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Measuring Management Accounting Service Quality

BY KENTON B. WALKER, PH.D.; GARY M. FLEISCHMAN, PH.D., CMA, CPA; AND ERIC N. JOHNSON, CPA

CUSTOMER PERCEPTIONS OF THE QUALITY OF MANAGEMENT ACCOUNTING SERVICE ARE IMPORTANT TO THE ABILITY OF MANAGEMENT ACCOUNTANTS TO SERVE EFFECTIVELY AS STRATEGIC BUSINESS PARTNERS. RESULTS OF A SURVEY ON MANAGEMENT ACCOUNTING SERVICE SHOW THAT SERVICE PROVIDERS ARE NOT DELIVERING THE QUALITY OF SERVICE THAT USERS EXPECT, WITH COMMUNICATIONS BEING THE WEAKEST ASPECT OF SERVICE QUALITY.

Management accounting (MA) plays an important service role in most organizations. As a result, companies should include MA service quality as a key performance measure of the accounting function. While internal service functions such as information systems, sales, human resources, and customer service frequently conduct service quality assessments, the lack of quality research related to accounting service suggests that the same typically does not occur for management accounting. This may be because those outside of the accounting field do not understand management accounting as well or because of its low cost relative to other organizational activities. Regardless, accounting departments should examine how they can increase their service quality to improve user deci-

sion making and productivity of organizations. In particular, as management accountants seek to add value by serving as strategic business partners and improving business performance management, an analysis of accounting service quality could provide useful metrics that accounting management can track to monitor user satisfaction.

A BRIDGE TO BUSINESS PARTNER STATUS

The management accounting role in organizations has evolved over time from simple bookkeeping functions to greater involvement in decision making and support. This has elevated the management accountant's standing in many organizations. In the 1980s, Robert Kaplan and H. Thomas Johnson pioneered the concept of MA relevance, specifically investigating MA's roles and prac-

tices in business and concluding that MA could play a much larger role in strategic business analysis.¹ Based on this renewed focus, the profession has undergone a renaissance. MA professionals now aspire to play the role of business partner in organizations, where they function as management advisors who provide value-added services to the firm and become active participants in decision making.

For management accountants to elevate their status to that of business partner, it is essential they provide quality decision-support services to users. But it is impossible for the accounting function to know whether it is performing quality services if it does not investigate users' perceptions concerning service characteristics, including factors such as whether the information is understandable, timely, relevant, and useful for decision support. Failure to do so leads to communication breakdowns and perceptual "disconnects" about service quality between users and providers. In essence, we need to understand the differences between users' and providers' perceptions of MA quality, why these differences exist, and how to narrow the perceived gaps in service quality. Only then can management accountants begin to improve service quality and achieve business partner status.

A SERVICES MARKETING APPROACH

The accounting function can gain substantial benefits from adopting a services marketing approach to user satisfaction. Under this approach, management accountants consider service users as internal customers rather than just fellow employees. According to research by William George, a customer-oriented view ideally should trigger significant improvements in service quality by raising awareness that internal customers (i.e., users of internal services) are an integral part of providing quality to the organization's ultimate (external) customer.²

We conducted a complete study of MA service quality with a grant from the IMA[®] Research Foundation. The study involved SERVQUAL, a diagnostic tool that provides an inexpensive and efficient method of tracking and benchmarking service quality and highlighting problem areas consistent with management by exception. Based on findings from users of the service quality

tool in other areas, the results may lead to improved MA effectiveness and user satisfaction.

Our specific objectives of the research study were:

