



Satisfaction with business-to-employee benefit systems and organizational citizenship behavior

Satisfaction with
benefit systems

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An examination of gender differences

Jen-Hung Huang

*Department of Management Science, National Chiao Tung University,
Hsinchu, Taiwan*

Bih-Huang Jin

*SoC Technology Center, Industrial Technology Research Institute,
Hsinchu, Taiwan, and*

Chyan Yang

*Institute of Business and Management, Institute of Information Management,
National Chiao Tung University, Hsinchu, Taiwan*

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Abstract *Marketing the products of other companies within an individual company intranet can benefit both employees and the company itself. This study examines the dimensions of satisfaction with a business-to-employees (B2E) benefit system and the linkages between satisfaction and organizational citizenship behavior (OCB). Structural equation modeling of data shows that convenience, delivery, interface, accuracy, price and security are factors that affect employee satisfaction with the B2E benefit system. Price is more important to the satisfaction of males than females. Significant, positive relationships were found between satisfaction and OCB. Perceived organizational support plays a stronger mediating role in leading to OCB for females than it does for males.*

Introduction

Advances in information technology have profoundly altered the business processes between a firm and its employees. Internet technology has brought e-training (Kendler, 2000) and e-benefits (Mitchell, 2000). Moreover, a trend has also arisen towards exhibiting the products of other companies within the intranet of a company. For example, GM and Delta are developing "business-to-employee" (B2E) strategies that offer discounts on products and services to the employees of their partners. Cummins Engine, which has 25,000 employees in North America, contracts other companies to allow its employees to obtain access to such things as employee entertainment and travel discounts (Schwartz, 2000). Company employees may be able to rent a car, book a hotel, reserve a restaurant and order books and other products via their company's intranet, and obtain a substantial discount in doing so. This type of reciprocity benefits both the employees and the company.

For companies that ally themselves with partner firms, this practice can greatly expand sales channels to include thousands of highly qualified customers. Employees



get significant discounts on products and services that they would generally not be able to obtain elsewhere. This type of benefit allows employers to provide more with less, meets the needs of a diverse employee group, attracts and retains a committed workforce and encourages citizenship behavior.

A B2E benefit system is part of a corporate intranet, the development and management of which requires caution and sound planning. Wachter and Gupta (1997) discussed various management strategies and argued that intranets are a form of end-user computing and must be managed accordingly. In other words, employee needs and preferences are important considerations in designing and managing a B2E system. Consequently, constantly gauging user satisfaction is essential to the success of B2E systems, just as for other computer systems.

User computing satisfaction is probably the most widely used measure of the success of information systems (Delone and McLean, 1992). The measure usually only encompasses the computer-related activities required or necessary to accomplish a particular job. One measurement that is widely used is the measure of end-user computing satisfaction (EUCS) developed by Doll and Torkzadeh (1988). Past research has demonstrated instrument validity and reliability (Harrison and Rainer, 1996; McHaney and Cronan, 1998; Torkzadeh and Doll, 1991).

For a B2E benefit system to continue growing in value, a better understanding of the elements that constitute successful implementation of B2E benefit systems must be developed. While quality of intranet software (Leung, 2001) has been examined and EUCS has been studied extensively, past research does not include purchasing convenience, product variety, product pricing, and product delivery. As Nunnally (1978) pointed out, one validates not a measuring instrument, but rather some use to which the instrument is put. With the broadening use of computer systems, measurement instruments have to reflect change. Clearly, a new instrument is required for B2E systems.

Employers may be concerned with whether a B2E benefit system improves organizational performance. Conventional theories of organizational behavior suggest that benefits should not influence the performance of workers (Lambert, 2000). However, recent research has pointed to the relationship between benefits and organizational citizenship behavior (OCB) and this relationship may be mediated by perceived organizational support (POS) (Lambert, 2000; Moorman *et al.*, 1998). Many studies have shown that OCB enactment positively impacts on various individual work outcomes, such as performance evaluations, and group work outcomes (Podsakoff and MacKenzie, 1994; Podsakoff *et al.*, 2000). Consequently, if a B2E benefit system can promote OCB, such a system would be valuable to the firm.

