

A Transaction Cost-Benefit for the Bottom of the Pyramid Market

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Abstract

Purpose : Transaction cost benefit is the prime reason for the adoption of technology by the bottom of the pyramid who survive on agriculture. This article empirically tested perceived economic well-being (PEWB) and conspicuous consumption (CC) for being the antecedents of transaction cost benefit as discerned by the bottom of the pyramid (BoP) section.

Methodology : Data were collected from 329 respondents by a two-stage stratified sampling procedure from rural Indian farmers using a structured survey instrument. In the first stage, the measurement model was examined for its reliability and validity, while in the second stage, the strength and direction of the hypothesized paths were investigated through the structural model. The relationships were subsequently checked for the moderation effects of income and gender.

Findings : This study affirmed that CC and PEWB established transaction cost benefits. Moreover, income and gender moderated the PEWB–CC relationship, resulting in important implications for the service providers.

Practical Implications : The BoP segment also wants to show off or consume conspicuously. If they are able to achieve it, they sense a benefit. Any perceived economic or non-economic benefit with the use of a product/service augurs cost benefit for this segment.

Originality : Through this research, the author identified the interplay of CC and PEWB, which leads to transaction cost benefits. It can be used as a measure to gauge the financial inclusion of bottom-of-the-pyramid farmers in developing countries.

Keywords : perceived economic well-being, conspicuous consumption, transaction cost benefits, BoP

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Effective use of information and communications technology can increase the socioeconomic status of farmers. The emerging field of mobile-based agricultural extension services (AES) is leading to the improvement of agriculture and the livelihood of farmers through improved information about weather forecasts, pest management, soil nutrition, market prices for produce, etc. Franklin D. Roosevelt coined the phrase bottom of the economic pyramid in 1932 during a radio dialog, “The Forgotten Man” (Rahman et al., 2014), which was later on termed as bottom of the pyramid (BoP) and applied as a business strategy by Prahalad and Hart (2002). According to one estimate, four billion people comprise the BoP (Deb & Sengupta, 2020; Lappeman et al., 2019; London & Anupindi, 2011), which equates to more than half of the total world population. This figure is determined by the number of people who earn less than or equal to US \$2/day, based on purchasing power parity (Karnani, 2007). With an estimated buying power of between 1.3 and 3.1 trillion USD (Lappeman et al., 2019), BoP customers can co-create value with or without direct support from marketers (Dey et al., 2016). Out of the 3 to 4 billion people worldwide, India has the world's largest number of this segment (Chakrabarti & Henneberg, 2023;

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Nagy et al., 2020). According to one estimate, around 70% of the Indian population, or 1 billion Indians, belong to this segment (Goyal et al., 2021). The world BoP population is projected to grow to 6 billion in the next 40 years (Panda et al., 2022). The majority of them would still be from India, necessitating a need for a study of their behavior. The BoP segment comprises both consumers (Chakravarti, 2006) and producers (Vaswani et al., 2005). BoP customers co-create value not only by being mere buyers but also by serving producers of goods.

Poor are value conscious customers who maximize their utility preferences by keeping their preferences that are congruent with their true self-interest (Prahalad, 2004). Studies have established that consumers weigh the benefits of consuming a product or service like electricity (Hobman et al., 2016) on the merits of their transaction costs. The poor weigh consumption benefits for each transaction rather than the overall benefits during the use of services like mobile applications, their only source of communication (Mudliar, 2018). These transactional benefits can be better interpreted by transaction cost economics (TCE). TCE offers an appropriate framework for understanding the value added by each mobile brand (Fernández-Barcala & González-Díaz, 2006). This paper investigates the factors forming the transaction cost benefits (TCB) for the BoP segment by taking up the case of mobile-based AES applications.

Agricultural extension is a longstanding practice of congregating, creating, and disseminating information about farming and agribusiness with the rural population. A Pakistani study established those small-scale farmers who used the AES produced a better yield compared to that of the medium- and large-scale farmers. The use of AES empowers the BoP as they become self-efficacious with access and control over their scarce land resources (Kamin et al., 2022). Therefore, perceived economic well-being (PEWB) and conspicuous consumption (CC) are two such factors that influence TCB through the use of an innovative product such as mobile based AES. BoP segment customers aspire to improve their condition, with their well-being always on top of their mind. Additionally, they would like to exhibit the use of such an innovative product within their social group. The public display of mobile usage can be related to CC, as it communicates to others their status and identity (Segal & Podoshen, 2013). Similarly to luxury goods, the consumption of social services quenches the craving for status by BoP (Johnson et al., 2018).

Since lack of money is a hindrance to any purchase, a BoP customer would weigh the perceived economic benefits and the desire for CC to yield a TCB. CC forms the basis of the theory of compensatory consumption in a situation of resource constraints, such as during the economic recession in Romania. So, it may be construed that the customer would adopt innovative services like mobile-based AES as they perceive it as a harbinger of wealth.

