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VOC Key to **Nonprofit Baldrige Wins** p. 28

Clear View

Bringing customer loyalty into focus through new measurement methods p. 20

Plus:

ASQ's Stance On Voting Reform p. 14

Residual Analysis: A Refresher p. 72

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CUSTOMER LOYALTY AND SATISFACTION

VOLUME 41/NUMBER 6

Contents

FEATURES

20 CUSTOMER LOYALTY
The True Test of Loyalty
Measuring customer loyalty related to a product or service through advocacy, purchasing and retention indexes can help companies build stronger, longer relationships with customers.
by Bob E. Hayes

28 BALDRIGE AWARD
Now Hear This
Looking to improve their operations, two nonprofit organizations—a U.S. Army division and a municipal government in Florida—turned to voice of the customer to drive improvement efforts. Their impressive results were acknowledged with 2007 Baldrige awards.
by Brett Krzykowski

36 TEAMS
Incredible Journey
Quality methods and tools helped one Boeing team pinpoint risk and safety concerns at a manufacturing site. The team implemented a safety management system and helped prevent injuries and reduce workers' compensation costs.
by Nicole Adrian

42 SARBANES-OXLEY ACT
Two Are Better Than One
To comply with SOX, organizations needn't reinvent the wheel. ISO 9001 offers leverage in helping organizations achieve SOX compliance.
by Vivek "Vic" Nanda

48 PROCESS IMPROVEMENT
Who's Keeping Score?
A division of Sears developed its own scorecard to keep close tabs on how the retailer's regions and managers were complying with its quality management system.
by Rebecca M. Neenan

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  Additional figures for Expert Answers and "Who's Keeping Score?" Sidebar of personal narratives for "Incredible Journey."
- **React and Rate**
  Comment on this month's columns and articles.
- **Get Out the Vote**
  Take the monthly Quick Poll.
- **Tools and Resources**
  Basic quality, including a glossary.

DEPARTMENTS

8 **Inbox**
- Media misses mark on Juran.
- Improving audits with a process approach.

12 **Expert Answers**
- Calculating DPMO.
- Origins of sampling plan.

14 **Keeping Current**
- Votes for election reform.
- Olympic-sized concerns over food.

19 **Mr. Pareto Head**

78 **QP Toolbox**

80 **QP Reviews**

82 **QP Calendar**

COLUMNS

6 **Upfront**
A fresh perspective.

61 **3.4 per Million**
Is your data dependable?

67 **Standards Outlook**
Seven things to remember when initiating an audit.

70 **Career Corner**
Ready your résumé.

72 **Statistics Roundtable**
A refresher on residual analysis.

76 **Quality in the First Person**
Navy experience leads to one man's career in quality.

88 **One Good Idea**
Build a probability plot with Excel.

53 **Special Advertising Section:** ASQ's Software Directory and Buyer's Guide

NEXT MONTH

- THE COST TO COMPETE
Feigenbaum on quality in the global marketplace.

- 10 RULES OF AUDITING
Guidelines to improve the process.

