
Connecting IT Services Operations to Services Marketing Practices

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ABSTRACT: The importance of building relationships with customers and trust in the services provider is well documented in the marketing literature. Conceptually, we extend this logic to the context of internal information technology (IT) services operations

through the notion of the service delivery chain. The purpose of the study is to examine how key service mechanisms in operational IT implementation are related to employee perceptions of actual system benefits and trust in the IT services provider. We report on a study with 380 employees of 14 bank affiliates that were recently acquired by a bank holding company. The focus of the study is on postimplementation trust rather than preimplementation or initial trust, and the service provider is viewed as the object of trust rather than the technology. Our findings suggest that training, trial, and social influence are key service mechanisms an IT services provider can use to stimulate trust in the IT services provider and the realization of system benefits.

KEY WORDS AND PHRASES: IT services, mandated systems, relational trust, service delivery chain, service mechanisms.

SERVICES ORGANIZATIONS ARE INCREASINGLY UTILIZING advanced information technologies (IT) in hopes of improving the efficiency, cost-effectiveness, or quality of their customer-facing operations. Over the past few decades, IT has altered the nature of work and organizational structures in many service industries. It is standard practice for a services firm to regularly implement IT changes and upgrades to continuously improve services operations and customer service. Many industries have undergone dramatic changes through the application of IT which have enabled the delivery of high-quality and secure services while lowering costs. Some industries are now entirely technology dependent. For example, even in a difficult economic climate, global IT spending by financial institutions is estimated by Gartner to reach just under \$246 billion in 2010 (www.americanbanker.com/btn_issues/23_1/spring-thaw-1005589-1.html).

As IT continues to evolve and merger and acquisition activity remains high, the issue of IT system integration or changeover is a fundamental problem. For service-oriented businesses that are characterized by high dependence on IT for services operations (e.g., retail, insurance, and telecommunications and banking), the system integration problem is an extremely difficult challenge because the change process requires seamless services operations in order to retain high customer service levels. System downtime or failure can have catastrophic consequences on profitability and customer relationships.

Industry investments in IT have risen dramatically over the past two decades and further increase is expected. Traditional measures used to assess return on IT investments have often centered on *productivity*, a concept that relates the level of outputs to the level of inputs. Dubbed the “productivity paradox,” productivity-based economic studies have suggested that investment in IT services industries has not led to substantial gains in productivity [7, 11, 44]. But the productivity-based economic studies of IT investment ignore the operational challenges associated with IT implementation and how IT implementation is related to performance.

Productivity-based assessments focus on increases in efficiency and cost reduction, whereas implementation-oriented assessments focus on the work processes between

the inputs and outputs. For a service organization, performance is ultimately about customer satisfaction and quality of service delivery. One reason for the productivity paradox may be because of operational IT implementation challenges that lead to performance problems. In this study, we focus on a key element of successful operational IT implementation within firms—trust in the internal IT service provider. The importance of building relationships with customers and trust in the service provider is well documented in the marketing literature [25, 51, 52]. It is a logical extension to apply services marketing concepts to internal IT services operations.

The IT services organization team within a firm cannot afford to focus solely on technology and their own unit; rather, they must consider their unit's relationships with their customers (the employee end users). Surprisingly little is known about what factors influence *postimplementation trust* in the IT services provider. This is an important question because employees are not only assessing any given IT implementation at some point in time, they are also involved in an ongoing relationship with their IT services provider. Unlike classic market-based customer–service provider relationships where the customer can switch service providers, in an organizational context, the employee (i.e., the internal customer) does not have a choice of IT services providers. Trust matters in the internal service provider context because past research clearly shows a strong positive link between employee satisfaction, customer satisfaction, and business performance [22]. This compels consideration of the ongoing customer–IT services provider relationship within the firm. In an organizational context, trust resulting from employee experiences can have important positive (negative) consequences on future organizational IT implementations and performance outcomes.

Broadly, this study explores the relationship between two key sets of stakeholders within an organization—the value makers (the IT services organization within a firm) and the value takers (the employees who use the IT services) [2]. Specifically, the purpose of this study is to examine how key service mechanisms in operational IT implementation—training, trial, and social influence—are related to employee perceptions of actual (realized) system benefits and trust in the IT services provider. We report on a study with 380 employees of 14 bank affiliates that were recently acquired by a bank holding company. The study examines an implementation of a new, complex IT system that was led by the holding company's internal IT services organization. The implementation can be described as a mandatory implementation situation where conversion to the comprehensive new IT system was required. This study has three distinct elements that are a departure from prior information systems (IS) research: (1) a focus on *postimplementation trust* rather than *preimplementation* or *initial trust*, (2) a focus on the services provider as the object of trust rather than the technology, and (3) a services-oriented definition of system benefits rather than a technology-oriented definition.