The originality of the paper lies in measuring the influence of PEWB and CC upon TCB for the BoP segment. This article addresses the causes of social issues rather than the outcomes. It can be considered as an advancement toward the knowledge of upstream social marketing as the impact of factors is deliberated (Gordon, 2013). This base of upstream social marketing will affect the judgments of upstream decision-makers (Kennedy et al., 2018).

Literature Review

Theory of Compensatory Consumption

An increase in income due to the interplay of social capital and capability enhancement shall lead to well-being (Ansari et al., 2012). Gronmo (1988) conceptualized the theory of compensatory consumption which envisages that compensation for a lack of status in society, low-income households along with poor or underprivileged in developing countries may offset against it by spending on socially visible products. Compensatory consumer behavior refers to any purchase, use, or consumption of products or services inspired by a craving to counterpoise or diminish a self-discrepancy. It has also been defined as the ability of product choices and consumption experience to restore consumers' diminished sense of control and related to a low sense of power. Detaching CC

from its compensatory root may also aid low-status groups to achieve greater economic parity. Therefore, organizations should also perform demarketing by discouraging the base of the pyramid population from making compensatory consumption (Bharti et al., 2014).

Monetary Limitations of BoP

This segment has irregular cash flow (Anderson & Markides, 2007), resulting in low and uncertain/volatile earnings (Singh et al., 2015). There are many variations of BoP classification which show asymmetry. The international poverty line defines earning less than \$1.25 (₹ 100) per day (Bharti et al., 2014). Ansari et al. (2012) stated BoP is those people who earn less than \$ 2 (₹ 166) per day. According to a World Bank report, this segment earns between US\$ 1.90 (₹ 158) and 3.10 (₹ 258) per day, based on a survey of 89 countries in 2013 (CIA.gov, 2022). This segment earns less than \$ 1,500 (₹ 125,000) per annum (Prahalad, 2012). In a meta-analysis study on BoP research, Kolk et al. (2014) found BoP to have per capita income at or below US \$1,500 (₹ 125,000) or US\$ 2,000 (₹ 166,000) per annum (expressed on an internationally comparable “purchasing power parity” basis). It has been measured by the buying power index (BPI) for the BoP, defined as consumers with an annual income of US\$ 3,000 (₹ 250,000) or less (Guesalaga & Marshall, 2008). A person below the poverty line earns \$ 0.5 (₹ 42) per day per capita (Ahmed & Kumar, 2015). Cardoso (2005) defined a low-income market as a place that has more than one million inhabitants with an annual income between US\$765 (₹ 63,845) and US\$ 9,385 (₹ 332,570). This segment is issued a red-colored below-poverty level (BPL) card by the Indian government.

BoP Segment

They comprise the poorest socioeconomic clusters in the universal income pyramid, employed chiefly in informal markets (Ramani et al., 2017; Tabeck & Singh, 2022). Their attitude, perceptions, and purchase practices are different from middle and high-end customers (Barki & Parente, 2006). Their aggregation is four billion, which is about two-thirds of the world population (Schuster & Holtbrügge, 2012). They suffer from poor infrastructure, loose legal framework, inadequate rights to property (Anderson et al., 2010), and inadequate skills (Ramani et al., 2017) while dwelling in collectivist and communal environments (Dey et al., 2016). Marketing success has been found by such firms who have built infrastructure for the supply of their goods and interacted with the BoP segment (Gutiérrez & Vernis, 2016) or stayed committed to the BoP segment by producing more than the local companies (Schuster & Holtbrügge, 2012).

Transaction Cost Benefits

Transaction costs are the costs of running the system (Coase, 1937). It is comparative and needs to be significant (Tadelis & Williamson, 2013). It is based on opportunism and appropriate response to control environmental uncertainty (Williamson, 1979), which results in benefits due to its opportunistic behavior (Ghosal & Moran, 1996). The moot question in transaction cost analysis is whether a transaction is more efficiently performed within a firm (vertical integration) or outside it by autonomous contractors (market governance) (Geyskens et al., 2006). Similarly, individuals weigh their choices between the existing mode and the new alternate mode of running the system. Individualists have a higher opportunistic propensity in intra-group transactions, while collectivism is in intergroup transactions (Chen et al., 2002).

According to TCE, a buyer is an individual who would transact with a seller who can minimize the transaction costs (Che et al., 2015; Chircu & Mahajan, 2006). Transaction costs would be higher because of information asymmetry and opportunistic behavior. However, they would choose that mode which is beneficial to them and

result in TCB. This is based on transaction cost theory (Coase, 1937; Williamson, 1979), which is governed by bounded rationality and opportunism. Transaction costs include the evaluative effort required to search for information before repurchase, the effort required to prevent being deceived when repurchase proceeds, and specific asset investment (Wu et al., 2014). A transaction has several facets which include perceived economic and consumption status benefits (Alagheband et al., 2011).

