manufacturing companies	United Kingdom	26	49 (variable costs: 10%; full cost: 38%; other: 1%)	24	1
Tang (2002)	95 Fortune 1000 companies	United States – domestic/ multinational transfer prices	26/35	53/43 (variable costs: 3%/ 0%; full cost: 49%/42%; other: 1%/1%)	17/14	4/8
Tang (2002)	95 Fortune 1000 companies	Japan – domestic/ multinational transfer prices	34/37	46/41 (variable costs: 2%/ 3%; full cost: 44%/38%)	19/22	
Hoque/Alam (undated)	61 privately held companies	New Zealand	18	71 (variable costs: 10%; full cost: 61%)	11	

Sources: Coenenberg (2003, p. 564); Ewert and Wagenhofer (2005, p. 586); Horngren, Datar, and Foster (2006, p. 774).

decisions that benefit the entire organization" (Abdel-khalik and Lusk, 1974, p. 8). The transfer price is set or even distorted (Ewert and Wagenhofer, 2005, p. 626) in a way that decentralized decisions lead to the maximum profit for the firm as a whole (Hirshleifer, 1956). In the following section we will discuss to what extent insights from marketing could also be applied to transfer pricing and how this insights could be used in particular to align the goals of subunits and the overall firm.

Higher or lower prices to influence decisions

One important theory for pricing strategies for external customers is the decision concerning market-skimming pricing or market-penetration pricing (Kotler, Wong, Saunders, and Armstrong, 2005, p. 689): Some companies initially set high prices to "skim" revenues and reduce the price over time ("market-skimming pricing"). Other companies set a low initial price to get a large number of buyers quickly ("market-penetration pricing"). Especially this last strategic option can also be interesting for transfer prices: The company can use low initial prices for new internal services or products in order to implement this service or the use of this internal product quickly in the company. Such a special offer can be made for all subunits or – to guide the behaviors of some special units – for a selection of divisions. For example, if one subunit – in the headquarters' opinion – is investing too little in research and development, the head office can set a transfer price that induces the subunit to increase the investments in R&D. This could be achieved with a very low price for R&D services, perhaps even below costs. In this case, suboptimal profit maximization in the short run is mitigated by "subsidizing" decisions that are efficient in the long run (Ewert and Wagenhofer, 2005, p. 627).

As shown, the price for internal services can be used to influence the decisions of the subunits in the interest of the overall corporation, imposing corporate strategies through transfer prices. Another example for this was presented by Hiromoto (1988, p. 23): A Japanese producer of video recorders (Hitachi) is convinced that it can only achieve competitive advantage by increasing the degree of automation. Therefore, the head office allocates its overhead costs according to the level of direct labor costs. In this manner, manual manufacturing is made more expensive while automatic processing is advantaged. Moreover, the more subunits have already automated their production facilities, the more expensive manual manufacturing becomes. This creates an additional pressure to switch to automation.

Following this idea, it also seems possible to guide the behaviors of construction engineers and designers (Wagenhofer and Riegler, 1994,

p. 486). Usually, these employees value the design and technical sophistication more than the market. Corporate management lacks the expertise to decide what development time and gadgetry are appropriate. Therefore, they cannot dictate the necessary amount of development time and technical sophistication. However, they can have an indirect influence on the designer's or engineer's behavior. One possibility is to allocate higher than actual overhead costs to the R&D department, thereby increasing the costs of one R&D-hour. In order not to jeopardize the launch of the new product due to cost overrun, the designer or engineer will spend less time on gadgetry.

Similar results could be achieved by specifying skewed transfer prices for components or modules of the new product. Whereas the costs of standard components are set too low, special parts are extremely highly priced. This way the designer should be motivated to use standard components and to avoid special parts.

Using differentiated pricing for transfer prices

Another subject of pricing theory which can also be applied to transfer prices is differentiated pricing: The idea of differentiated pricing in marketing is to set different prices, for example, for different consumers, different selling points, different countries (Kotler and Keller, 2006, p. 453). This can be used as previously shown by setting lower prices for selected ("discriminated") subunits to increase the use of special internal services. However, there are even more possibilities to use differentiated pricing for transfer prices: A special strategy of differentiated prices which is widely used in marketing for external goods, especially the services of hotels and airlines, is Yield Management. The idea is to use prices for allocating fix capacities and to manage the degree of demand over time by prices (see, for example, Kimes, 1989). For transfer prices, it seems useful to think about different prices depending upon the changing ratio of utilization and/or the time of demand: If a subunit makes a reservation for an internal service early, the price can be lower. This creates incentives for the early booking of internal services and products. It also facilitates planning as the internal demand of the subunits is known earlier.