Males and females are different in many perspective such as price sensitivity (Farrelly *et al.*, 2001) and psychology (Tannen, 1994). Males and females may perceive and value the same benefit system differently, therefore, sensing different obligations to the organization. Women, emotion and rapport-oriented, are more likely to appreciate what the firm has done for them than men are. To our knowledge, gender as a moderating variable in the relationships among satisfaction with benefits, POS and OCB has not yet been examined. When offering benefits to employees, understanding the differences among employees is important to enhance the value of the benefits.

The purposes of this study are to measure satisfaction with the B2E benefit system, to examine the differences in satisfaction between genders and to link the satisfaction

with OCB. Factors that affect B2E satisfaction assessments are examined and documented. Qualitative evidence gathered from literature is used and focus group interviews are performed to develop questionnaire items and a conceptual model. The model is then tested; the effects of gender on the satisfaction with the B2E system examined; the gender differences in the link between satisfaction and OCB analyzed; and the implications of the findings are discussed.

The system

Taiwan's economic development started with labor-intensive industries, such as textiles and footwear, which allowed firms to exploit the low wage advantage. The next stage was a shift to capital-intensive industries such as plastics and petrochemicals. Starting in the early 1980s, high-tech knowledge-intensive industries, such as desktop PCs, notebook computers, semiconductor manufacturing and IC design, moved to center stage. One of the consequences for human resource management was the need for increasingly sophisticated practices for the more highly educated workforce (Bamber and Legget, 2001).

Against this background, UMC, the world's second largest semiconductor foundry firm, located in Taiwan, with over 9,000 employees, explored methods for improving the benefits to its employees. According to the regulations in the country, a small percentage of revenue has to be set aside for employee benefits. A benefit committee has been set up to deal with benefit issues, including the uses to which this benefit fund is put. While the committee can simply distribute the benefit fund directly to individual employees, this approach is not the most effective use of the money. Instead, the bulk procurement of products and services for employees can obtain substantial discounts from suppliers and greatly increase the value of the benefits. Moreover, this approach also allows employees who purchase the products involved using their own money to achieve the same discount. The net result is to greatly increase employee purchasing power. However, individual employees have different desires concerning fund use and personal spending. For example, while some would like oversea trips, others would like to buy products from local department stores. Meanwhile, the procurement process and record keeping place a significant demand on committee time and manpower.

A benefit system has been set up to offer choices of products and services on the company's intranet with payments being deducted directly from the funds allocated to the employees. If employee spending exceeds their allocated funds, money can be deducted directly from the employee's salaries. This approach significantly reduces the concerns of many Internet shoppers, since the employees do not need to give out their credit card information. Moreover, record keeping can be done by the system automatically, greatly reducing the workload of the committee members.

Products currently in the system include books, products that can be purchased at the local convenience stores and coupons for local department stores. The books are delivered to a bookstore operated within the company, while products from the convenience stores are delivered by the stores' delivery units. If employees wish to shop at a local department store, the B2E benefit system allows them to purchase discount coupons, which will be delivered to them directly via the internal mail system.

Other than offering opportunities to shop, the B2E benefit system includes a few other functions, such as a travel section where employees can organize trips and vote on preferred destinations. Using the B2E benefit system, employees can also organize

communities in which they are interested in participating. Finally, allowing employees to log into the intranet at home means that they do not need to spend valuable work time shopping, significantly reducing employer concern that the B2E benefit system will distract employees from work.

The system had been up and running for five months when this research was conducted. Employees must use the system to spend the funds allocated to them, and thus, almost all company employees knew about the system and had the experience in using it.

Conceptual model

A qualitative phase of this research was conducted to identify the possible causes and consequences of B2E benefit system satisfaction. A focus-group interview was conducted with three members of the benefit committee who were in charge of outsourcing the system and had been obtaining constant feedback from users. Another focus-group interview with six users of the systems followed. The interviews were designed to elicit information on employee opinions, preferences and satisfaction with shopping on the company's B2E benefit system. Literature on Internet shopping and EUCS satisfaction was also reviewed in this phase.

Doll and Torkzadeh (1988) offer a second-order factor model of EUCS that consists of five first-order factors measured by 12 items. The second-order factor is interpreted as EUCS. Doll *et al.* (1994) compared this second-order model with three other alternative models and recommended this second-order model. Following their recommendation and the proposed relationships among satisfaction, POS and OCB to be discussed below, a conceptual model shown in Figure 1 is advanced. Factors of satisfaction include convenience, product assortment, delivery, product information, interface, price, accuracy, and security.