Conceptual Framework: Trust and IT Services Providers

RECENT IS RESEARCH HAS INVESTIGATED THE INFLUENCE of *initial trust* on perceptions or use of a technological artifact such as a system [28, 34, 46, 58]. Results suggest

that understanding how initial trust toward a new system is formed is essential for promoting intention or adoption, particularly in the period prior to implementation and in voluntary adoption contexts. In prior research on trust in the IS literature, the traditional object of trust (the trustee) is the technology [9, 34].

Our study departs from this stream of research along two key dimensions. First, we draw on the trust research from the services marketing literature that focuses on interpersonal relationships [15, 33, 35]. In the trust research from the marketing perspective, the trustee is not a technology artifact; rather, the trustee is the service provider (a person or group of people). In this study, we focus on the internal *IT services organization as the trustee*. Recent interest in IT services management reflects the notion that providers of IT services must focus on their relationship with end users, rather than on technology or their internal organization. Trust is at the core of this relationship as it deals with the beliefs that the IT services organization will fulfill its commitments [35, 48]. Moreover, because trust is most often associated with situations involving outcome uncertainty and risk, it is particularly relevant to the implementation of a new IT system.

Employee trust has been found to decrease transaction costs within organizations, increase spontaneous sociability among organizational members, and bolster appropriate forms of deference toward superiors [32]. Trust has also been found to enable cooperative behavior [19], reduce harmful conflict and facilitate formation of ad hoc work groups [40], and increase network relations [41]. Of particular interest in our study is the notion of relational trust in the IT services provider context. Relational trust results from repeated interactions over time between the trustor and the trustee, and the basis of the trust is formed from information available to the trustor from within the relationship [49].

The second point of departure is our focus on the drivers of *postimplementation trust* in the IT services provider. While past research suggests that initial trust in the technology prior to implementation influences expected benefits, we posit that postimplementation trust is a highly relevant factor to understand from an ongoing service perspective. Postimplementation attitudes are relevant from a practical perspective because system usage obviously continues well beyond initial implementation. Investments and potential opportunity costs can rise exponentially if there are problems due to a lack of trust in the IT services provider as the provider delivers ongoing support for the new IT system. Lack of trust in the IT organization can also have negative halo effects for *future* IT endeavors. In addition, we contend that there are learning lags in the process of adoption of new IT systems that affect the initial trust formation and stabilization process. Therefore, we focus on postimplementation trust in this study.

Postimplementation trust is an important yet understudied area in IS. The relationship between organizational trust, job satisfaction, and performance has been well established in the organizational behavior literature. For example, in a meta-analysis of the job satisfaction literature, Harter et al. [22] identified 7,855 relevant publications and noted that studies to date have consistently found positive linkages among workplace attitudes (including trust and attitudes toward technology), individual performance, and business performance. Typical performance outcome variables that have been

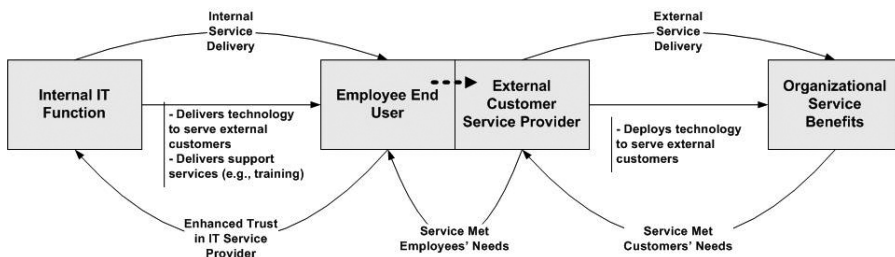


Figure 1. Service Delivery Chain

studied include customer satisfaction/loyalty, profitability, productivity, employee turnover, and safety. Prior research has not examined the mechanisms that engender trust in the IT services provider for an operational IT implementation.

We draw on the service-profit chain as a conceptual framework that describes the relationships among profitability, customer satisfaction/loyalty, and employee satisfaction/loyalty [24]. We extend the service chain concept to the internal IT services provider context to include the role of trust in the service-profit chain (see Figure 1). Specifically, we contend that the service delivery chain establishes the relationship between the IT services provider, the employee, and the customer. In a service business, Heskett et al. [24] suggested that frontline employees and customers must be the center of management concern. In their description of the service-profit chain, Heskett et al. [24] note that successful service firms balance several key factors to drive profitability: investment in people, technology that supports frontline employees, recruiting and training practices, and performance-based compensation. We argue that the service delivery chain enables the service-profit chain.