Another possibility of differentiated pricing which can be useful for transfer prices as well is differentiation by the degree of the customer's integration in the production process (Lovelock and Wirtz, 2004, p. 11; Bruhn and Georgi, 2006, p. 74): In external markets, prices sometimes are reduced for customers who are willing to participate in some parts of the service production. For example, some companies in the furniture industry offer their products for lower prices but the customer must install the

furniture himself. Similarly, fast food restaurants can be cheaper because the customer is not only customer: He is customer and waiter at the same time, because he takes the meal from the desk to his table.

This pricing method also seems to be applicable to transfer prices. For example, some subunits in a company need a full service by the IT service department for the installation of new software, while other subunits need less support. Here different transfer prices can be used depending upon the degree of customer integration in the service production.

Using psychological pricing theories for a better acceptance of transfer prices

Transfer prices will only succeed in achieving goal congruence and guiding subunits' behaviors if they are accepted by the decision makers concerned (Ewert and Wagenhofer, 2005, p. 626). Therefore, psychological pricing theories for external markets can be adapted and used in order to obtain and improve acceptance.

A first approach is the theory about perceived price fairness, based upon the theory of equity (see, for example, Boyd and Bhat, 1998; Kalapurakal, Dickson and Urbany, 1991; for the origins of this theory, see, for example, Homans, 1961; Adams, 1963). Following this theory, individuals compare what they get and what they have to invest for it to what other people get and what other people have to invest for it. The result of this comparison is the perceived fairness.

In terms of pricing, the perceived fairness (and so the acceptance of a price) can be reduced if different prices are used for different customers. This is not really an argument against the previously mentioned possibilities of price differentiation, but a very important argument to explain the price differences between customers that are caused by price differentiation or to explain changes in prices over time. Thus, it is crucial to use both communication and as much transparency as possible in the pricing system. This applies to traditional prices in marketing and also to transfer prices for internal products and services.

The theory of reference prices (Winer, 1986, 1988; Mayhew and Winer, 1992; Rajendran and Tellis, 1994; Greenleaf, 1995; Kalyanaram and Winer, 1995) is another important theory to explain the acceptance of prices: Following this theory, the evaluation of prices by individuals and their reactions to it are the result of a comparison between real prices and a specific individual price norm ("reference points").

There are two possibilities for achieving positive norm-based price evaluations – and accordingly a high acceptance – of transfer prices: First,

the reference prices can be considered in the process of price setting so that the transfer price (real price) does not exceed the reference price. This leads to the question of what the reference price for internal services and products will be. It can be assumed that the reference price will be the price for similar services or products on external markets. This is an important argument for the previously mentioned market-oriented approach to transfer prices. However, as discussed above, the market-oriented price setting encounters difficulties in the case of synergies and/or the absence of an external market, complicating the determination of the reference price in these situations.

Secondly, communication of a price and the explanation of the calculation of its components can be used to reduce the effects of a negative norm-based price evaluation (Bruhn et al., 2005, p. 17). This means that the future reference price can also be changed.

The psychological view of prices indicates that problems in price perceptions are often problems in communication. This should be considered for external prices and transfer prices in the same way.

Conclusion

Transfer prices are becoming increasingly important. At the same time, more and more Marketing theories are being discussed for internal products and services (see, for example, Gremler, Bitner and Evans, 1994; Stauss, 1995; Frost and Kumar, 2000; Bruhn, 2003). In this chapter, some theories of transfer prices have been presented. Second, we have demonstrated that traditional pricing theories and methods for external markets can also be adapted for transfer prices. There are numerous possibilities for using these methods, for instance for influencing the decisions of subunits and aligning the goals of subunits and the overall firm. For future research, it seems interesting to enrich the shown theories with empirical studies in companies and to test the possibilities of the shown approaches.

References

Abdel-khalik, A.R. and E. J. Lusk (1974) "Transfer Pricing – A Synthesis," *The Accounting Review*, Vol. 49, No. 1, pp. 8–23.

Adams, J.S. (1963) "Toward an Understanding of Inequity," *Journal of Abnormal and Social Psychology*, Vol. 67, pp. 422–36.

Amershi, A. H. and P. Cheng (1990) "Intrafirm Resource Allocation: the Economics of Transfer Pricing and Cost Allocation in Accounting," *Contemporary Accounting Research*, Vol. 7, No. 1, pp. 61–99.

Anthony, R. N. and V. Govindarajan (2006) *Management Control Systems*, 12th edn (Boston: McGraw-Hill/Irwin).