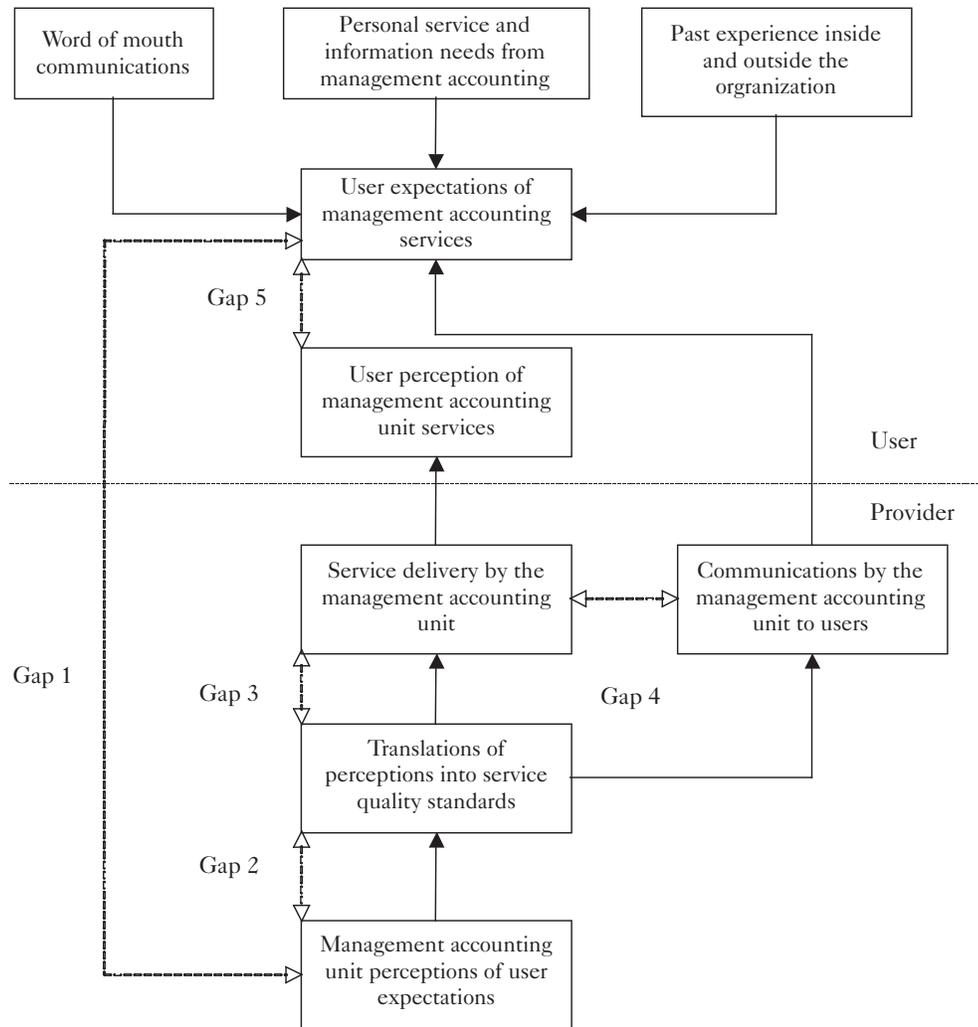
1. Investigate how well MA services meet users' expectations on a number of service quality dimensions, determine service quality scores for each dimension, and examine the relative importance of the dimensions to users,
2. Calculate an overall service quality index (SQI) and scores for underlying sources of differences in service quality perceptions between MA providers and users,
3. Determine how managers of the MA function perceive user expectations and the extent of their ability and willingness to set standards for delivery of services,
4. Identify perceptions of MA staff (those who are in primary contact with users) concerning their ability to deliver service quality according to set standards,
5. Establish the extent to which the quality of delivered MA services matches the external communications of the accounting department, and
6. Generalize the findings to other accounting services, industries, and organizations.

Because MA services are both intangible and specialized, users of accounting information may find it difficult to understand the broad array of MA service offerings. Therefore, accounting management may find it hard to understand what services will benefit users the most, which will contribute to communication breakdowns between users and providers and the confusion regarding perceptions of service quality. This in turn may lead to additional challenges. Specifically, standardizing MA service quality, particularly in environments characterized by a high degree of customized services, is difficult to control and monitor. All these factors combine to create perceptions of "quality gaps" between MA service providers and users.

A MODEL OF SERVICE QUALITY

Analysis of service quality compares what the customer feels should be offered to what is received. Many have extensively researched service quality in organizational and service settings such as transportation, healthcare,

Figure 1: **The Management Accounting Service Gap Model**



Source: Adapted from A. Parasuraman, Valerie Zeithaml, and Leonard Berry, "A Conceptual Model of Service Quality and Its Implications for Future Research," *Journal of Marketing*, Fall 1985, pp. 44.

education, government services, tourism, banking, and information systems, among others. To our knowledge, no previous studies have empirically examined quality dimensions of the MA service function. As a result, there is a limited understanding regarding the usefulness of accounting services at the operational level. Closing any gaps that may exist between provider and user perceptions regarding the usefulness of MA func-

tion services is essential to improving service quality.

In the 1980s, A. Parasuraman, Valerie Zeithaml, and Leonard Berry developed a "Gaps Model" of five service quality characteristics.³ Figure 1 presents this model and the gaps in the context of MA service delivery.

