A Proposed Cross-National Study: The Effects of Self-Serving Bias and Co-Production on Customer Satisfaction
Mary Conway Dato-on, Fred Beasley

Abstract
Customer co-production is evident in numerous marketing exchanges. U.S. consumers routinely pump their own gas, bus their own tables, construct their own furniture, crop their own photographs, and check themselves out of everything from hotels to supermarkets. How does co-production influence customer satisfaction in different cultural settings? The overall objective of the proposed study is to answer this broad question by examining consumer co-production in two culturally diverse settings. The proposed research compares attitudes of a growing, yet relatively understudied consumer population in the Philippines to a demographically similar population in the United States. Specifically we investigate whether a self-serving bias in a co-production situation shown to exist in U.S. consumers (Bendapudi and Leone 2003) will be evident in Filipino consumers. The paper begins with a brief literature review of self-serving bias, co-production, and individualism/collectivism. Following this we propose a model, suggest methodology to measure the proposed model, and discuss practical and theoretical implications of the work.

Key words: Self-serving Bias, Co-Production.

Introduction
Globalization is a trend toward accelerated interdependence of decision outcomes made by consumers, companies, and governments. Increased global media availability and sophistication of global consumers mean that the choices made by managers in one region of the world affect corporate image across the globe. These realities necessitate cross-national research to ensure marketers understand the global implications of their marketing actions. The proposed study addresses this need for international marketing research by investigating a consumer behavior phenomenon in two national settings.

Customer co-production is evident in numerous marketing exchanges. U.S. consumers routinely pump their own gas, bus their own tables, construct their own furniture, crop their own photographs, and check themselves out of everything from hotels to supermarkets. How does co-production influence customer satisfaction in different cultural settings? The overall objective of the proposed study is to answer this broad question by examining consumer co-production in two culturally diverse settings.

Marketing literature has investigated the trend of customer participation in the production of goods and services from an economic and psychological perspective in the United States (Bendapudi and Leone, 2003; Fitzsimmons, 1985). Researchers from marketing and psychology suggest that cultural differences in the consumer population may lead to success or failure of customer co-production strategies (Bendapudi and Leone, 2003; Gelfand et al., 2002). To date, no known study has explored the psychological underpinnings of consumer participation in the production of goods and services across cultures. The proposed study attempts to bridge this gap by studying the relationships between three variables (1) national origin (the U.S.A. and the Philippines), (2) the cultural dimension of individualism/collectivism, and (3) self-serving bias in co-production settings. The proposed research compares attitudes of a growing, yet relatively understudied consumer population in the Philippines to a demographically similar population in the United States. Specifically we investigate whether a self-serving bias in a co-production situation shown to exist in U.S. consumers (Bendapudi and Leone, 2003) will be evident in Filipino consumers.

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The study will utilize the theoretical framework of self-serving bias and scenario methodology of Bendapudi and Leone (2003) to investigate consumers’ perceived satisfaction with co-production outcomes. We offer a unique contribution to the literature by studying the perceptions across cultures (U.S. and Philippines) of the relationship between self-serving bias and customer satisfaction. As shown in Figure 1, we propose that the cultural dimension of individualism/collectivism (Hofstede, 1980) and national origin will moderate the relationship. The paper begins with a brief literature review of self-serving bias, co-production, and individualism/collectivism. Following this we propose a model, suggest methodology to measure the proposed model, and discuss practical and theoretical implications of the work.

![Fig. 1. Proposed Model](image)

**Literature Review**

**Consumer Co-Production and Self-Serving Bias**

In the United States, many marketing exchanges involve consumers participating in the production of the final good or service. One aspect of participation is the use of self-service kiosks prevalent in banks (ATM), grocery stores, and airports. IHL Consulting Group estimated that in 2003 U.S. consumers spent $128 billion at all types of kiosks; up 80% from 2002. IHL expects this trend to continue, estimating that by 2007 the figure may reach $1.3 trillion (Kiviat, 2004). In addition to this growth in self-service, U.S. consumers are increasingly co-producing goods and services. Consumers often assemble their own furniture, install their own computer software, and even customize music mixes (e.g., MP3). Apple’s iTunes.com, the leader in legally downloadable music, has sold over 100 million songs to date (USA Weekend, 9/10/04). Harley Davidson, with its cult-like following encourages co-production through after-market accessories (Schouten and McAlexander, 1995). The statistics leave little doubt that the phenomenon of involving consumers in production of the final good or service is growing in the United States.