The relationship between satisfaction and OCB

OCB

OCBs are the additional things employees do that are beneficial to the organization, but are not required of the individuals; for example, helping coworkers, and keeping up with matters that affect the organization. According to Organ (1988), OCBs have a variety of forms, including altruism, courtesy, sportsmanship, civic virtue, and conscientiousness. Altruism means that employees help others with organizationally relevant tasks. Courtesy means that they treat others with respect. Sportsmanship implies that employees have a positive attitude and are willing to tolerate less than ideal circumstances without complaining. Civic virtue means that employees responsibly participate in, and are concerned about, the welfare of the company. Conscientiousness is discretionary behavior that goes well beyond the minimum role requirement of the organization, such as making phone calls to take care of business from home.

OCB can influence organizational performance (Podsakoff *et al.*, 1997; Walz and Niehoff, 2000). Citizenship behaviors improve group performance because they help people work together. Employees who help each other do not have to ask supervisors for help frequently, leaving the supervisors free to do more important tasks. Empirical evidence supports this theory. A meta-analysis has shown that OCB correlated with job satisfaction, perceived fairness, organizational commitment, and leader supportiveness (Organ and Ryan, 1995). Hence, a B2E benefit system would have the potential to

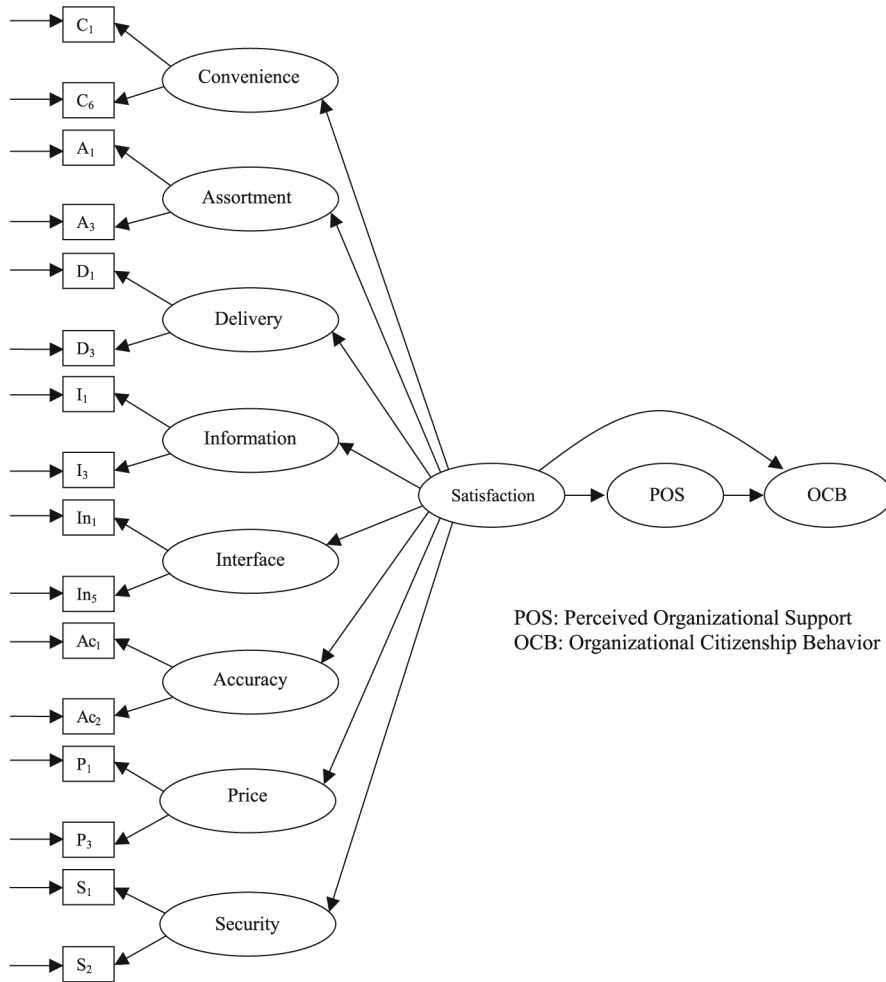


Figure 1.
Proposed model of satisfaction with business-to-employee benefit systems, POS and OCB

improve organizational performance and to add value to the organization (Lambert, 2000).