In many service industries, operational-level employees are those who interface with the customer. For IT-intensive service industries, IT system implementations can significantly impact operational-level employees' daily jobs and their ability to achieve results for customers. Thus, in an operational IT implementation, employees may anticipate benefits (or costs) related to their individual productivity or job performance, the ability to offer the same or additional services, actual product/service performance, or the quality of customer interactions. At the very least, operational-level employees likely expect IT implementations to not decrease any of these factors. Kramer [32] argues that individuals in lower-status positions in organizations (such as operational-level service employees) are more attentive to trust-related issues due to their greater dependence on IT systems for job performance. Brockner et al. [6] found that trust is more volatile when outcomes are perceived as unfavorable. This suggests that a favorable IT system implementation may have little positive effect on trust, but that a poor implementation may significantly damage trust in the IT services provider.

As illustrated in Figure 1, benefits accrue to an organization when customers' service needs are effectively met. When an IT system is a major vehicle in the provision of customer service, the internal delivery of IT services takes on fundamental importance in the service delivery chain. As a result, the IT services provider becomes an indirect

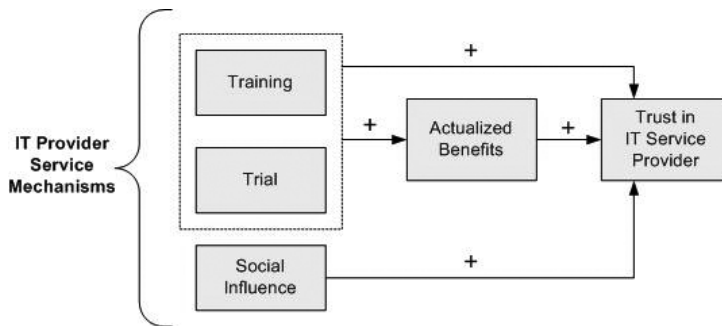


Figure 2. Conceptual Research Model

but significant factor in the service-profit chain. We expect that trust in the internal IT services provider results from high-quality IT support services (*service mechanisms*) that enable employees to deliver benefits to customers.

With the service delivery chain as an overarching framework, we focus in on service mechanisms that drive postimplementation perceived benefits and trust in operational IT implementation. In the following sections, we develop hypotheses relating benefits to trust and we examine how three service mechanisms—training, trial, and social influence—are related to perceived benefits. Figure 2 shows the research model we will discuss next.

Hypothesis Development

Trust and Actualized Benefits

THE MEASUREMENT OF SYSTEM BENEFITS is a robust area of IS research and has been generally explored from a user satisfaction or technology acceptance perspective [12, 13, 60]. Yet, as noted by Delone and McLean, “no single variable is intrinsically better than another” [12, p. 80]; rather, the choice should be a function of the research context. In this study, we define actualized benefits as the *ability to deliver service to customers*. This is a comprehensive definition that is particularly relevant in a postimplementation service context where the IT system is the primary vehicle through which customer service is provided. Ultimately, operational-level employees will evaluate a new IT system in terms of how it affects their ability to achieve results for customers. Achieving results involves both workflow, the sequence of internal operations involving employee-to-employee interactions, and external operations involving employee-to-customer interactions [42]. By integrating both views, our definition provides not only a broader measure of benefits but also one that is service oriented.

Substantial individual learning must occur before new IT system benefits are fully actualized or realized [16]. Individual learning occurs over time as employees use a system. In a service context, system benefits will be judged by employees based on their ability to deliver ongoing or new service to customers. Perceived enhancements

to customer service will, in turn, increase employees' assessment that the IT services provider fulfilled its internal service commitment. Thus, perceptions of actualized benefits will lead to enhanced levels of postimplementation trust in the IT services provider. Stated formally:

Hypothesis 1 (The Benefits–Trust Hypothesis): Perceptions of actualized benefits are positively related to postimplementation trust in the IT services provider.

IT Provider Services: Training and Trial

One way to influence the actualization of IT system benefits is to provide effective support to employees [36]. Igbaria et al. [26] suggest that end-user support is, in fact, more critical than management support. For the IT services provider, service mechanisms include not only the delivery of technology to employees but also the delivery of appropriate training and trial programs such that end users can realize system benefits [5]. Effective training and trial programs can play a significant role in organizational change, particularly when change is mandatory, as they may engender more positive attitudes toward the system and the IT services provider [56, 57].

Training and trial programs often involve both formal training and opportunities to experiment with the system prior to implementation. Formal, or facilitated, training leads employees through a system in a “hands-on” manner, thus allowing them to explore the system from both technical and functional standpoints [5]. Past research has found that training has a significant effect on the attainment of system benefits [18, 61]. In concert with formal training, trial provides opportunities for employees to further explore the system and practice trained tasks prior to implementation. However, mixed support has been found for the effects of trial on adoption, with results varying by situational context (e.g., perceived risk, lack of time or other resources) [43, 57]. From past research [5, 55], we posit that as a consequence of training and trial opportunities, employees will have a better understanding of system benefits and the requisite skills and knowledge to realize those benefits.

Hypothesis 2 (Training–Benefits Hypothesis): Training is positively related to perceptions of actualized system benefits.