Atkinson, A. A., R. S. Kaplan, E. M. Matsumura and S. M. Young (2007) *Management Accounting*, 5th edn (Upper Saddle River, NJ: Prentice Hall).

Baldenius, T. (2000) "Intrafirm Trade, Bargaining Power, and Specific Investments," *Review of Accounting Studies*, Vol. 5, No. 1, pp. 27–56.

Baldenius, T., S. Reichelstein and S. A. Sahay (1999) "Negotiated Versus Cost-based Transfer Pricing," *Review of Accounting Studies*, Vol. 4, No. 2, pp. 67–91.

Bartelsman, E. J. and R. M. W. J. Beetsma (2003) "Why Pay More? Corporate Tax Avoidance Through Transfer Pricing in OECD Countries," *Journal of Public Economics*, Vol. 87, Nos 9–10, pp. 2225–52.

Boyd, D.E. and S. Bhat (1998) "The Role of Dual Entitlement and Equity Theories in Consumers' Formation of Fair Price Judgements," *Journal of Professional Service Marketing*, Vol. 17, No. 1, pp. 1–14.

Bruhn, M. (2003) "Internal Service Barometers: Conceptualization and Empirical Results of a Pilot Study in Switzerland," *European Journal of Marketing*, Vol. 37, No. 9, pp. 1188–204.

Bruhn, M. and D. Georgi (2006) *Services Marketing: Managing the Service Value Chain* (Harlow: Pearson-Prentice Hall).

Bruhn, M., M. Missler-Behr, F. Siems, D. Arndt and N. Wachter (2005) "The Integration of Price Perceptions in Customer Satisfaction Models," in H. Estelami and S. Maxwell (eds), *Proceedings of the 2005 Fordham University Behavioral Pricing Conference* (New York: Fordham University), pp. 12–21.

Choi, F., C. Frost and G. Meek (1999) *International Accounting*, 3rd edn (Upper Saddle River, NJ: Prentice Hall).

Clausing, K. A. (2003) "Tax-motivated Transfer Pricing and US Intrafirm Trade Prices," *Journal of Public Economics*, Vol. 87, Nos 9–10, pp. 2207–23.

Coenenberg, A. G. (2003) *Kostenrechnung und Kostenanalyse* (Stuttgart: Schäffer-Poeschl).

Conover, T. L. and N. B. Nichols (2000) "A Further Examination of Income Shifting Through Transfer Pricing Considering Firm Size and/or Distress," *The International Journal of Accounting*, Vol. 35, No. 2, pp. 189–211.

Eccles, R. F. (1986) *The Transfer Pricing Problem*, 2nd edition (Lexington: Lexington Books).

Ewert, R. and A. Wagenhofer (2005) *Interne Unternehmensrechnung*, 6th edn (Berlin and Heidelberg: Springer-Verlag).

Fama, E. F. (1980) "Agency Problems and the Theory of the Firm," *Journal of Political Economy*, Vol. 88, No. 2, pp. 288–307.

Fama, E. F. and M. C. Jensen (1983) "Separation of Ownership and Control," *Journal of Law and Economics*, Vol. 26, No. 2, pp. 301–25.

Frost, F. A. and M. Kumar (2000) "INTSERVQUAL – an Internal Adaptation of the GAP Model in a Large Service Organisation," *Journal of Services Marketing*, Vol. 14, No. 5, pp. 358–77.

Greenleaf, E. A. (1995) "The Impact of Reference Price Effect on the Profitability of Price Promotions," *Marketing Science*, Vol. 14, No. 1, pp. 82–101.

Gremler, D. D., M. J. Bitner and K. R. Evans (1994) "The Internal Service Encounter," *International Journal of Service Industry Management*, Vol. 5, No. 2, pp. 34–65.