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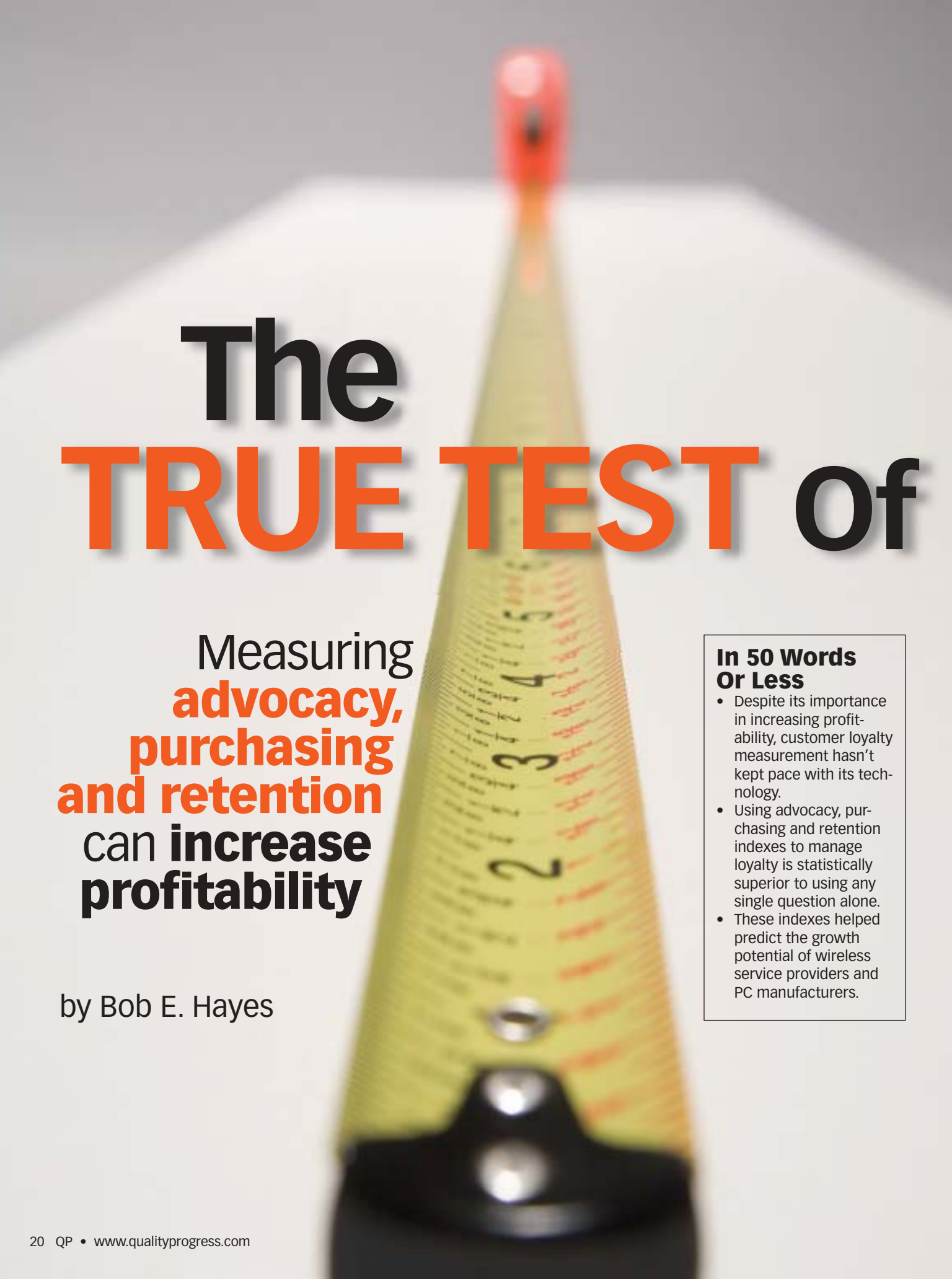


The TRUE TEST of

Measuring **advocacy, purchasing and retention** can **increase profitability**

by Bob E. Hayes

In 50 Words Or Less

- Despite its importance in increasing profitability, customer loyalty measurement hasn't kept pace with its technology.
- Using advocacy, purchasing and retention indexes to manage loyalty is statistically superior to using any single question alone.
- These indexes helped predict the growth potential of wireless service providers and PC manufacturers.

Loyalty

THE CUSTOMER LOYALTY field has experienced much technological innovation, such as automated reporting portals and integration of attitudinal and behavioral data in customer relationship management applications, over the past decade. The quality of measurement and understanding of the meaning of customer loyalty, however, have not kept pace.

A multidimensional measurement approach to conceptualizing customer loyalty can offer new insights into growing business through new and existing customers.

There are several objective measures of customer loyalty:

- Number of referrals—word of mouth and "word of mouse."
- Decision to purchase again.
- Decision to purchase different products.
- Decision to increase purchase size.
- Customer retention and defection rates.

Customer loyalty can lead to profitability gains. Companies can grow through the referral process, thanks to the acquisition of new customers. The idea is that the customer acquisition process relies on existing customers to promote or recommend the company to their friends, who, in turn, become customers.

Another way to strengthen the financial growth of a company is by having existing customers increase their purchases or buy other products or services it offers. Finally, financial growth is dependent on a company's ability not to lose existing customers at a faster rate than it acquires new ones.

Customer defection rate is an important metric in the wireless service industry, where processes such as number transfers and contract terminations make customer defection measurement straightforward and routine.

Customer loyalty surveys

Customer surveys rather than objective loyalty measures are still the more commonly used way to assess customer loyalty, for several reasons:

- Customer surveys allow companies to quickly and easily gauge levels of customer loyalty.
- Results from customer surveys can be more easily used to change organizational business processes.
- Customer surveys commonly include questions about customer loyalty, as well as the customer experience with products, services or support. Used jointly, these questions can be analyzed to identify reasons customers are loyal or disloyal.
- Questions about expected levels of loyalty-related behavior provide opportunities for companies to look into the future regarding customer loyalty.