Dabholkar (1990) defines customer participation as “the degree to which the customer is involved in producing and delivering the service.” Bendapudi and Leone (2003) distinguish between two forms of customer participation: self-service and joint production. In the latter case, consumers work with firm’s employees to formulate the final product/service. In co-production, then, a dyad exists where mutual dependence for production success is found. This interdependence on the part of the customer and the firm means both parties have a degree of responsibility for the ultimate satisfaction of the customer and profitability of the firm. The present manuscript concentrates on co-production.

Marketing research is inconclusive as to whether co-production increases, decreases, or has no effect on customer satisfaction (Bendapudi and Leone, 2003; Kellogg et al., 1997). To explain the link between co-production and product/service satisfaction, marketing researchers applied the concept of self-serving bias from social psychology. Self-serving bias is one’s tendency to accept more credit for success and less responsibility for failure in a jointly produced outcome (Wolosin et al., 1973). Self-serving bias as a phenomenon is derived from attribution theory. Nu-
merous researchers across many disciplines have concluded that people have a tendency to see themselves as better than others (Campbell and Sedikides, 1999; Knee and Zuckerman, 1996). This self-serving tendency pervades various domains including organizations (Johns and Xie, 1998), negotiations (Gelfand et al., 2002), consumer behavior (Bendapudi and Leone, 2003; Folkes, 1988), and academic performance (Green et al., 1994). Prior to the implementation of a co-production strategy, a firm should be aware that customers may be less likely to take blame and are more likely to take credit in joint production of a service/product and be prepared to handle either situation in order to avoid drops in customer satisfaction.

**Culture and Self-Serving Bias**

Heine and Lehman (1997) suggest that Eastern cultures do not show the same individually focused concept of self or self-serving bias as Western cultures. These authors suggest that a national culture’s tendency toward individuality or collectivism may change the effect of self-serving bias. Based on this finding and other similar work (Gelfand et al., 2002; Johns and Xie, 1998), Bendapudi and Leone (2003) call for cross-cultural research on self-serving bias and satisfaction in the co-production context. The proposed study is a partial answer to this call.

Psychology research is replete with studies investigating the meaning of self across cultures (Kashima et al., 2004; Markus and Kitayama, 1991; Sonderegger and Barrett, 2004). In general, researchers conclude that while universal aspects of self exist (i.e., private, inner aspects), two distinct construals of self are evident in Eastern and Western cultures. Eastern cultures such as Japanese, Chinese, and Filipino view the self through one’s connectedness to others. The self, then, is interdependent with those in their social context (Markus and Kitayama 1991). The interdependent self “understands behaviors are influenced much more strongly by the thoughts, feelings, and actions of others” (Al-Zahrani and Kaplowitz, 1993, p. 223). When this construal of self is elevated to the societal-cultural level, the culture is said to be collectivistic. Collectivism “pertains to societies in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people’s lifetime continue to protect them in exchange for unquestioning loyalty” (Hofstede, 1991, p. 51).

Western cultures such as the U.S., England, and Canada believe in the inherent uniqueness of each person. Cultural norms promote independence from others and self-reliance beginning in early childhood and continuing through old-age. This independent construal of self perceives an individual “whose behavior is organized and made meaningful primarily by reference to one’s own internal repertoire of thoughts, feelings, and actions” (Markus and Kitayama, 1991, p. 226). Elevated to the societal-cultural level, the culture is said to be individualistic. Individualism “pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family (Hofstede, 1991, p. 51).

The construal of self and societal level is believed to influence self-serving bias. Although some contradictions exist (e.g., Kashima and Triandis, 1986; Yamauchi, 1988) research suggests that individuals from Western, individualistic cultures, perhaps because of a greater need to maintain self-esteem, activate the self-serving bias to a higher degree than those from Eastern, collectivistic cultures (Al-Zahrani and Kaplowitz, 1993; Johns and Xie, 1998; Kashima and Triandis, 1986; Nam, 1995). The occurrence of self-serving bias may be impacted by the extent to which one views oneself as connected to others. One important caution in interpreting the findings is necessary. Most of the studies cited above did not actually measure individualism-collectivism but rather used national origin as a proxy for the cultural dimension. Al-Zahrani and Kaplowitz (1993) did measure the individualism-collectivism construct using Triandis et al. (1988). Although differences between the two national groups studied (Saudi and U.S.) were evident on the measurement of individualism-collectivism; they found the cultural dimension did not influence self-serving bias.