Gap 1 features the gap between accounting managers' perceptions of user expectations and the users' actual expectations. Put simply, accounting managers do

not always understand what users want or need. Gap 2 focuses on the gap between accounting managers' perceptions of user expectations and their ability to translate these expectations into MA service quality standards. Stated another way, accounting managers might know what users expect, but they are unable to set quality MA service standards to enhance service delivery and consistency. Gap 3 highlights the gap between the MA service quality standards that are set and the MA service quality that is actually delivered. This measures the extent to which the accounting department delivers according to the standards it has set for itself. Gap 4 is a gap between what the accounting department promises and what it actually delivers. Many communications about MA services create expectations in the minds of users. When the delivered service does not meet these expectations, the user is often dissatisfied, sometimes to the extent that it would be better if the communication had never occurred.

Gaps 1 to 4 contribute either directly or indirectly to Gap 5, which is the gap between users' expectations and perceptions. Gap 5 may be the most important gap in the analysis because it focuses entirely on the customer. Known as the service quality index (SQI), Gap 5 provides an overall quality measure. In the context of accounting service quality, success in the eyes of providers depends on their self-perception of their job performance, which are measured by Gaps 1 to 4. Users, on the other hand, are instead concerned about how well MA services meet their needs and expectations, which Gap 5 measures.

MEASURING SERVICE QUALITY:

THE SERVQUAL INSTRUMENT

Parasuraman, Zeithaml, and Berry followed the Gaps Model with SERVQUAL, a multiple-item scale for measuring consumer perceptions of service quality.⁴ Widely used, SERVQUAL measures service quality as the gap between consumer expectations and perceived delivery. Underlying the SERVQUAL instrument are five dimensions customers use when evaluating service quality, regardless of the type of customer service:

1. Tangibles—the appearance of physical facilities,
2. Reliability—the ability to perform promised services dependably and accurately,

3. Responsiveness—the willingness to help customers and provide prompt service,
4. Assurance—the knowledge and courtesy of employees and their ability to inspire trust and confidence, and
5. Empathy—providing caring and individualized attention to customers.

SERVQUAL is easily adapted to an MA context, as accounting service users form expectations based on communications between individuals, personal needs, and individual experiences with the accounting department.

OUR STUDY

To gather responses for the study, we adapted a questionnaire by the authors of the SERVQUAL instrument.⁵ Our research focused on the following general questions and the related perceived service gaps from the Gaps Model:

1. Do accounting function services meet user expectations on the service quality dimensions? (Gaps 1 and 5)
2. Do accounting function services meet provider expectations on the service quality dimensions? (Gaps 2 to 4)
3. What is the perception of MA managers concerning user expectations and the extent and willingness of management to set service quality standards? (Gap 2)
4. What are the perceptions of MA user-contact personnel concerning the ability of the MA function to deliver service quality according to set standards? (Gap 3)
5. What is the extent to which the quality of the delivered service matches the external communications of the MA unit? (Gap 4)
6. What is the overall service quality index (SQI) for Gap 5 and scores for Gaps 1, 2, 3, and 4?

The survey was administered online. IMA sent an e-mail to its members seeking survey participants in three categories: supervisory accountants (accounting managers), nonsupervisory accounting staff (accounting staff), and users of accounting services. Accounting

managers completed questionnaires for Gaps 1 and 2; accounting staff completed questionnaires for Gaps 3 and 4; and service users completed questionnaires for Gaps 1 and 5. Responses to questions were on a seven-point scale, with 1 being most favorable.

A total of 300 IMA members completed questionnaires, including 96 accounting managers, 103 non-supervisory accounting staff, and 101 accounting service users. The majority (64%) were men. The size of organizations varied greatly: 21% of respondents worked for organizations with less than \$10 million in revenues. At the other extreme, 15% worked for companies with revenues of more than \$20 billion. Seventy-two percent worked for public or private corporations, while 22% worked for governmental or not-for-profit organizations. Respondents represented many different functional areas, including sales and marketing, administrative services, customer service, production, engineering and construction, procurement, and research and development. Slightly more than 50% of respondents had one to five years of experience in their current positions, and 19% had six to 10 years of experience. In sum, the variety of organizations and the breadth of individual backgrounds were considerable.