Hypothesis 3 (Trial–Benefits Hypothesis): Trial is positively related to perceptions of actualized system benefits.

Since the IT services provider is the organization that delivers the training and trial opportunities to employees, these service mechanisms should also directly affect perceptions of postimplementation trust [15, 20, 33]. Proving that the IT provider can be trusted is problematic when initially forming a relationship. Prior research suggests that trust will arise from the perceptions, beliefs, and attributions of the trustor about the trustee, based on observations of the trustee's actions and behaviors [59]. Training and trial services provide an observational and relational platform between employees and the IT services provider. This platform may lead to enhanced trust if the IT services provider is perceived to have invested time in the relationship or the

employees believe they received adequate explanations and feedback from the IT services provider [8]. Therefore, we posit that trust will be a product of the observational and relational service experience delivered through the training and trial service mechanisms. Stated formally:

Hypothesis 4 (Training–Trust Hypothesis): Training is positively related to trust in the IT services provider.

Hypothesis 5 (Trial–Trust Hypothesis): Trial is positively related to trust in the IT services provider.

Social Influence

Social influence is defined as the degree to which an individual perceives that important others believe he or she should use a new system and whether the individual wants to comply with what those others believe [14, 57]. Drawing from social exchange theory [59], social influence has been found to be more important in mandatory IT implementation settings [23, 57, 59]. Past research has largely focused on immediate peers or supervisors when examining the effects of social influence [50]. In this study, we focus specifically on the influence of the IT services provider on employees. By doing so, we incorporate the social and relational underpinnings of trust.

While trust has been found to play an important role in determining acceptance of an organizational decision such as a new system implementation [31, 54], an essential prerequisite is the likelihood that an employee will trust. Prior research suggests that individuals differ considerably in their general predisposition to trust others [21]. Rotter [48] proposed that individuals build general beliefs about others by extrapolating from earlier, nonrelated trust experiences. As they generalize expectancies from one social agent to another, individuals develop expectancy for trust in others that eventually becomes a relatively stable personality characteristic.

We argue that employees' receptivity to and desire to comply with what important others think is, at least partially, reflective of their general disposition to trust others. The propensity to trust the IT services provider stems from their expectations about the provider. As the social agent charged with the implementation of a new system, the IT services provider is more than likely to be perceived as an "important other." Employees may look to the IT services provider for behavioral cues—that is, the correct behavior is to use the new system. They are also likely to conform because they believe that the IT provider's information about the situation is more accurate than their own [38, 47]. By providing behavioral cues and supportive information, the IT services provider may use social influence as a service mechanism. Therefore, we posit that perceptions of social influence will lead to enhanced levels of trust. Stated formally:

Hypothesis 6 (Social Influence–Trust Hypothesis): Social influence is positively related to trust in the IT services provider.

Methodology

Context

THE CONTEXT FOR THIS RESEARCH IS A BANK HOLDING COMPANY (BHC) formed as a result of 30 acquisitions. BHC provides a comprehensive range of financial services, including commercial and retail banking, trust, brokerage, correspondent banking, and insurance. In aggregate, BHC has over \$5 billion in annual revenues and employs 3,000 individuals at 130 locations across the U.S. Midwest. The acquisitions, known as “affiliates,” represent regional community banks that grew as a result of close, long-standing ties to local customers. Each was unique and thus the affiliates varied greatly in total assets, number of branches, and target markets. The affiliates were initially provided substantial autonomy to allow them to continue to succeed in their local markets. Each continued to operate under its own original name, president, board, and charter. Marketing and sales decisions in terms of product and service offerings were also left to the individual banks. Through this independence, the affiliates were able to maintain their community banking heritage. In addition, the affiliates were allowed to select whatever software and technology platform that best suited their needs while BHC, as the parent holding company, outsourced its data processing needs.

Subsequently, in an effort to improve internal efficiencies and reduce costs, BHC created an IS subsidiary—IS Service Corporation (ISSC)—to manage IT services operations and develop a plan to standardize hardware and software platforms across all bank affiliates. ISSC was charged with providing service support to install Windows-based personal computers (PCs) and local area networks (LANs) and develop a wide area network (WAN) infrastructure. In addition, ISSC was responsible for converting all affiliates to a common computer banking system (CBS) and training employees to use it. Our study focuses on the mandatory adoption of CBS by the bank affiliates.

Employee perceptions of system benefits are often based on the messages from senior management or any number of signals that employees receive. For each affiliate undergoing conversion to CBS, senior managers were present at the conversion kickoff meetings where the benefits of CBS were described by ISSC representatives and reiterated by affiliate management, and the cutover date was announced. During the 60 days prior to cutover, upgrades to the existing IT infrastructure were made and data were mapped from the system currently in place at each affiliate into the CBS format (e.g., customer records). During this period, it was emphasized to employees that they would begin using CBS on the cutover date. Employees also received week-long training sessions led by ISSC representatives. Subsequent to formal training and prior to the cutover date, opportunities for trial were provided by ISSC to employees using fictitious customer records. On the weekend of the cutover, the old system was removed and CBS was formally delivered to the affiliate. Once CBS was made operational, due to the nature of the customer transactions and security restrictions, it was not possible for a bank employee to perform work manually or have another employee enter it. Thus, in order for employees to deliver service to customers, CBS use was mandatory.