Lambert (2000) drew on developments in social exchange theory and empirically showed that a relationship exists between workers' experiences with a work-life package and OCB, mediated by POS. Social exchange theory indicates that people feel obligated to reciprocate when they benefit from some entity's actions. OCB is the employees' currency of reciprocity.

Scholars have always conceived OCB as consisting of several behavioral dimensions and these dimensions are distinct from one another. Podsakoff *et al.* (1990) first operationalized Organ's (1988) five dimensions. Their OCB scales have served as the basis for OCB measurement in a large number of empirical studies. However, an issue remains regarding whether OCB is a "latent" construct with each dimension a manifestation of OCB and the causal arrow would be from OCB to the

dimensions, or whether OCB is an aggregate construct, which would be formed as a mathematical function of the dimensions and the causal arrow can be thought of as originating from the dimensions and pointing toward the OCB construct. Lepine *et al.* (2002), in a meta-analytic study, found that the five dimensions of OCB are not much more than equivalent indicators of OCB and that scholars should begin to think explicitly of Organ's (1988) OCB as a latent construct. Following this recommendation, OCB is measured with items from several dimensions and is treated as a latent construct in this study.

POS

The concept of organizational commitment has attracted considerable interest in the field of organizational behavior research. Eisenberger *et al.* (1986) presented a social exchange view of commitment that focuses on employees' perceptions of the organization's commitment to them, i.e. POS. POS is a belief in the organization's willingness to reward their efforts, a belief that the organization values their contribution, and a belief that the organization is concerned about their well-being (Eisenberger *et al.*, 1986). A perception of support from the organization is reciprocated with both commitment and behaviors valuable to the organization. Hutchison (1997) and Shore and Tetrick (1991) demonstrated that POS is unidimensional and differs from two similarly conceptualized correlates of affective commitment: perceived supervisory support and organizational dependability.

Positive discretionary activities by the organization, which benefit the employee, are taken as cues that the organization cares about employees' well-being. Researchers have shown that benefits can enhance workers' perceptions of organizational support (Grover and Crooker, 1995; Lambert, 2000). In a study of the causes of OCB, Rioux and Penner (2001) found that concern for the organization is strongly associated with OCB directed toward the organization. POS has been found to be a mediating variable between procedural justice and OCB (Moorman *et al.*, 1998), between discretionary activities such as promotion and developmental experiences and OCB (Wayne *et al.*, 1997) and between work-life benefits and OCB (Lambert, 2000). In the context of the current study, greater employee satisfaction with the B2E benefit system corresponds to a more positive perception of organizational support, leading to better OCB.

Gender differences

Differences between men and women have not been an overly popular research area. Most existing research compares amounts of constructs expressed by female and male employees (Babin and Boles, 1998). For example, Johlke *et al.* (2002) examined salesperson POS and found that female salespersons experience lower levels of POS than male salespersons. They indicated that no prior research tested for gender differences in employee POS. Few organizational studies have examined how gender might alter the relationships between constructs (Babin and Boles, 1998, Organ and Ryan, 1995).

A firm's employee benefits are not a constant across the board, even when all employees use the same system (Kossek, 1989). Employees may perceive and value the same benefit system differently, subsequently sensing different obligations to the organization. For example, the offer of flexible work hours was related to higher organizational commitment and job satisfaction from those with family responsibilities (Scandura and Lankau, 1997). American Express, working with many companies, found that employee populations are highly diverse, with varying needs that stem from

differences in income levels, gender and other characteristics (Pruter, 2000). Men are described as exhibiting aggression, competitiveness, assertiveness, individualism, task-orientation and a focus on material success. Women are considered to exhibit nurturance, kindness, loquaciousness, warmth, an emotion-orientation, and a concern for the quality of life (Archer and Lloyd, 1985; Gefen and Straub, 1997; Tannen, 1994). Women are more likely than men to appreciate what the firm does for them.

Although studies have been conducted on relationships among company activities, POS and OCB (Moorman *et al.*, 1998), to the authors knowledge, no study has examined the differences in the strength of these relationships between males and females. POS depends on the same attributional processes that people use generally to infer the commitment by others to social relationships (Eisenberger *et al.*, 1986). Gender may significantly be related to these attributional processes. Studies in related areas concerning gender differences in attributions point to potential gender differences in attributions of a B2E benefit system. Elizur and Koslowsky (2001) found that gender moderates the relationship between values and organizational commitment. Russ and McNeilly (1995) indicated that women place greater importance on social relationships. They found that satisfaction with work more strongly impacts on the organizational commitment of female sales representatives than the male representatives.