RESULTS

Gap 1—Management's Perceptions of User Expectations vs. Actual User Expectations

Table 1 presents scores for Gap 1, which addresses the question "Do managers know what customers expect in terms of MA service quality?" Gap 1 questionnaire items measure the perception discrepancy between ratings by accounting managers and service users. If a significant gap exists, then managers may not be able to identify or design the service to meet their customers' requirements because they do not properly understand what customers expect.

To calculate gap scores, we subtracted the manager perception scores from the customer expectation score. The ideal score is zero, indicating that accounting managers correctly perceive their customers' expectations. A positive gap score indicates that managers overestimate customer expectations, meaning that managers think users expect higher quality services than they actually do. A negative gap score shows that customer expecta-

tions exceed what managers perceive in terms of service quality delivery. In this study, the gaps are negative for all items, suggesting that accounting service managers consistently underestimate the expectations of users.

To further examine the issues underlying Gap 1, we averaged the responses to questions representing SERVQUAL's five dimensions (tangibles, reliability, responsiveness, assurance, and empathy). These scores appear in Table 2. It is apparent that customer expectations of MA services are quite high, with expectations in three dimensions averaging less than 2 and the other two dimensions averaging just more than 2. A statistical test of mean differences between groups, called the t-test, indicates that all five gaps are highly significant, with the likelihood of less than 0.001 that the observed results would occur by chance (the p-value). The greatest gap is associated with the reliability dimension (-1.04), followed by assurance (-0.90). Clearly, users responding to the survey believed that the accounting function needs to improve significantly in these and other dimensions to meet their needs.

From the accounting manager's perspective, there are three key drivers for Gap 1:

1. *Lack of a marketing research orientation*, e.g., insufficient marketing research, inadequate use of results, lack of interaction between management and users,
2. *Inadequate upward communication*, e.g., lack of communication between accounting user contact personnel and accounting management, and
3. *Too many levels of management*, e.g., too much separation between accounting user contact personnel and top accounting management).

To analyze the responses of accounting managers on these factors, we used the questions in Table 3, Panel A. We summarized responses to groups of Panel A questions to compute the dimensional scores in Panel B. These scores are the average for each of the three factors on a scale of 1 to 7, where 1 is most favorable. Scores for all three Gap 1 dimensions are above average (less than the scale midpoint of 4). The overall factor score for Gap 1 is 3.16, which indicates that accounting managers perceive the MA function to be slightly above

Table 1. **Gap 1: Customer Expectations vs. Accounting Manager Perceptions**

Item	Customer Expectation	Manager Perception	Gap
1. Accounting will have/has up-to-date hardware and software.	1.78	3.25	-1.47
2. The physical facilities of accounting will be/are visually appealing.	2.93	3.33	-0.40
3. Accounting employees will be/are well dressed and neat in appearance.	2.21	2.56	-0.35
4. The appearance of the physical facilities of the accounting units will be/are in keeping with the kind of services provided.	2.39	3.08	-0.69
5. When accounting personnel promise to do something by a certain time, they do so.	1.29	2.52	-1.23
6. When users have a problem, accounting personnel will show/show a sincere interest in solving it.	1.48	2.44	-0.96
7. Accounting personnel will be/are dependable.	1.33	2.20	-0.87
8. Accounting personnel will provide/provide their services at the times they promise to do so.	1.34	2.32	-0.98
9. Accounting personnel will insist/insist on error-free records and reports.	1.26	2.40	-1.14
10. Accounting personnel will tell/tell users exactly when services will be performed.	1.91	2.74	-0.83
11. Accounting employees will give/give prompt service to users.	1.73	2.53	-0.80
12. Accounting personnel will always be/are willing to help users.	1.74	2.39	-0.65
13. Accounting personnel will never be/are never too busy to respond to users' requests.	2.54	3.22	-0.68
14. The behavior of accounting personnel will instill/instills confidence in users.	1.62	2.58	-0.96
15. Users will feel/feel safe in their transactions with the accounting department employees.	1.41	2.35	-0.94
16. Accounting personnel will be/are consistently courteous with users.	1.78	2.44	-0.66
17. Accounting personnel will have/have the knowledge to do their job well.	1.23	2.26	-1.03
18. The accounting department will give/gives users individual attention.	2.11	2.40	-0.29
19. The accounting department will have/has operating hours convenient to all their users.	2.14	2.63	-0.49
20. The accounting department will have/has employees who give users personal attention.	2.01	2.38	-0.37
21. The accounting department will have/has the users' best interest at heart.	2.01	2.66	-0.65
22. The employees of the accounting department will understand/understand the specific needs of their users.	1.93	2.74	-0.81

average, with substantial room for improvement.