Instrument Development

We developed a survey instrument to measure the constructs presented in the research model (see Figure 2). Wherever possible, the constructs were operationalized using measures validated in prior research (see the Appendix for items). The measurement items for the training construct were derived from Venkatesh [55]. The items for the trial construct were derived from measures developed by Moore and Benbasat [43]. The items for social influence were derived from measures developed by Karahanna et al. [30] and Taylor and Todd [53]. Finally, items for perceptions of actualized system benefits to the organization were developed based on interviews with BHC management and a review of related literature [39, 57]. The benefits included in these items are those that were deemed important to bank management.

Data Collection

Targeting 14 affiliates that had completed the conversion to CBS, a mail survey was distributed to all employees whose primary function was to interface directly with customers; that is, lenders and tellers who were required to use CBS on a daily basis in order to perform their job tasks to deliver customer service. The use of CBS was mandatory and important to those surveyed. The surveys were distributed via internal mail and included a letter from management regarding the importance of participation. Surveys included addressed, postage-paid reply envelopes that delivered the completed surveys directly to the researchers. Due to data being gathered from 14 different locations, the actual time of measurement of experiences varied due to practical constraints. Specifically, we gathered information related to experiences between four and six months after the implementation of CBS.

A total of 986 surveys were distributed with 742 returned. Of these, 380 were complete and usable responses relative to our study (e.g., participants received training and were affiliate employees prior to CBS conversion), resulting in an overall response rate of 38.5 percent. Table 1 provides demographic details of the respondent pool.

Analysis and Results

In the first step of analysis, we assessed factor structure and construct reliability via confirmatory factor analysis using LISREL version 8.8 [29]. The results in Table 2 indicate that the confirmatory factor model fits the data well. The χ^2 for the model is 1,419.99 (degrees of freedom [df] = 315; $p < 0.001$); Bentler's [3] comparative fit index (CFI) and Bentler and Bonett's [4] normed fit index (NFI) were acceptable at 0.95 and 0.94, respectively. Simulations have shown that Bentler's [3] CFI is less dependent on sample size, avoids the extreme underestimation and overestimation often found with other fit indices, and has been recognized in the modeling literature as one of the best, if not the best, indices of overall model fit. Reliability measures (Cronbach's alpha) ranged from 0.90 to 0.96, with all measures achieving the 0.70 threshold [45], thus demonstrating convergent validity.

Table 1. Demographic Data

Demographics	Numbers	Percent
Age		
< 20	4	1.0
20–30	46	12.0
30–40	85	22.0
40–50	128	34.0
> 50	117	31.0
Gender		
Male	78	21.0
Female	302	79.0
Work experience at bank affiliate		
< 10	125	33.0
10–20	157	41.0
20–30	79	21.0
> 30	19	5.0
IT service affiliate		
1	119	31.3
2	10	2.6
3	8	2.1
4	41	10.8
5	7	1.8
6	25	6.6
7	33	8.7
8	3	0.8
9	24	6.3
10	8	2.1
11	13	3.4
12	30	7.9
13	17	4.5
14	42	11.1

We examined the discriminant validity using the average variance extracted [17]. As shown in Table 3, average variances extracted, shown on the diagonal of the correlation matrix, are greater than those in the off-diagonal construct correlations in the corresponding rows and columns. Combined with the results of the confirmatory factory analysis, this indicates that each construct shared more variance with its items than it shared with other constructs, thereby confirming the construct validity.

Table 4 shows the univariate statistics and zero-order correlations for our constructs. Tests of univariate normality were within the range (± 1 skewness and ± 1 kurtosis) considered acceptable for maximum likelihood estimation LISREL analysis [27].

To test the hypothesized relationships among the latent constructs, we analyzed a structural model using LISREL. To handle missing values in our data set, we used the expected maximization algorithm in the multiple imputation module of LISREL. Figure 3 shows the operationalized structural model results, including significant paths and path coefficients. Although the χ^2 test (1,842.39, $df = 422$) produced a significant