In the proposed study we will use both the proxy of national origin and a measure of individualism-collectivism (Hofstede, 1980) to investigate possible differences within and between U.S. and Filipino consumers in their use of self-serving bias in a co-production setting. We concur with Al-Zahrani and Kaplowitz (1993) who note that most of the theory and empirical study of collectivistic cultures has emphasized East Asia. The Philippine culture is a unique combination of
Western and Eastern cultural norms. The country was conquered by Spain for over 300 years, occupied by Japan for four years, and ruled by the U.S. for almost 40 years. The result is a somewhat eclectic culture based on American-like educational and political systems, Spanish-invoked Catholicism, extended-familial piety, machismo, and Asian-based beliefs of reverence for ancestors, deference to authority, ascribed status, loyalty, gratitude (*utang na loob*), superstition, and collectivism (Karnow, 1989).

Thus we anticipate the prevalence of collectivism in the Filipino culture based on previous research in other Asian countries (Gudykunst et al., 1992; Larson and Kleiner, 1992; Oishi et al., 2000; Triandis et al., 1988) while acknowledging that manifestation of collectivism in the current setting may be unique from that found in research based in Japan and China. For example, as Triandis (1988) notes, in “collectivist cultures of the Mediterranean and Latin America, . . . preservation of one’s honor is a supreme value” (p. 326). The Filipino, whose culture has been influenced by Spanish and American imperialism, must balance the cultural norm of collectivism with machismo and preservation of one’s honor.

**Research Propositions**

Consistent with self-serving bias theory (Campbell and Sedikides, 1999), if the outcome of a co-production experience is better than expected, a customer should assume greater responsibility for the successful outcome. In the co-production context (Table 1), U.S. consumers take credit for positive outcomes and are therefore less satisfied with the firm’s contribution to the co-production. Conversely, U.S. consumers are less likely to accept blame for poor co-production outcomes; therefore satisfaction with the firm will remain the same as if there was no participation. If the consumer does not participate in production, all credit for the outcome goes to the firm, therefore the U.S. consumer will be more satisfied when outcomes are better than expected and as satisfied when the outcomes are negative or as expected (Bendapudi and Leone, 2003).

<table>
<thead>
<tr>
<th>Condition 2 (2 levels)</th>
<th>Participation</th>
<th>Non-Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition 1 (3 levels)</td>
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<tr>
<td>Outcome</td>
<td></td>
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</tr>
<tr>
<td>Better than Expected</td>
<td>Less Satisfied</td>
<td>More Satisfied</td>
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<tr>
<td>Worse than Expected</td>
<td>As Satisfied</td>
<td>As Satisfied</td>
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<tr>
<td>As Expected</td>
<td>As Satisfied</td>
<td>As Satisfied</td>
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</tbody>
</table>

If the collectivistic dimension of culture moderates the activation of self-serving bias, Filipinos should neither take credit nor avert blame for co-production outcomes. Therefore, regardless of whether the Filipino consumer participates in production, s/he will be more satisfied with a positive outcome, less satisfied with a negative outcome and as satisfied in neutral outcomes. Table 2 illustrates these expectations.

<table>
<thead>
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<tr>
<td>Worse than Expected</td>
<td>More Satisfied</td>
<td>Less Satisfied</td>
</tr>
<tr>
<td>As Expected</td>
<td>Satisfied</td>
<td>Satisfied</td>
</tr>
</tbody>
</table>
In proposition form we submit the following.

**P1a:** For U.S. respondents, when an outcome is better than expected, a customer who participates in production with the firm will be less satisfied with the firm than will a customer who does not participate in production.

**P1b:** For U.S. respondents, when an outcome is worse than expected, a customer who participates in production with the firm will be as satisfied with the firm as will a customer who does not participate in production.

**P1c:** For U.S. respondents, when an outcome is as expected, a customer who participates in production with the firm will be as satisfied with the firm as will a customer who does not participate in production.

**P2a:** For Filipino respondents, when an outcome is better than expected there will be no difference in the level of satisfaction with the firm between the participation vs. non-participation conditions.

**P2b:** For Filipino respondents, when an outcome is worse than expected a customer who participates in production with the firm will be more satisfied with the firm than will a customer who does not participate in production.

**P2c:** For Filipino respondents, when an outcome is as expected there will be no difference in the level of satisfaction with the firm between the participation vs. non-participation conditions.