Gap 2—The Ability of Accounting Management to Translate Customer Service Quality Expectations into Service Quality Standards

Managers cannot ensure service quality simply by understanding what users expect. They must translate this understanding into service quality standards because failure to do so leads to Gap 2. Four primary factors drive Gap 2:

1. *Lack of commitment to MA service quality by senior MA management*, e.g., no long-term definition or objectives for service quality; service quality is defined from the accountant's point of view,

2. *An absence of goal setting*, e.g., goals are based on accounting—instead of customer—standards and expectations,

3. *Inadequate task standardization*, e.g., the extent to which MA service tasks are consistently carried out with uniform and reliable outcomes, such as reports that have a standardized format, and

4. *A perception of infeasibility*, e.g., a feeling that “it can't be done.”

As with Gap 1, accounting managers answered questions comprising item factors for Gap 2. Results for Gap 2 appear in Table 4, which highlights the analysis of Gap 2 responses with the scores from individual questions in

Table 2. **Gap 1 Scores by Dimension**

Dimension	Mean (Standard Deviation)		Gap*
	User (Customer) Expectation	Accounting Manager Perception	
Tangibles			
The appearance of the accounting department's physical facilities, equipment, personnel, and communication materials	2.33 (1.03)	3.11 (1.38)	-0.78
Reliability			
The accounting department's ability to perform the promised service dependably and accurately	1.34 (0.55)	2.38 (1.25)	-1.04
Responsiveness			
The accounting department's willingness to help users and provide prompt service	1.98 (0.93)	2.72 (1.24)	-0.74
Assurance			
The knowledge and courtesy of the accounting department's employees and their ability to convey trust and confidence	1.51 (0.67)	2.41 (1.16)	-0.90
Empathy			
The caring, individualized attention the accounting department provides to its users	2.04 (0.94)	2.56 (1.13)	-0.52

* The gap (difference in mean scores between customer expectations and accounting manager perceptions) is statistically significant, with less than one chance in 1,000 that the difference is due to chance ($p < 0.001$).

Table 3. **Gap 1 Factors: Accounting Management Perceptions of Service Quality**

Panel A — Gap 1 Factors	Mean Score
1. We regularly collect information about the needs of our users.	2.98
2. We rarely use user survey information that is collected about our users.	4.18
3. We regularly collect information about the service-quality expectations of our users.	3.59
4. The managers in our department rarely interact with users.	5.62
5. The personnel in our department who have regular contact with users frequently communicate with management.	2.20
6. Managers in our department rarely seek suggestions about serving users from personnel who have regular contact with them.	2.99
7. The managers in our department frequently have face-to-face interactions (e.g., discussions, informal and formal meetings) with personnel who have regular contact with users.	2.35
8. The primary means of communication in our department between personnel who have regular contact with customers and senior managers is through memos.	4.58
9. Our department has too many levels of management between personnel who have regular contact with customers and top management.	2.65

Panel B — Gap 1 Factors by Dimension	Mean Score
Lack of a marketing research orientation	3.28
Upward communication	3.03
Too many levels of management	2.65

Overall average score for Gap 1 = 3.16

Table 4. **Gap 2: Service Quality Standards Gap as Perceived by Accounting Management**

Panel A — Gap 2 Factors	Mean Score
1. Our department does not commit the necessary resources for service quality.	3.53
2. Our department has internal programs for improving the quality of service to users.	3.35
3. In our department, managers who improve quality of service are more likely to be rewarded than other managers.	3.65
4. Our department emphasizes the provision of systems as much as or more than it emphasizes serving users.	3.84
5. Our department has a formal process for setting quality of service goals for employees.	4.35
6. In our department we try to set specific quality of service goals.	3.95
7. Our department effectively uses technology to achieve consistency in serving users.	3.08
8. Guidelines are in place in our department to improve procedures so as to provide consistent service.	3.25
9. Our department has the necessary capabilities to meet user's requirements for service.	3.12
10. If we gave our users the level of service they really want, we would always overspend our budgets.	4.09
11. Our department has the procedures to deliver the level of service that users demand.	3.30

Panel B — Gap 2 Factors by Dimension	Mean Score
Management commitment to service quality	3.59
Goal setting	4.15
Task standardization	3.17
Perception of feasibility	3.50

Overall average score for Gap 2 = 3.59

Panel A and those for the four related dimensions in Panel B. Dimensional scores for Gap 2 show that goal setting is below average (4.15), while perceptions of accounting management's overall commitment to service quality is slightly above average (3.59), as are perceptions of task standardization (3.17) and task feasibility (3.50). These results suggest that, other than for task standardization, accounting managers view their performance on the Gap 2 dimensions as mediocre at best.