Table 2. Confirmatory Factor Analysis

	Actualized benefits	Trust in IT services provider	Training	Trial	Social influence
ABEN1	77	—	—	—	—
ABEN2	92	—	—	—	—
ABEN3	92	—	—	—	—
ABEN4	84	—	—	—	—
ABEN5	80	—	—	—	—
ABEN6	90	—	—	—	—
ABEN7	89	—	—	—	—
ABEN8	91	—	—	—	—
TRUST1	—	89	—	—	—
TRUST2	—	89	—	—	—
TRUST3	—	93	—	—	—
TRUST4	—	94	—	—	—
TRUST5	—	93	—	—	—
TRUST6	—	91	—	—	—
TRUST7	—	86	—	—	—
TRUST8	—	69	—	—	—
TRAIN1	—	—	84	—	—
TRAIN2	—	—	89	—	—
TRAIN3	—	—	90	—	—
TRIAL1	—	—	—	87	—
TRIAL2	—	—	—	93	—
TRIAL3	—	—	—	94	—
TRIAL4	—	—	—	90	—
SOC1	—	—	—	—	71
SOC2	—	—	—	—	91
SOC3	—	—	—	—	75
SOC4	—	—	—	—	89
Cronbach's alpha	0.96	0.96	0.91	0.95	0.90

Notes: Item labels correspond to those shown in the Appendix. All numbers are factor loadings multiplied by 100.

Table 3. Discriminant Validity

	1	2	3	4	5
1 Training	0.77				
2 Trial	0.59	0.83			
3 Social influence	0.23	0.16	0.67		
4 Actualized benefit	0.20	0.09	0.18	0.76	
5 Trust in IT services provider	0.39	0.34	0.31	0.33	0.78

Notes: Diagonal: average variance extracted from the observed variables by the latent variables. Off-diagonals: Correlation between latent variables = shared variance.

Table 4. Descriptive Statistics and Correlations

	Mean	Standard deviation	Skewness	Kurtosis	1	2	3	4	5
1 Training	4.71	1.29	-0.63	-0.36	1				
2 Trial	4.21	1.48	-0.19	-0.94	0.57**	1			
3 Social influence	5.53	1.15	-0.66	0.17	0.21**	0.12*	1		
4 Actualized benefits	4.52	1.54	-0.56	-0.48	0.19**	0.09	0.18**	1	
5 Trust in IT services provider	4.61	1.25	-0.31	-0.26	0.38**	0.34**	0.26**	0.33**	1

* $p < 0.05$; ** $p < 0.01$.

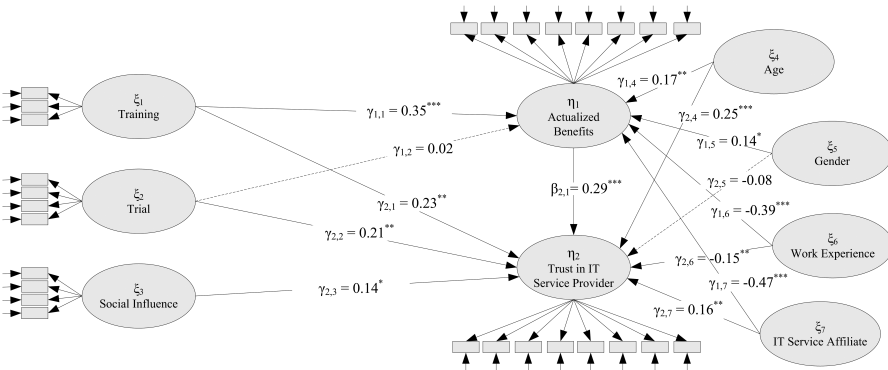


Figure 3. Structural Model

Notes: Correlations between latent constructs (ϕ_{12} , ϕ_{13} , and ϕ_{23}) were omitted for the sake of clarity. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

value ($p < 0.01$), this is likely an artifact of large sample size [1]. Therefore, as reported in Table 5, we examined other goodness-of-fit statistics and concluded that the theoretical model accurately captured the pattern of relationships found in the data. The CFI was 0.94 and the nonnormed fit index (NNFI) was 0.93, both above the acceptable level of 0.90, thus suggesting a good model fit with the data. The root mean square error of approximation (RMSEA) (0.09) and root mean squared residual (RMR) (0.08) are also both at acceptable levels for a satisfactory model.

Table 6 summarizes the structural path analysis in Figure 3 relative to our hypotheses. Our findings indicate that the effect of actualized system benefits on trust in the IT services provider ($\gamma = 0.29$) is significant at $p < 0.001$, supporting the Benefits–Trust Hypothesis (H1). The effects of the IT services mechanisms (training, trial, and social influence) on trust were all significant: $\gamma = 0.23$ ($p < 0.01$), $\gamma = 0.21$ ($p < 0.01$), and $\gamma = 0.14$ ($p < 0.05$), respectively. Thus, the Training–Trust Hypothesis (H4), Trial–Trust Hypothesis (H5), and Social Influence–Trust Hypothesis (H6) were supported. The effects of the training and trial on actualized benefits were mixed. Training has a significant effect on actualized benefits ($\gamma = 0.35$, $p < 0.001$), supporting the Training–Benefits Hypothesis (H2). But the effect of trial on actualized benefits was nonsignificant, thus the Trial–Benefits Hypothesis (H3) was not supported.