For each survey question or item, customers are asked to rate their likelihood of engaging in a specific behavior. Commonly used customer loyalty survey questions mirror the seven objective loyalty measures:

1. Overall satisfaction.
2. Likelihood of a first-time purchaser to repurchase.
3. Likelihood to recommend.
4. Likelihood to continue purchasing the same products or services.
5. Likelihood to purchase different products or services.
6. Likelihood to increase frequency of purchasing.
7. Likelihood to switch to a different provider.

Most of the questions allow respondents to indicate their likelihood of behaving in different ways toward the company (for example, 0 = not at all likely to 10 = extremely likely). The satisfaction question is sometimes used in customer loyalty measurement and is rated on a scale (for example, 0 = extremely dissatisfied to 10 = extremely satisfied). For all questions (except for likelihood to switch), higher ratings reflect higher levels of customer loyalty.

Measurement error

Objective measures of customer loyalty have minimal measurement error associated with them because they have unambiguous meanings.

The number of recommendations a customer makes is clearly distinct from the number of repeat purchases that customer makes. This is not to say these measures of customer loyalty are unrelated, but instead that they are measurably different entities—similar to the fact that height and weight are different constructs but are related to each other because taller people tend to weigh more than shorter people.

Measures of customer loyalty via survey questions, however, have measurement error associated with them. In psychological measurement terms, the loyalty questions are simply observable indicators of a single underlying construct. Specifically, customers' ratings of each of the questions (loyalty items) is simply a function of an underlying construct (loyalty).

Because of the way customers interpret survey questions and the inherent error associated with measuring psychological constructs, ratings on the customer surveys do not exactly match the true loyalty of the customers. That is, customers' true levels of loyalty can

Wireless provider factor pattern matrix / TABLE 1

	Factors[1]		
Questions (items)	1 (Advocacy)	2 (Purchasing)	3 (Retention)
Overall satisfaction	**0.79**	0.34	0.35
Choose again	**0.71**	0.41	0.43
Recommend	**0.78**	0.40	0.39
Purchase same	**0.61**	0.37	0.58
Purchase different	0.29	**0.75**	0.23
Purchase increase	0.26	**0.76**	0.09
Likelihood to switch to another provider[2]	0.32	0.12	**0.68**

1. Based on a factor analysis with varimax rotation.
2. Reverse coded so higher scores mean lower likelihood of switching.

only be estimated through the questions on the survey. As such, ratings need to be critically evaluated to ensure the meaning behind the ratings is understood.[1]

Factor analytic view

To determine the measurement properties of the loyalty items, two separate studies were undertaken in June and July 2007, each within a specific industry: wireless service providers and PC manufacturers.

For each study, a sample of about 1,000 general consumers ages 18 and older in the United States were asked about their attitudes toward their wireless service providers or PC manufacturers. All respondents were interviewed to ensure they met correct profiling criteria and were rewarded with an incentive for filling out the survey. Global Market Insite Inc. collected the survey data.

The seven loyalty items listed earlier were included in the wireless service provider sample. For the PC manufacturer sample, the first six questions were used with an additional question (likelihood to increase frequency of purchasing).

In statistical terms, factor analysis is a data reduction technique that explains the statistical relationships among a given set of variables using fewer unobserved variables (factors). In simpler terms, a factor analysis tells us two things:

1. The number of factors (constructs) being measured by the set of questions.
2. Which questions are related to which factors.

Specifically for our example, a factor analysis helps determine whether the set of seven original loyalty questions is actually measuring fewer constructs (factors). It is important to note that an exploratory factor analysis involves some form of judgment when determining the number of factors, as well as deciding which variables are related to the smaller set of factors.[2]

The elements in the factor pattern matrix are called factor loading and essentially reflect the correlation between each item and the three factors: advocacy, purchasing and retention. Higher factor loadings indicate a stronger relationship between the item and the underlying factor.

The results of the factor analyses suggest the seven items measure fewer constructs—three for the wireless sample and two for the PC sample. Tables 1 and 2 represent the factor pattern matrixes.