Gap 3—The Service Delivery Gap

If accounting service specification standards are ill-defined or vague, accounting service providers run the risk of delivering inappropriate services to the user, resulting in Gap 3. In other words, Gap 3 measures the extent to which MA service quality is consistent with MA service standards. Accounting staff responded to questions addressing the factors that contribute to Gap 3. Often, a significant gap in this area is the greatest concern to the accounting manager. Given the weak

performance in goal setting reported from this sample, one might expect Gap 3 to be significant because if service goals are not well-established, then it is likely that Gap 3 will be large.

The causes of Gap 3 are:

1. *Lack of teamwork*, e.g., the extent to which accounting staff view their internal customers as part of a larger team effort to make the company more successful and not simply employees of the same firm,
2. *Employee-technology-job fit*, e.g., competitive salaries, consistent job requirements and job demands, and availability of appropriate technology in accounting,
3. *Lack of perceived control*, e.g., the extent to which accounting staff believe they can influence service delivery standards,
4. *Supervisory control systems*, e.g., administrative task requirements,
5. *Role conflict*, e.g., the extent to which accounting staff feel they cannot satisfy all of the demands placed on them, and

Table 5. **Gap 3: Service Quality Gap as Perceived by Accounting Staff**

Panel A — Gap 3 Factors	Mean Score
1. I feel strongly that I am part of a team in Accounting.	2.14
2. Everyone in Accounting contributes to a team effort in servicing users.	2.18
3. I feel a sense of responsibility to help my fellow employees do their jobs well.	1.68
4. My fellow employees and I cooperate more often than we compete.	1.86
5. I feel that I am an important member of this department.	1.85
6. I feel comfortable in my job in the sense that I am able to perform the job well.	1.63
7. Accounting hires people who are qualified to do their jobs.	2.41
8. Accounting gives me the resources that I need to perform my job well.	2.39
9. I spend a lot of time in my job trying to resolve problems over which I have little control.	3.56
10. I have the freedom in my job to truly satisfy my users' needs.	2.56
11. I sometimes feel a lack of control over my job because too many users demand service at the same time.	4.02
12. One of my frustrations on the job is that I sometimes have to depend on other employees in serving my users.	4.65
13. My manager's appraisal of my job performance includes how well I interact with users.	2.09
14. Within Accounting, making a special effort to serve users well does not result in more pay or recognition.	4.54
15. Within Accounting, employees who do the best job serving their users are more likely to be rewarded than other employees.	3.52
16. The amount of paperwork in my job makes it hard for me to effectively serve my users.	3.41
17. Accounting places so much emphasis on providing systems to users that it is difficult to service users properly.	3.61
18. What my users want me to do and what management wants me to do are usually the same thing.	2.97
19. Accounting and I have the same ideas about how my job should be performed.	2.70
20. I receive a sufficient amount of information from management concerning what I am supposed to do in my job.	2.91
21. I often feel that I do not understand the services offered by Accounting.	2.93
22. I am able to keep up with changes in Accounting that affect my job.	2.68
23. I feel that I have not been well trained by Accounting in how to interact effectively with users.	3.21
24. I am not sure which aspects of my job my manager will stress most in evaluating my performance.	3.43

Panel B — Gap 3 Factors by Dimension	Mean Score
Lack of teamwork	1.94
Employee-job fit	2.02
Technology-job fit	3.70
Perceived control	3.39
Supervisory control systems	3.17
Role conflict	3.65
Role ambiguity	3.03

Overall average score for Gap 3 = 3.05

6. *Role ambiguity*, e.g., staff accountants' perceptions that they possess adequate training and information to perform their jobs.