There are two routes to OCB from satisfaction with a B2E benefit system (Figure 1). The first is from satisfaction to POS, and then from POS to OCB. Moorman *et al.* (1998), and to a lesser extent Lambert (2000), have strongly supported this route. The second route is from satisfaction directly to OCB, which is supported by the strong relationship found in Lambert (2000). Satisfaction with a B2E benefit system can lead to OCB through both routes or only one of the two routes. A B2E benefit system is stronger evidence to females than to males that the organization cares about their well-being. Females thus typically feel more obliged to reciprocate. On the other hand, males may take the direct route to OCB when they are satisfied with a B2E system. The mediating role played by POS is significant for men, but may not be as dominant as that for women.

Research procedures

A literature review was conducted on topics related to EUCS and satisfaction with Internet shopping. This literature review identified 27 potential research items for measuring eight factors of satisfaction. These items were incorporated into a preliminary questionnaire, which was sent out for review by a number of academics and company employees. The respondents to the pretest were asked to answer the questions and examine the relevance of the items in terms of end-user satisfaction with the B2E benefit system.

After refining the existing items and adding some new ones, a total of 28 items were obtained. These items along with items related to the consequences of satisfaction, including future intentions, POS, citizenship behaviors, and questions on Internet usage, system usage and demographic information, were put into a questionnaire. The items were measured with the Likert-type scale ranging from 1 to 5. The questionnaire was distributed to company employees along with a small gift to show our appreciation for the efforts of the employee in answering the questionnaire. Although this is a convenient sampling method, an attempt was made to obtain responses in proportion to the number of employees in each department. After poor quality responses, i.e. incomplete questionnaires and questionnaires in which the same responses were given to all questions, were eliminated, a total of 266 responses were

obtained. About 12 percent of respondents had not logged into the system in the past month. The responses of these individuals were removed from the analysis, leading to a total of 234 usable responses.

Over 60 percent of respondents had experience of Internet shopping and around 60 percent of respondents also had experience of making a purchase on the B2E benefit system during the past month. Females and males each account for about one-half of the respondents. Over 85 percent of the respondents are aged between 26 and 40. Approximately half of the respondents are engineers, and over 60 percent of the respondents have university degrees.

Analysis of the satisfaction construct

Reliability of the measure

The internal consistency reliability (α coefficient) should be the first value calculated to assess instrument quality (Churchill, 1979). Table I lists the α coefficients of the measurement scores. The α coefficients all exceed 0.75, above the conventional acceptable level of 0.7 (Nunnally, 1978), and thus, are adequate.

Item ^a	Coefficient α
<i>Convenience</i>	0.86
1. B2E system can save my shopping time	
3. That shopping on the B2E system can be done any time is very convenient	
<i>Delivery</i>	0.87
11. The promised delivery time for the products on the B2E system is not long	
12. Getting the products I purchased on the B2E system is very convenient	
<i>Interface</i>	0.87
16. The design of the Web pages of the B2E system is excellent	
17. The design of the Web pages of the B2E system can pull me toward purchasing	
<i>Accuracy</i>	0.83
21. The B2E system records and processes data accurately	
22. I am satisfied with the accuracy of the B2E system	
<i>Price</i>	0.78
23. The prices of the products on the B2E system are low	
24. I will purchase coupons on the B2E system before I go to purchase products	
<i>Security</i>	0.82
26. I feel secure about the transactions when shopping on the B2E system	
27. It is safer to shop on the B2E system than to shop on the Internet	
<i>POS</i>	0.88
7. The company does its best to take care of different needs of colleagues	
8. The company appreciates the contribution of every colleague	
9. The company is proud of the contribution of its employees	
10. The company will not replace me with someone else at a lower salary	
<i>OCBs</i>	0.88
10. I will do something to enhance the company's image even if not asked to do so	
11. I will not waste time complaining to the company if I am not satisfied	
12. I will help my colleagues even if the company does not ask for it	
13. I will follow the company's rules as much as possible	

Table I.
Measures of satisfaction
with the system,
POS and OCB

Note: ^a Items are measured with a Likert-type scale with 1 being strongly disagree, and 5 strongly agree

Exploratory factor analysis

Because this is the first study on B2E benefit systems and many of the scales are new, an exploratory factor analysis was performed to ascertain the underlying dimensions of employee satisfaction. After a few items which load on more than one dimension are deleted, the results clearly show that there are eight dimensions. These eight factors explain 78 percent of the variance in the data, all items load heavily onto one of the factors, and all of the factors correspond with the originally intended dimensions.