Advocacy, purchasing and retention

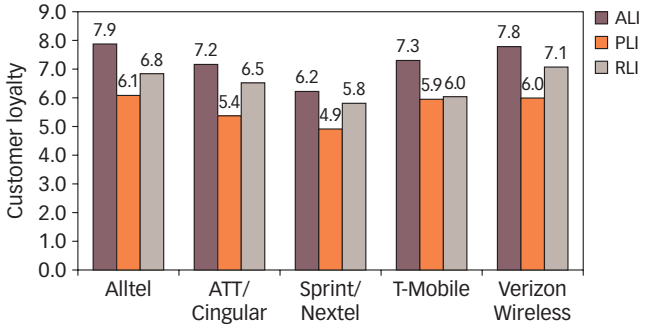
The items that load on the first factor appear to have a strong emotional component, reflecting the extent to which customers advocate the company. Consequently, this factor was labeled "advocacy loyalty." The items

PC manufacturer factor pattern matrix / TABLE 2

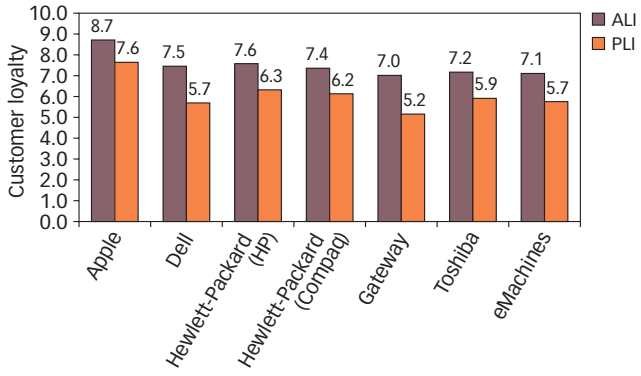
	Factors[1]	
Questions (items)	1 (Advocacy)	2 (Purchasing)
Overall satisfaction	**0.77**	0.32
Choose again	**0.81**	0.35
Recommend	**0.90**	0.34
Purchase same	**0.81**	0.39
Purchase different	0.49	**0.54**
Purchase increase	0.35	**0.92**
Purchase frequency	0.32	**0.79**

1. Based on a factor analysis with varimax rotation.

Loyalty scores for wireless providers / FIGURE 1



Loyalty scores for PC manufacturers / FIGURE 2



that load on the second factor reflect specific purchasing behaviors. This second factor is labeled "purchasing loyalty." For the wireless service provider sample, the item that represents the third factor reflects retention (the opposite of switching) and is, therefore, labeled "retention loyalty."

Indexes for each factorially derived component of customer loyalty can be calculated by averaging the loyalty items that load highly on the same factor:

- **Advocacy loyalty index (ALI):** Reflects the degree to which customers will be advocates of the company (average across satisfaction, recommend, choose again and purchase same).
- **Purchasing loyalty index (PLI):** Reflects the degree to which customers will increase their purchasing behavior (average across purchase different, purchase increase and purchase frequency).
- **Retention loyalty index (RLI):** Reflects the degree to which customers will remain with a given company (single defection item—reverse coded).

Loyalty index reliability

Reliability deals with the extent to which measurement is free from random error. For the wireless service provider sample, the reliability (Cronbach's alpha[3, 4]) of the ALI was 0.92. The reliability estimate (Cronbach's alpha) for the PLI was 0.82.

For the PC manufacturer sample, the reliability of the ALI was 0.94. The reliability of the PLI was 0.87. These levels of reliability are considered very good for attitude research (0 = no reliability, 1 = perfect reliability)[5] and suggest that each measure has minimal measurement error.

Of particular interest are three specific loyalty items that load on advocacy loyalty in each study:

1. Satisfaction.
2. Recommend.
3. Purchase same.

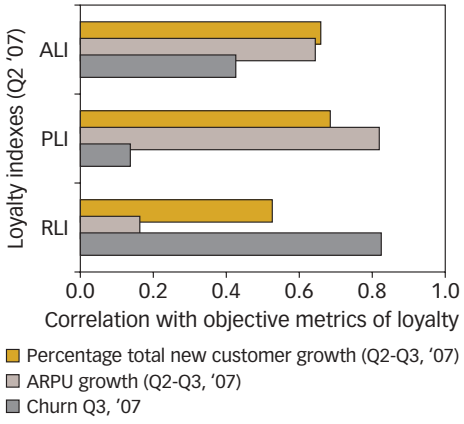
Net promoter score (NPS) developers say the "recommend" question is the best predictor of business growth.[6, 7] This conclusion has come under recent attack from other researchers who have found that the "satisfaction" and "purchase same" questions are just as good as the "recommend" question in predicting business growth.[8-10]

The current factor-analytic findings cast additional doubt on the conclusions by the NPS camp. The "recommend" question appears to measure the same underlying construct as the other two loyalty questions. There is no scientific evidence the "recommend" question is, or should be, a better predictor of business growth compared to other loyalty questions.