Table 5 shows the mean scores for Gap 3 items

(Panel A) and the seven related dimensional scores (Panel B). The overall dimensional average score was 3.05 on a seven-point scale. This suggests that accounting staff believed that they delivered quality overall but that there was room for improvement in this service cat-

Table 6. **Gap 4: External Communications**

Panel A — Gap 4 Factors		Mean Score
1. The people who develop our communications with users (e.g., newsletters, systems development deadlines, presentations, and general discussions) consult employees like me about the realism of promises made in those communications.		4.47
2. I am often not aware in advance of the promises made in our communications with users.		4.31
3. Employees like me interact with other employees to discuss the level of service the department can deliver to users.		3.23
4. Our department's policies on serving users differ among different groups within Accounting.		4.19

Panel B — Gap 4 Factors by Dimension	Mean Score
Overpromising	4.39
Horizontal communication	3.71

Overall average score for Gap 4 = 4.05

egory. Examining dimensional scores shows that accounting staff rated teamwork and employee-job fit highly, which should encourage accounting managers. There are apparent problems with technology-job fit, however, suggesting that staff may feel underpaid or that they lack adequate job resources. In addition, there appears to be a role conflict such that staff members believe they are overworked. Accounting managers should investigate these relatively high mean scores (3.70 and 3.65, respectively) on an exception basis using variance analysis.

Gap 4—Service Delivery and Communication by Management Accountants

The fourth gap in the service quality model is concerned with the difference between accounting department service promises and what is actually delivered. Accounting staff completed this questionnaire. Formal and informal communications with users create expectations, and users may become dissatisfied when expectations are not met. The two major causes of this gap are:

1. *Overpromising*, e.g., communications create unrealistic expectations; accounting representatives make promises that cannot be kept, and
2. *Inadequate horizontal communications*, e.g., members of the accounting function at the same hierarchical level make promises on behalf of one another, leading to misinformation or failure to communicate with users.

Table 6 reports mean scores for these factor items (Panel A) and the two related dimensional groups (Panel B). Based on the high overall score (4.05), it is clear that accounting staff perceive that this communications gap is an area of underperformance. While accounting staff perceive horizontal communications to be adequate, but with room for improvement, the below-average mean score of 4.39 for overpromising suggests that staff perceive this to be a service quality problem. Cures for Gap 4 are difficult to achieve because it is easy to promise the unattainable, but individuals should not make promises—especially on behalf of others—that they cannot keep.

Gap 5—The Service Quality Index (SQI)

The last analysis examines Gap 5, the *service quality index* (SQI), which represents the difference between user expectations and user perceptions of actual accounting services. Table 7 reports the SERVQUAL individual item gaps for user expectations of services compared to their perceptions of what they actually receive. Table 8 summarizes the individual items in Table 7 into the five dimensions assessed in the Gap 1 analysis (e.g., tangibles, reliability, responsiveness, assurance, and empathy). The Table 8 average difference scores (gaps) are part of an overall service quality construct; therefore, they are additive and present a quantitative indication of the extent of perceived service quality.

Table 7. **Gap 5: User Expectations vs. User Perceptions of Accounting Services**

Item	User Expectation	User Perception	Gap
1. Accounting will have/has up-to-date hardware and software.	1.78	3.02	-1.24
2. Their physical facilities will be/are visually appealing.	2.93	3.20	-0.27
3. Their employees will be/are well dressed and neat in appearance.	2.21	2.48	-0.27
4. The appearance of the physical facilities of these accounting units will be/are in keeping with the kind of services provided.	2.39	2.84	-0.45
5. When accounting personnel promise to do something by a certain time, they do so.	1.29	2.52	-1.23
6. When users have a problem, accounting personnel will show/show a sincere interest in solving it.	1.48	2.66	-1.18
7. Accounting personnel will be/are dependable.	1.33	2.44	-1.11
8. Accounting personnel will provide/provide their services at the times they promise to do so.	1.34	2.38	-1.04
9. Accounting personnel will insist/insist on error-free records and reports.	1.26	2.18	-0.92
10. Accounting personnel will tell/tell users exactly when services will be performed.	1.91	2.79	-0.88
11. Accounting employees will give/give prompt service to users.	1.73	2.66	-0.93
12. Accounting personnel will always be/are willing to help users.	1.74	2.65	-0.91
13. Accounting personnel will never be/are never too busy to respond to users' requests.	2.54	3.20	-0.66
14. The behavior of accounting personnel will instill/instills confidence in users.	1.62	2.58	-0.96
15. Users will feel/feel safe in their transactions with the accounting department employees.	1.41	2.16	-0.75
16. Accounting personnel will be/are consistently courteous with users.	1.78	2.51	-0.73
17. Accounting personnel will have/have the knowledge to do their job well.	1.23	2.25	-1.02
18. The accounting department will give/gives users individual attention.	2.11	2.74	-0.63
19. The accounting department will have/has operating hours convenient to all their users.	2.14	2.55	-0.41
20. The accounting department will have/has employees who give users personal attention.	2.01	2.61	-0.60
21. The accounting department will have/has the users' best interest at heart.	2.01	2.65	-0.64
22. The employees of the accounting department will understand/understand the specific needs of their users.	1.93	2.69	-0.76