Factors of satisfaction

Doll and Torkzadeh (1988) proposed a second-order factor model of EUCS that consists of five first-order factors: content, format, accuracy, ease of use and timeliness. The five first-order factors, measured by 12 items, provide a framework for explaining the EUCS construct by identifying the underlying components. This model has been confirmed (Doll *et al.*, 1994) and used in other studies (Harrison and Rainer, 1996). Following the structure of the model, Figure 1 displays the current hypothesized model, which is used for a second-order confirmatory factor analysis. In the process of running Lisrel, some items are further deleted for simplicity, clarity and to enhance the fit of the model with the data. Finally, only two items are retained for each of the eight first-order factors.

Furthermore, if the model does not include the assortment and information factors, the model fit improves significantly. Subsequently, a model without these two factors was run. The $\chi^2=58.45$ with 48 degrees of freedom (p -value = 0.14), GFI = 0.96, AGFI = 0.93, RMR = 0.019, standardized RMR = 0.035, and NFI = 0.96 are all within the ranges of a good fit. Hence, the factors considered to impact on satisfaction and included in the model are convenience, delivery, interface, accuracy, price and security. Table I lists these items.

Gender and satisfaction with the system

Numerous studies have focused on the conceptual development and measurement of satisfaction. Nevertheless, only a few have addressed the effects of gender as a differentiating factor in determining the overall satisfaction. The relationship between gender and customer satisfaction is inconclusive (Francken and van Raaij, 1985; Moutinho and Goode, 1995; Peterson and Wilson, 1992), due to the wide variety of products and services studied.

Significant gender differences in attitude toward and using information systems exist. Males appear to have an advantage in computer use oriented towards programming, games and work that requires mathematical and analytical skills. Females, on the other hand, have an advantage when verbal or written tasks are the key. Males have more positive perceptions of, and less anxiety toward, computing than females (Simon, 2001). Gefen and Straub (1997) found that women view e-mail as being higher in social presence and being more useful than do men. Yet, gender differences do not affect the actual use. Similarly, males have a higher perception of Web sites, yet satisfaction with Web sites does not differ between the genders (Simon, 2001).

To find out whether males and females differ in the formation process of satisfaction with the B2E benefit system, a Lisrel two-group analysis is performed, using males as one group and females as the other group. In the two-group analysis, the parameters of factors that led to satisfaction are constrained to be the same for the

two groups. Compared with the original model where males and females belong to one group, chi-square increases from 126.13 to 146.20 with degrees of freedom increasing from 90 to 108. The increase in the value of chi-square is not significant, indicating that males and females do not differ in how each factor affects their satisfaction. The fit for the two-group analysis is also good as the goodness-of-fit indices show: RMR = 0.033, standardized RMR = 0.063, GFI = 0.91, NFI = 0.90.

While the overall test yields insignificant differences between males and females, a few factors may differ significantly between the genders. Further analysis is performed by relaxing the constraint, one factor at a time, that the relationship between each factor and the satisfaction construct be the same between genders. If the chi-square value decreases dramatically when the constraint of the equality of a factor between genders is relaxed, it indicates that the factor influences satisfaction differently between males and females. Only the influences of prices on satisfaction differ significantly between males and females. The chi-square value decreases by 6 with 1 degree of freedom (p -value = 0.014). The coefficient for price is 0.75 for males and 0.52 for females, suggesting that price is a more important factor of satisfaction for males than for females.

Price sensitivity and information search behavior can be employed to explain the result that lower prices lead to higher satisfaction for males than for females. Many studies have examined price sensitivity; however, only a few have scrutinized the gender difference in price sensitivity. Farrelly *et al.* (2001) found that females have higher price elasticity than males for cigarettes. Sherman *et al.* (2001) found that older women are more price conscious than older men and are more responsive to retail specials and incentives.