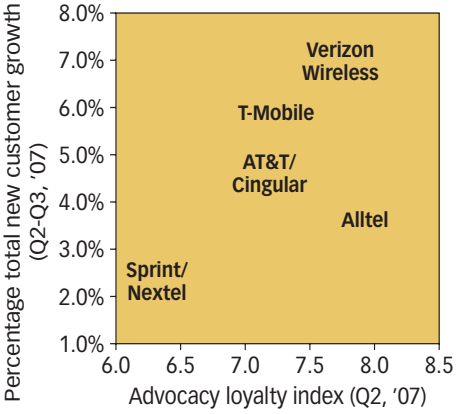
The NPS developers support the use of a single question to understand customer loyalty. Current study findings don't support this single-item approach. There is nothing unique and special about the "recommend" question. Furthermore, single-item measures are less reliable (contain more measurement error) than multiple-item measures.

Measuring loyalty with a single question is akin to measuring math skills with a single-item math test. An answer to the single item test would be a less reliable reflection of math skills than the combined answers to a 50-item math test. Would you want your child's Scho-

Impact on objective loyalty measures / FIGURE 3



Advocacy loyalty and new customer growth / FIGURE 4



lastic Aptitude Test score to be determined by a single question or the entire set of questions on the test?

Using the loyalty indexes in customer loyalty management is statistically better than using any single question because the indexes provide a more precise measure of loyalty than any of the items used alone.

Ranking companies

Figures 1 and 2 (p. 23) contain the average loyalty indexes for the wireless service providers and PC manufacturers, respectively. The ALI and PLI are sensitive enough to detect differences across the companies. It appears that the measurement precision of each of the loyalty scales can detect meaningful differences across different companies, thus enabling researchers and practitioners to reliably study different types of loyalty across different groups of customers.

Predicting business growth

To understand how well the ALI and PLI predict future growth, objective loyalty measures for the wireless service providers were collected for the third quarter of 2007 (www.fiercewireless.com and quarterly reports from providers' respective websites).

Each loyalty index was correlated with each of the following objective loyalty measures collected for that quarter (see Table 3 for values):

- Average revenue per user (ARPU) growth, quarter two to quarter three, 2007.
- Churn for quarter three, 2007, reverse coded so higher scores reflected better retention.
- Total percentage of new customer growth, quarter two to quarter three, 2007, estimated from churn rate and net new customers

The correlations for each loyalty index with each objective loyalty measure are in Figure 3. Each loyalty index (quarter two, 2007) was differentially related to the objective loyalty measures (quarter three, 2007).

The ALI had its greatest impact on new customer growth. Companies with higher ALI scores experienced greater new customer growth compared to customers with lower ALI scores. Figure 4 illustrates the relationship between the ALI and new customer growth.

The PLI, however, was highly predictive of ARPU growth. Companies with higher PLI scores also experienced greater ARPU growth compared to companies with lower PLI scores. Figure 5 illustrates the relationship between the PLI and ARPU growth.

Finally, the RLI was the best predictor of actual churn rates for wireless service providers. Companies with higher RLI scores had lower churn rates compared to companies with lower RLI scores. Figure 6 (p. 26) illustrates the relationship between the RLI and churn rate.

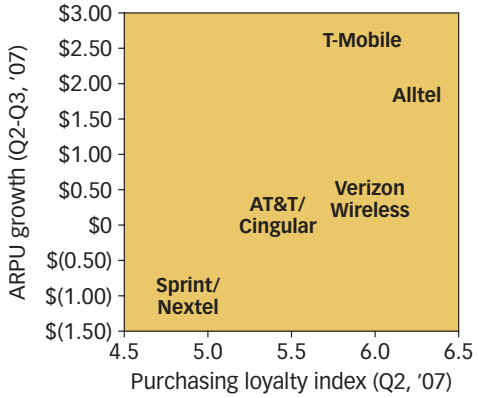
The results show that loyalty indexes are predictive of future business growth through new customers (new customer growth) and existing customers (ARPU), suggesting that the ALI, PLI and RLI are useful measurement instruments in managing customer loyalty and business growth.