**P3a:** Individualistic respondents will exhibit the same outcome/satisfaction relationships as U.S. respondents.

**P3b:** Collectivistic respondents will exhibit the same outcome/satisfaction relationships as Filipino respondents.

### Proposed Methodology

#### Participants

We plan to distribute surveys to undergraduate students at a medium-sized state university in the United States and two universities in the Philippines (one private and one public). Demographic questions on university major, year in school (freshman, sophomore, junior, and senior), sex, age, work experience, estimated family income and travel abroad experience will be included in the surveys to assess cross-nation sample equivalence. English surveys will be used in both locations. Filipinos are educated in English and Tagalog (Philippines national language). At the college level English is the primary language of instruction, thus translation is not necessary.

#### Procedure

The methodology for the proposed study will follow Bendapudi and Leone (2003) with minor adjustments to overcome shortcomings the authors acknowledged in their research. Six scenarios are used to describe purchases in three product (bookshelf, poster frame, and custom-fit jeans) and three service (attorney, travel agent, and weight-loss center) categories. As noted in Tables 1 and 2, the scenarios depict one of six experimental conditions (two levels of customer participation: participation vs. non-participation x three outcome levels: better than expected, worse than expected, as expected). Table 3 shows samples of the proposed scenarios.

Each respondent will receive six scenarios, one for each product/service category that reflects one of the six experimental conditions. As with Bendapudi and Leone (2003), the order of scenarios will be randomized for each subject and the androgynous name “Pat” used to avoid confounding effects of male/female actors and respondents. The projective technique of asking students to put themselves in Pat’s place and specify how they think Pat would respond to the setting will be used. Likewise, the manipulation of outcome quality will be kept independent of participation in production. In other words, the scenarios will indicate that there were no problems or difficulties with the production whether Pat participated or not. Scenarios simply state that the outcome was better than expected, worse than expected, or as expected depending on the condition.

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1 Propositions 1a-1c are a replication of Bendapudi and Leone (2003).
Table 3

Sample Scenarios

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Satisfaction</th>
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<tbody>
<tr>
<td>Pat consults a lawyer about drafting a letter to a landlord for a return on a security deposit. The lawyer shows Pat a form letter. Using the form letter, Pat drafts and mails the letter to the landlord. The letter is written fine; Pat’s refund from the landlord is as good as expected.</td>
<td></td>
</tr>
<tr>
<td>Pat is going on vacation. Pat talks to a travel agent about selecting a hotel room. Pat calls to reserve the room. The room looks fine; Pat thinks the view is as good as expected.</td>
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<tr>
<td>Pat talks to a weight counselor at a weight-loss center and selects a weight-loss plan. The center gives Pat a food list to shop for food according to the plan. Pat's weight loss is not as good as expected.</td>
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</tr>
<tr>
<td>Pat is shopping for a bookshelf to purchase. Pat talks to a salesperson and selects the bookshelf to buy. Pat is told the store will assemble and deliver the shelf. The shelf is assembled fine; Pat thinks the shelf is less sturdy than expected.</td>
<td></td>
</tr>
<tr>
<td>Pat received a poster as a birthday present and is shopping for a frame for the poster. Pat talks to a salesperson and selects the frame for the poster. Pat is told that the store will build the frame. The frame is built fine; Pat thinks the frame matches the room much better than expected.</td>
<td></td>
</tr>
<tr>
<td>Pat talks to a salesperson and selects fabric and color for custom-fit jeans. The employee takes Pat’s measurements for the custom fit jeans and enters them into the computerized sewing machine. The jeans are tailored fine; Pat thinks the fit is much better than expected.</td>
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</tr>
</tbody>
</table>

After each scenario, respondents are asked to indicate Pat’s level of satisfaction with the firm (service provider). Bendapudi and Leone (2003, p. 26) indicate the need for a multi-item measure of satisfaction; therefore our satisfaction measure includes three 9-point semantic differential items anchored by dissatisfied-satisfied; displeased-pleased; and unhappy-delighted. These anchors are consistent with Bendapudi and Leone’s (2003) pre-test.

Following all the scenarios, respondents will be asked to complete two additional sets of information. First, they will receive the Hofstede 10-item measure of individualism/collectivism (See Table 4). A 7-point Likert-type scale is used for the measure, anchored by 1 – strongly disagree, and 7 – strongly agree. While much controversy exists over the reliability and validity of Hofstede’s dimensions of culture (Spector et al., 2001; Yeh, 1988) marketing scholars continue to use and refer to Hofstede’s scales (Hui et al., 2004; Hult et al., 1999; Litvin and Goh Hwai Kar, 2003; Singh, 2004; van Everdingen and Waarts, 2003). In accordance with Hofstede’s work, the scale will be scored so that high scores represent individualistic tendencies.