In addition to being more price sensitive, females tend to use a “comprehensive strategy” and attempt to assimilate as many cues as possible in coming to a purchase decision (Meyers-Levy and Maheswaran, 1991; Meyers-Levy and Sternthal, 1991). Hence, females may engage in comparative shopping much more than males. From a female perspective, the B2E benefit system may be just one of the many places where low prices can be found. Even if the system offers the lowest prices for products, the differences between the prices on the system and the prices found in other places may not be that significant. Hence, the influence of lower prices on satisfaction for females, though significant, is somewhat smaller than that for males. In contrast, males usually do not comprehensively process all available information, but are selective. Males consider and rely on subsets of highly available cues. Low prices on the B2E benefit system can prevent them from paying high prices, and this is valuable, leading to high satisfaction.

Analysis of the full model

Items that measured POS and OCB were included in the questionnaire (Table I). The items of POS were taken from Eisenberger *et al.* (1986), while those of OCB were taken from Podsakoff and MacKenzie (1994). Since both POS and OCB are unidimensional (Hutchison, 1997; Lepine *et al.*, 2002), the reduced number of items are valid to represent the constructs. The Cronbach's α , 0.88 and 0.88 for POS and OCB respectively indicate that the measures have internal consistency.

A structural equation model with males and females as two separate groups was run to test the relationships between satisfaction, POS and OCB as postulated in

Figure 1. The results show that the chi-square value is 456.74 with 243 degrees of freedom, p -value < 0.01 , $\chi^2/df = 1.88$, GFI=0.82, RMR = 0.047, standardized RMR = 0.084, RMSEA = 0.82, CFI = 0.89, indicating that the model represents reasonable errors of approximation in the population (Byrne, 1998). The relationships among satisfaction, POS and OCB for males and females are shown in Table II. As hypothesized, those equations show that higher satisfaction leads to better POS. Higher satisfaction, mediated by POS, leads to better OCB. However, there are differences between males and females. POS fully mediates the relationship between satisfaction and OCB for females, while POS only partially does so for male.

To elucidate the full mediation role of POS on the relationship between satisfaction and OCB for females a model that includes the direct link between satisfaction and OCB is compared with the preceding model that has no such direct link. The change in chi-square between the two models was 1.71 for one degree of freedom, and this change was not significant ($p = 0.19$). The result indicates that POS fully mediates the relationship between satisfaction and OCB for female.

The relationships between satisfaction with the B2E benefit system and POS are the same for both males and females. The coefficient for males is 0.74, while that for females is 0.73. However, the relationships between POS and OCB differ between males and females. The coefficient for males is 0.27, while for females is 0.87. Females associate POS with OCB more strongly than males. Furthermore, the antecedent variables that lead to OCB differ between males and females. For males, satisfaction not only leads to POS, which leads to OCB, but also causes OCB directly. Restated, if males are satisfied with a B2E benefit system, regardless of POS, they will show OCB enactment. However, for females, satisfaction with a B2E benefit system leads to OCB only via POS. If, for some reason, POS is low, a B2E benefit system will less easily be able to encourage OCB.

Discussion and conclusions

This study shows that satisfaction with a B2E system which sells products is a multifaceted construct consisting of six dimensions: convenience, delivery, interface, accuracy, price, and security. The values of the goodness-of-fit indices obtained from

Item ^a	Coefficient α	R ²
<i>Male</i>		
POS ^a	0.74 × Satisfaction, (0.067) 11.15*	0.54 ^{***}
CB ^b	0.27 × POS ^a + 0.68 × Satisfaction, (0.079) 3.43* (0.11) 6.15*	0.48 ^{***}
<i>Female</i>		
POS ^a	0.73 × Satisfaction, (0.068) 10.73*	0.53 ^{***}
CB ^b	0.87 × POS ^a (0.081) 10.67*	0.47 ^{***}

Notes: ^a POS = perceived organizational support; ^b CB = citizenship behaviors; * t -value, significant at $\alpha = 0.01$ level; ^{***} Significant at $\alpha = 0.01$ level

Table II.
Equations representing the relationship between constructs for males and females

the original confirmatory factor analysis indicate that the second-order model of the instruments presented in this study provides a reasonable fit with the data.

Two-group structural equation modeling shows that the factors of satisfaction with the B2E benefit system are the same for both genders, except in regard to prices of products on the system. Males are more satisfied with low prices than females. This finding is interesting since females are usually more price-sensitive. However, few studies have examined the gender differences in the relationships between price and satisfaction in a setting like the B2E benefit system. Future research into the relationships in other settings may prove fruitful.