While the current results are based only on the wireless industry, the findings showing the predictive power of the ALI and PLI are very compelling. Future research in other industries can help verify and extend the current findings.

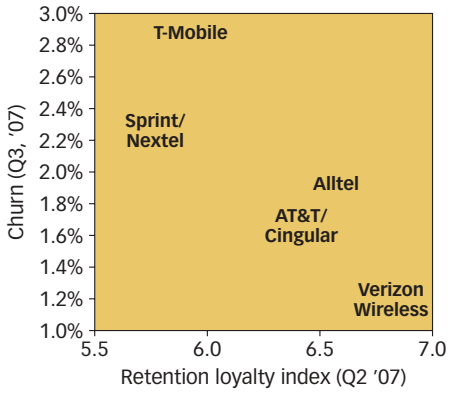
Objective loyalty measures for wireless providers / TABLE 3

	ARPU growth (Q2-Q3, 2007)	Churn (Q3, 2007)	Percentage total new customer growth Q2-Q3, 2007
Alltel	$1.86	1.9%	3.7%
AT&T	$0.19	1.7%	4.7%
Sprint/Nextel	$-1.00	2.3%	2.3%
T-Mobile	$2.60	2.9%	5.9%
Verizon Wireless	$0.33	1.2%	6.8%

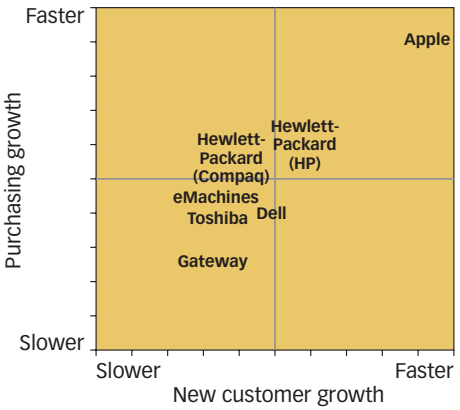
Purchasing loyalty and ARPU growth / FIGURE 5



Retention loyalty and churn rate / FIGURE 6



PC manufacturer loyalty grid / FIGURE 7



Loyalty grid

The ALI assesses new customer growth, while the PLI assesses purchasing growth. The Hayes loyalty grid charts the ALI and PLI and helps companies understand where they rank in the competitive landscape with respect to predicted business growth. Figures 7 and 8 are two examples of the Hayes loyalty grid.

As seen in Figure 7, there is considerable variability across PC manufacturers with respect to their growth potential. Clearly, Apple has high levels of both advocacy loyalty and purchasing loyalty. Compared to other PC manufacturers, Apple should expect to see faster growth with respect to acquiring new customers and increasing the purchasing behavior of existing customers.

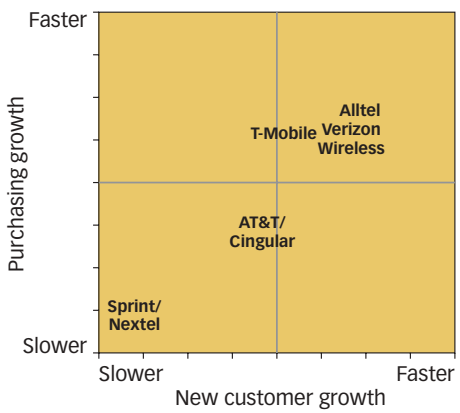
Among the remaining PC manufacturers, HP (Compaq) and Dell's growth potential are on par with the industry average, while Gateway, Toshiba and eMachines are expected to experience slower growth in both customer acquisition and increased purchases from existing customers.

As you can see in Figure 8, Alltel and Verizon appear in the upper right quadrant, suggesting they are poised to experience faster growth with respect to customer acquisition and increased purchases from existing customers. Additionally, T-Mobile customers indicate they are likely to increase their purchase behavior at a rate comparable to the customers of Alltel and Verizon.

New-customer growth potential for AT&T is on par with the industry average. Sprint/Nextel will experience slower growth in both customer acquisition and increased purchases from existing customers.

Advocacy loyalty, purchasing loyalty and retention loyalty each provide unique information regarding the quality of customer relationships. Loyalty indexes predict actual future growth (business outcomes) and can help companies effectively measure and manage the different types of customer loyalty. They allow companies to better manage their customer relationships to maximize growth through new and existing customers.

Wireless provider loyalty grid / FIGURE 8



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