Harris, M., C. Kriebel and A. Raviv (1982) "Asymmetric Information, Incentives and Intrafirm Resource Allocation," *Management Science*, Vol. 28, No. 6, pp. 604–20.
Hirshleifer, J. (1956) "On the Economics of Transfer Pricing," *The Journal of Business*, Vol. 29, No. 3, pp. 172–84.
Hiromoto, T. (1988) "Another Hidden Edge – Japanese Management Accounting,"*Harvard Business Review*, Vol. 66, No. 4, pp. 22–6.
Homans, G. C. (1961) *Social Behavior: Its Elementary Forms* (New York: Harcourt, Brace and World).
Horngren, C. T., S. M. Datar, and G. Foster (2006) *Cost Accounting: a Managerial Emphasis*, 12th edn (Upper Saddle River, NJ: Pearson Prentice Hall).
Jensen, M. C. and W. H. Meckling (1976) "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics*, Vol. 3, No. 4, pp. 305–60.
Kalapurakal, R., P. R. Dickson and J. E. Urbany (1991) "Perceived Price Fairness and Dual Entitlement," *Advances in Consumer Research*, Vol. 18, pp. 788–93.
Kalyanaram, G. and R. Winer (1995) "Empirical Generalizations from Reference Price Research," *Marketing Science*, Vol. 14, No. 3, pp. 161–9.
Kaplan, R. S. and A. A. Atkinson (1998) *Advanced Management Accounting*, 3rd edn (Upper Saddle River, NJ: Prentice Hall).
Kimes, S.E. (1989) "Yield Management: a Tool for Capacity-Constrained Service Firms," *Journal of Operations Management*, Vol. 8, No. 4, pp. 348–63.
Kotler, P. and K. L. Keller, (2006) *Marketing Management*, 12th edn (Upper Saddle River, NJ: Pearson).
Kotler, P., V. Wong, J. Saunders and G. Armstrong (2005) *Principles of Marketing*, 4th European edn (Harlow: Pearson).
Lovelock, C. and J. Wirtz (2004) *Services Marketing: People, Technology, Strategy*, 5th edn (Upper Saddle River, NJ: Pearson).
Mayhew, G. and R. S. Winer (1992) "An Empirical Analysis of Internal and External Reference Prices Using Scanner Data," *Journal of Consumer Research*, Vol. 19, No. 1, pp. 62–70.
Morse, W. J., J. R. Davis and A. L. Hartgraves (2003) *Management Accounting: A Strategic Approach* (Mason, OH: Thomson South-Western).
Pfaff, D. (1995) "Kostenrechnung, Verhaltenssteuerung und Controlling," *Die Unternehmung*, Vol. 49, No. 6, pp. 437–55.
Rajendran, K. N. and G. J. Tellis (1994) "Contextual and Temporal Components of Reference Price," *Journal of Marketing*, Vol. 58, No. 1, pp. 22–34.
Schmalenbach, E. (1909) "Über Verrechnungspreise," *Zeitschrift für handelswissenschaftliche Forschung*, Vol. 3, pp. 165–85.
Schultze, W. and A. Weiler (2007) 'Gestaltung von Verrechnungspreisen unter Beachtung von Anreiz- und Steuerungseffekten', *Zeitschrift für Controlling & Management*, Vol. 51, No. 2, pp. 102–8.
Solomons, D. (1973) *Divisional Performance: Measurement and Control*, 7th printing (Homewood, IL: Irwin).
Stauss, B. (1995) "Internal Services: Classification and Quality Management," *International Journal of Service Industry Management*, Vol. 6, No. 2, pp. 62–78.
Vaysman, I. (1996) "A Model of Cost-based Transfer Pricing," *Review of Accounting Studies*, Vol. 1, No. 1, pp. 73–108.

Wagenhofer, A. (1992) „Verrechnungspreise zur Koordination von Informationsasymmetrie," in K. Spremann and E. Zur (eds), *Controlling – Grundlagen, Informationssysteme, Anwendungen* (Wiesbaden: Gabler Verlag), pp. 637–56.

Wagenhofer, A. (1994) "Transfer Pricing Under Symmetric Information: an Evaluation of Alternative Methods," *European Accounting Review*, Vol. 3, No. 1, pp. 71–104.

Wagenhofer, A. (2006) "Verrechnungspreise," in Handelsblatt (ed.), *Wirtschaftslexikon: Das Wissen der Betriebswirtschaftslehre*, Band 11, pp. 6022–9.

Wagenhofer, A. and C. Riegler (1994) "Verhaltenssteuerung durch die Wahl von Bezugsgrößen," in F. Dellman and K. P. Franz (eds), *Neue Entwicklungen im Kostenmanagement* (Bern: Haupt), pp. 463–94.

Weber, J. and U. Schäffer (2006) *Einführung in das Controlling*, 11th edn (Stuttgart: Schäffer-Poeschel).

Winer, R. S. (1986) "A Reference Price Model of Brand Choice for Frequently Purchased Products," *Journal of Consumer Research*, Vol. 13, No. 2, pp. 250–6.

Winer, R. S. (1988) "Behavioral Perspective on Pricing: Buyers' Subjective Perceptions of Price Revisited," in T. M. Devinney (eds), *Issues in Pricing: Theory and Research* (Lexington, MA: Lexington Books), pp. 35–57.

Wolfsgruber, H. (2005) *Interne Unternehmensrechnung in der österreichischen Industrie: Stand und Entwicklungstendenzen* (Vienna: Linde).

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