Table 4

Hofstede’s 10-item Individualism/Collectivism Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale anchored by 1 – strongly disagree, and 7 – strongly agree</th>
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<tbody>
<tr>
<td>I stick with my group even through difficulties.</td>
<td></td>
</tr>
<tr>
<td>My personal accomplishment is more important for me than group success.</td>
<td></td>
</tr>
<tr>
<td>I do not support my group when I feel they are wrong.</td>
<td></td>
</tr>
<tr>
<td>If the group is slowing me down, it is better to leave and work alone.</td>
<td></td>
</tr>
<tr>
<td>It is important for me that I have considerable freedom to adopt my own approach to the job.</td>
<td></td>
</tr>
<tr>
<td>It is important for me that a job leaves sufficient time for my personal or family life.</td>
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<tr>
<td>It is better to work in a group than alone.</td>
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<tr>
<td>Groups make better decisions than individuals.</td>
<td></td>
</tr>
<tr>
<td>I prefer to be responsible for my own decisions.</td>
<td></td>
</tr>
<tr>
<td>Contributing to the group is the most important aspect of work.</td>
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</tbody>
</table>

The second scale will be a measure of self-serving bias previously used by Knee and Zuckerman (1996). Four items will be administered on a 7-point likert-type scale assessing (1) the degree to which participants felt Pat was responsible for performance in the co-production setting; (2) how much credit or blame they give Pat for the co-production outcome; (3) the extent to which...
Pat’s performance shows how successful Pat is in general; and (4) the degree to which Pat’s performance was due to Pat’s doing as opposed to factors unrelated to Pat. Bendapudi and Leone (2003) did not actually measure self-serving bias. The addition of this measure to the study will be another extension of their work.

Discussion

The goal of this paper is to propose a study which answers the question: How does co-production influence customer satisfaction in different cultural settings? Studying the effects of co-production on customer satisfaction is critical given the dramatic growth of self-service and co-production in the marketplace. In the grocery business alone, it is estimated that 95% of all supermarkets in the U.S. will have self-checkouts by 2006 (Grimes, 2004). Cost savings are the primary motivation for the proliferation of co-production and self-service. For example, Forrester Research estimated that self-service airport kiosks save an airline $3.52 per passenger (Jones, 2004). Also, Dabholkar (1990) posits that firms may benefit from customer co-production because it may impact consumer perceptions of waiting time (i.e., they believe waiting times are shorter) and may increase perceived quality. As self-service and co-production grow in use, it will be very important that marketers understand the psychological effects these activities have on consumers.

We also believe the study offers a unique contribution to the literature and begins a stream of future research that may prove valuable for marketing practitioners and researchers. Consumer psychology in the Philippines is a relatively understudied phenomenon with little empirical research results available. Studies such as the one proposed here may increase our understanding of complex constructs such as self-serving bias and customer satisfaction in the unique Filipino culture.

Understanding the influence of self-serving bias on customer satisfaction in co-production situations will also help marketing researchers to suggest strategies which enhance or negate the effects in order to maximize satisfaction. For example, customer relationship management techniques can be utilized to establish close relationships with customers since previous research has found that self-serving bias is less likely when a jointly produced outcome involves friends rather than strangers (Sedikides et al., 1998). In collectivistic cultures such as the Philippines, creating and maintaining close relationships with customers may be an expected business practice and thus have different effects in co-production situations.

The results of the study may also guide a firm in its decision to engage in co-production. Bendapudi and Leone (2003) propose that if self-serving bias is found by research to exist, firms might encourage or discourage co-production based on the probability that their customers will experience outcomes that meet their expectations. If it is expected that outcomes will not meet expectations, co-production should be encouraged, but if outcomes are expected to exceed consumer expectations, co-production might be discouraged.

Future research might assess the effect of co-production on customer perceptions of the price of a product. Consumers may feel that their involvement in co-production reduces the product’s price. Research could also examine customer satisfaction and the occurrence of self-serving bias in co-production settings in which the customer’s participation efforts have a negative effect on outcome quality. The study of the occurrence of self-serving bias in co-production should also be extended beyond hypothetical scenarios to a real-world, field setting.

References