The overall SQI was -0.80, which represents a sizeable gap of almost a full point on the seven-point scale. The size of the gap is highly significant, statistically, as indicated in Table 8. This is the first study of management accounting service quality using SERVQUAL, and our sample includes a broad cross section of organizations. Without a basis of comparison, we are unable to provide a practical interpretation of the individual gaps and the overall SQL. The gaps may be viewed like production variances in that they provide a starting point for additional investigation and analysis. The sources of the gaps are likely to vary by organization, as would subsequent management actions to correct problem areas.

IMPLICATIONS FOR MANAGEMENT ACCOUNTING PRACTICE

There are some important conclusions from this study. First, the relatively large size of Gap 5 clearly indicates that this sample of MA service providers are not delivering the service quality that users expect. User expectations may be unrealistically high (Gap 1, Table 2), however, given that dimensional expectations for three of five areas are in the highest category (1 on a seven-point scale), and the other two are also quite high. Second, Gap 4 suggests a significant communications gap and highlights the weakest aspect of MA service quality in this group of respondents. MA professionals need to enhance their communications skills with their users. Training workshops may help bridge this gap. Third,

Table 8. **Gap 5 Scores by Dimension**

Dimension	Mean (Standard Deviation)		Gap*
	Customer Expectation	Customer Perception	
Tangibles			
The appearance of the accounting department's physical facilities, equipment, personnel, and communication materials	2.33 (1.03)	2.88 (1.32)	-0.55
Reliability			
The accounting department's ability to perform the promised service dependably and accurately	1.34 (0.55)	2.44 (1.29)	-1.10
Responsiveness			
The accounting department's willingness to help users and provide prompt service	1.98 (0.93)	2.83 (1.21)	-0.85
Assurance			
The knowledge and courtesy of the accounting department's employees and their ability to convey trust and confidence	1.51 (0.67)	2.38 (1.19)	-0.87
Empathy			
The caring, individualized attention the accounting department provides to its users	2.04 (0.94)	2.65 (1.15)	-0.61
Service Quality Index (SQI) (average of gap scores)			-0.80

* The gap (difference in mean scores between customer expectations and accounting manager perceptions) is statistically significant, with less than one chance in 1,000 that the difference is due to chance ($p < 0.001$).

analyzing the dimensional perception scores of Gaps 1 and 5 (see Tables 2 and 8) shows that there is a high degree of correspondence in each dimension about how respondents perceive the state of MA service quality. Therefore, it suggests that perceptual differences between MA providers and users may be less severe than indicated by the results in the sense that there is a common starting point for implementing steps to improve service.

This study has several implications for MA practice and future investigations. First, this is the first study to report on the state of MA service quality that considers the perceptions of both users and providers, thus establishing an agenda for further investigation of the accounting service quality issue. Second, the study suggests that SERVQUAL is useful as a diagnostic tool for managers of MA units who wish to evaluate the quality of their services. Third, the gap analyses provide metrics that future studies may use to benchmark and track service quality. Fourth, the results may indicate areas where MA service providers can improve quality.

SERVQUAL is only a starting point to investigate

service quality issues, but it provides a simple and efficient tool that highlights key areas in need of management's attention. The service marketing approach encourages accounting service providers to view users of accounting information as *internal customers*. This change in mindset may be the most important aspect of the approach and will likely do much for improving MA service delivery, which should enhance user decision making. Ultimately, this may enhance organizational productivity and help the MA function add value as a strategic business partner.

Finally, there are some limitations of this study. First, the study's data collection method required participants to self-select in order to participate, so participants may have personal and professional characteristics and attitudes that differ from the general population of accounting managers and staff and service users. Second, we were not able to match respondents from the same organization. As a result, our findings represent perceptions only from this cross-sectional sample of individuals, so we cannot infer any conclusions about MA service quality in particular organizations or indus-

tries. Third, although our participants largely represent a wide range of experienced business professionals, we caution against generalizing our results to other demographic groups. Lastly, the SERVQUAL instrument may not capture service quality attributes important to specific organizations and circumstances. ■

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ENDNOTES

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