We included several demographic-based control variables in our model to account for individual respondent variation that may be systematically related to trust in the IT services provider and perceptions of system benefits. Specifically, we controlled for age, gender, work experience, and IT services affiliate in the model. The results in Figure 3 suggest that the control variables are important and relevant sources of individual variation. Age is positively related to actualized benefits and trust, suggesting that older workers on average reported more positive perceptions of actualized benefits and trust. Gender is positively related to actualized benefits, indicating that women tended to report more positive benefits on average. Work experience is negatively related to both benefits and trust, indicating that more experienced bank

Table 5. Structural Fit Measures

Goodness-of-fit indices	Model	Desired levels
χ^2/df	1,842.69/422 = 4.37	< 3.0
Standardized RMR	0.08	< 0.05
RMSEA	0.09	0.05–0.08
NFI	0.92	> 0.90
CFI	0.94	> 0.90
NNFI	0.93	> 0.90

Table 6. Summary of Results

Hypotheses	Path coefficient	Supported
H1: Perceptions of actualized benefits are positively related to trust in IT services provider.	0.25***	Yes
H2: Training is positively related to perceptions of actualized system benefits.	0.27***	Yes
H3: Trial is positively related to perceptions of actualized system benefits.	−0.05	No
H4: Training is positively related to trust in the IT services provider.	0.26***	Yes
H5: Trial is positively related to trust in the IT services provider.	0.23**	Yes
H6: Social influence is positively related to trust in the IT services provider.	0.15**	Yes

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

affiliate employees tended to report lower levels of trust in the IT services provider and have lower perceptions of actualized benefits. Finally, the affiliate that the respondent belonged to affected both benefits and trust.

Discussion and Implications

IT IS INCREASINGLY TIED TO THE STRATEGIC PRIORITIES of service industries because it enables and supports the interactions of both internal clients and external partners with a wide range of services, including hardware/software selection and installation, systems development and maintenance, Web design, network, help desk, and training. These strategic priorities include things such as managing customer relationships, managing risk, reducing costs, and attracting new customers. One consequence of this expanded role of the IT function and core technology is that firms must regularly implement and manage complex and expensive organization-wide, integrated IT systems, such as enterprise resource planning (ERP) and global collaboration platforms.

Complex IT systems may involve organization-wide user interdependencies and have the potential to significantly impact the completion of normal work routines. The implementation of such systems tends to be associated with substantial challenges [61] and can result in changes in end-user job characteristics. As a result, we proposed that internal IT units could benefit from the adoption of a marketing perspective wherein the IT organization is regarded as a service provider and we return to a focus on interpersonal relationships. Through this lens, we explored how an IT services provider may be able to enhance and actively manage its relationship with end users through the use of service mechanisms. Specifically, we examined how training, trial, and social influence are related to perceptions of postimplementation (or actualized) system benefits and trust in the IT services provider. To our knowledge, no prior research has examined the role of postimplementation trust in the IT services provider and mechanisms that drive it in the service delivery chain. An area for future research would be connecting trust in the IT services provider to business performance outcomes (e.g., customer satisfaction, profitability, etc.).

The context of our study was a mandatory implementation of a complex IT system in a service context where conversion to the comprehensive new system was required. In mandatory implementation situations, while employees must use the new system, their job satisfaction, feelings toward their supervisors, and loyalty toward the organization can be severely and negatively affected if the implementation is not well managed. These negative feelings and attitudes can lead to negative behaviors, even including sabotage and unfaithful appropriation of technology. A number of studies, for example, have demonstrated that employees will use a technology to perform (and keep) their jobs, but they may also engage in alternative destructive behaviors, which may or may not be intentional [10, 37]. Our findings suggest that training, trial, and social influence are key service mechanisms the IT services provider can use to stimulate trust in the IT services provider and the realization of system benefits. Future research should examine the link between trust, system benefits, and negative behaviors.

Our findings for the effects of trial and training on trust are consistent with recent research that describes trust as a key factor that helps users overcome perceptions of risk and uncertainty in the use of new technology [34]. Specifically, providing users with the opportunity to practice using the technology and job-specific training effectively increases trust in the IT services provider because these mechanisms reduce perceived risk and uncertainty about the pending change. The practical implication of this finding is that IT services providers need to plan and budget adequate time and funds to allow users to try the new system and receive the necessary training. From a marketing perspective, it also implies that the training should be user-centric as opposed to technology-centric. Effective training by the IT services provider should be service oriented, focused on the user needs and concerns about the new system with respect to employees' job roles/functions. Training that presents *IT as a means to deliver services* rather than focusing on the technology itself creates a strong orientation toward the end-user experience, thereby enhancing trust in the IT services provider.