The relationship between satisfaction with the B2E benefit system and OCB is found to be strong and differs between males and females. For males, satisfaction with a B2E benefit system not only enhances POS, but also leads directly to OCB enactment. However, for females, satisfaction with a B2E benefit system will lead to OCB only via POS. This result explains partially why the mediating role of POS was stronger in the work of Moorman *et al.* (1998) than in that of Lambert (2000). The sample of Moorman *et al.*, consisted of 70 percent women, while Lambert's sample included only 43 percent women. Few previous studies in benefits, POS and OCB addressed gender differences. However, gender differences in satisfaction with the B2E benefit system and in the relationship among satisfaction, POS, and OCB were found herein. Gender differences deserve more careful attention.

Researchers have argued that an organization's actions enhance perceptions of organizational support to the extent that they signal to a worker that he or she is particularly valued, and that this signaling occurs only when the action is both discretionary and directed at the individual worker (Eisenberger *et al.*, 1986; Wayne *et al.*, 1997). Wayne *et al.* (1997) even assert that "benefits available to all employees regardless of performance would not be associated with POS". However, Lambert's (2000) study examined benefit target at a group and found that a relationship between benefit and POS did exist. The current study examines the benefits targeted at all of the company's employees and still found a strong relationship between benefits and POS. Employees' judging POS may include the conduct of other companies. If few other firms have B2E benefit systems, employee POS is strong. In contrast, if many firms in the same industry or vicinity have the system, employees probably do not consider the benefit system to represent extra effort on the part of the firm and so they feel relatively little POS. The company examined in this study was the first to offer the benefit system in an industrial park with approximately 200 companies, so the finding that its employees have strong POS is reasonable. Accordingly, contrary to the findings in the literature, the current study shows that benefits available to all employees can generate strong POS.

In this study, OCB was measured by self-reporting. This method can be argued to inflate the relationships among OCB and its antecedents. However, as indicated by Organ and Ryan (1995), much OCB may escape the notice of supervisors or peers, and therefore, be known only to the individuals. Furthermore, supervisors may be in a poor position to judge an employee's OCB since the employee may behave differently, depending on whether he/she expects that the supervisor will know of his/her behavior. Finally, an employee may not be willing to answer questionnaires because he or she has to identify himself or herself. Hence, self-rating OCB has its merits and has been used in many studies (Godard, 2001, Ryan, 2001, Tang and Ibrahim, 1998). Organ

and Ryan (1995), in their meta-analysis, found that the difference between other-rating and self-rating studies, in terms of mean estimated corrected population correlation coefficient, is 0.14. When evaluating the result of this study, this possible inflation should be kept in mind.

Culture and level of economic development may affect the relationships among satisfaction with a B2E benefit system, POS and OCB. Comparing OCBs between the USA and Romania, Turnipseed and Murkison (2000) suggested that national and organizational cultures are significant determinants of OCB. Tang and Ibrahim (1998) supported the contention that leader supportive behavior is more strongly related to OCB for people in the Middle East than for those in the USA. The data in this study were collected in Taiwan. From the perspective of Hofstede's cultural dimension of masculinity-femininity, Taiwan leans toward femininity. As this study shows, females associate POS with OCB more strongly than males. The relationship between POS and OCB herein would likely be stronger than that experienced by employees in countries from North America and Western Europe. More empirical studies in this area are needed.

The results of the research have important implications for managers. One of the main reasons why companies resist implementing a B2E benefit system is a concern that such a system may distract employees' attention from their work during working hours, and thus decrease the performance of individuals as well as the firm. However, a B2E benefit system may significantly decrease the time taken by, and efforts required of, employees who need to locate an item, e.g. an engineering book, for their work. Even if items required by employees are for personal use, employees do not need to leave the company early to buy them from a retail store. The time they save can still be used for work. Hence, a B2E benefit system can save employee time and improve performance. Additionally, as the study shows, a B2E benefit system can significantly improve POS and OCB. Employees may perceive that their company really trusts them and cares about their well-being. This perception, as well as the benefit system itself, promotes OCB, which results in improving the individuals' and company's performance. A B2E benefit system is a worthwhile undertaking for a company.

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Further reading

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