In our empirical study, we examined preimplementation actions regarding trial and training. Consistent with past research, we did not find that trial was related to

perceptions of actualized benefits. While the IT services provider may provide employees with the opportunity to experiment with a new system posttraining and prior to implementation, trial is typically at the discretion of the employee. This individual decision may depend on a number of factors, including perceptions of the effectiveness of formal training, time commitment, and so forth. However, as this study shows, trial along with training can engender trust in the IT services provider.

While the notion of trial logically implies a preimplementation event, training could also be a postimplementation intervention to address a problem and even restore trust in the IT services provider. Trust is a dynamic concept that develops and changes over time [50]. In a departure from prior research on trust in the IT context, we focused on postimplementation perceptions of trust rather than preimplementation initial trust formation. Two important avenues for future research include an evaluation of postimplementation training and the role of such mechanisms in trust reparation.

Regarding social influence, our findings suggest that social influence has a positive effect on trust in the IT services provider. This study extends past research by focusing specifically on the influence of the IT services provider on employees. Conventional wisdom suggests that end users have relatively low confidence in their IT organizations. Our findings suggest that confidence in the IT services provider is an important part of implementation and it directly affects trust. The technology is only able to deliver on its promise to the extent that employees understand it and can integrate it into their work processes. Our findings suggest that the social influence of the IT services provider plays an important role in effective implementation. An important area for future research would be to examine the drivers of the social influence of the IT organization. For example, reputation effects may play a role. Also, because our measurement scale did not include other potential sources of social influence, future research could explore the role of others as influencers (e.g., peers, supervisors).

This study has several limitations that are important to note. First, the context of study is single industry and single firm based. While this did allow us to control for cross-industry and cross-firm effects, it is important to examine the sensitivity of our findings to the banking context. Future cross-industry research is needed to validate the findings. Second, our data are single-source data that are collected at a single point in time in a dynamic implementation and learning process. Although not unusual, this limitation can lead to a bias in structural analysis when the predictor and instrumental variables are from the same source. We also cannot say how the results may change over time. Because our focus was on individual-level perceptions of the service mechanisms, perceived benefits, and trust, the source of the data was appropriate. But future research is needed to develop additional and alternative measures of the factors included in this study. Future research could also take a time-series approach to unfold the phenomenon of trust evolution over time.

Overall, our findings generally supported our model, thus lending confidence to the view of the IT organization as a service provider and a bridge between service delivery and fulfillment. IT exists to support the business in its profit-generating activities. In our particular study, the new system was implemented to make the bank more effective and efficient. While many organizations are beginning to measure relationships

in the service-profit chain, only a few have related the links in meaningful ways to comprehensive strategies for service delivery. Our results offer important insight into one aspect of the service delivery process—trust in the IT services provider.

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Appendix: Survey Instrument

Trust

- TRUST1 I think ISSC keeps commitments.
 TRUST2 I think ISSC behaves according to its commitments.
 TRUST3 I think ISSC is dependable.
 TRUST4 I think ISSC meets its obligations.
 TRUST5 In my opinion, ISSC is reliable.
 TRUST6 I think people in ISSC keep their promises.
 TRUST7 I think that commitments made to our bank will be honored by the people in ISSC.
 TRUST8 I think ISSC lets us down. (reverse)

Actualized benefits

- ABEN1 CBS has allowed me to use my job-related knowledge and skills more effectively.
 ABEN2 CBS has increased our bank's level of customer service.
 ABEN3 CBS has improved the consistency of our service.
 ABEN4 CBS has increased customer confidence in our bank.
 ABEN5 CBS has increased the quality of information we are able to provide to each other (e.g., coworkers, supervisors).
 ABEN6 CBS has increased the quality of information we are able to provide to our customers.
 ABEN7 CBS has increased the timeliness of information we are able to provide to each other (e.g., coworkers, supervisors).
 ABEN8 CBS has increased the timeliness of information we are able to provide to our customers.

Training

- TRAIN1 Overall, the training I received was . . .
 TRAIN2 The type of training I received on CBS was appropriate for my job at the time.
 TRAIN3 The amount of training I received on CBS was sufficient for my job at the time.

Trial

- TRIAL1 Before having to use CBS applications, I was able to properly try them out.
 TRIAL2 I was permitted to use CBS on a trial basis long enough to see what it could do.
 TRIAL3 I was able to experiment with CBS as necessary.
 TRIAL4 I had access to the CBS applications for long enough periods to try them out.

Social influence

- SOC1 The members of the ISSC conversion team think I should use CBS.
 SOC2 In general, I want to do what members of the ISSC conversion team think I should do.
 SOC3 Computer specialists at ISSC think that I should use CBS.
 SOC4 In general, I want to do what the computer specialists at ISSC think I should do.

Notes: All items, except for TRAIN1, were measured on a seven-point Likert scale anchored by "strongly disagree" to "strongly agree." TRAIN1 was measured on a seven-point Likert scale anchored by "extremely good" to "extremely bad."

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