Perceived Economic Well-Being

According to Walson and Fitzsimmons (1993), perceived income appropriateness, fulfillment with current total household revenue, the sum of money the household is able to save, amount of current liability, level of consumption, total household assets, and funds at disposal to meet a financial emergency determine one's PEWB. If people are more satisfied with their resources and view their present financial situation better as compared to five years ago, they perceive economic well-being more favorably. These can be achieved by saving on a regular basis. PEWB has been described as an idiosyncratic valuation of inclusive monetary endurance (Draughn et al., 1994) to assess whether they are worse, the same as or better off than others in their community (Beckett & Pebley, 2003).

It has been measured by their finances for basic needs (Raffaelli et al., 2012). Cultural differences influence the beliefs, values, and behavioral tendencies that contribute to financial well-being (Mokhlis, 2009). Financial well-being has been measured by overall satisfaction with one's financial situation (van Praag et al., 2003). A higher income is related to better financial well-being (Sabri et al., 2012). A higher PEWB would better the financial status with an increased perceived savings on costs (Carter, 2011). Individuals accumulate resources over and above their minimum needs by continuous savings on their transaction costs according to resource theory (Foa & Foa, 1980). Thus, the following is stated:

✦ **H1:** A higher PEWB positively influences a higher transaction cost benefit for mobile-based AES.

Conspicuous Consumption

It was conceptualized by Veblen (1992) as the reason for consumption by the rich. It is construed that the social differentiating mechanism is propagated by acts of CC (Bourdieu, 1984). Over a period of time, it has been felt human conspicuity nature is not only for the rich but also for the poor (Fafchamps & Shilpi, 2008). An increase in income leads to a higher CC (Heffetz, 2011). The acquisition and display of expensive items to attract attention to one's wealth or to suggest that one is wealthy is termed CC (O'Cass & McEwen, 2004). According to Stanković (2008), displaying the use of consumer goods for the purpose of impressing others rather than for satisfaction during consumption is CC (Stanković, 2008). A longitudinal study in Bolivia for health-related applications establishes that CC signals prestige and status for the underprivileged (Undurraga et al., 2016). Individuals who spend more on CC reported lower levels of subjective well-being in India (Linssen et al., 2011).

A higher CC is expected to be displayed by low-income rural groups to gesture status owing to a reduced appeal of other mechanisms (Jaikumar & Sarin, 2015) and substitute for intelligence as a signal of status (Moav & Neeman, 2012). Similarly, the BoP segment of AES users shall consider conspicuously flashing AES as a sign of their PEWB. The mere possession of AES will determine not only CC but also the gravity of the resulting rise in social status due to the perceived economic gains (Ordabayeva & Chandon, 2011). It prompts one's upgraded standing on the societal ladder by higher perceived economic benefits (Linssen et al., 2011). Hence, it is argued that:

✦ **H2:** A higher CC positively influences a higher transaction cost benefit for mobile-based AES.

⇒ **H3** : A higher PEWB positively influences a higher CC for mobile-based AES.

Categorical Variables

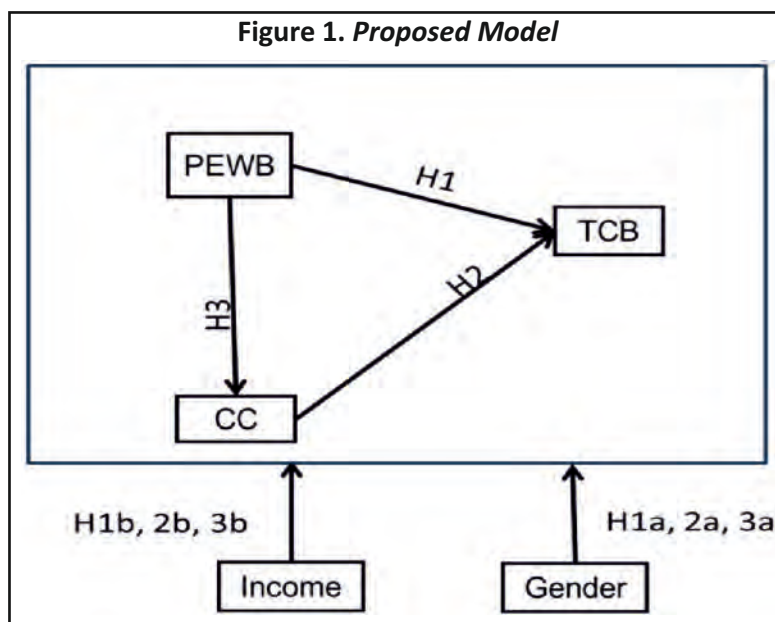
Gender differences have been studied for a long time in social service research (Carli, 1999), and they form the basis for the variance in valuing certain possessions (Segal & Podoshen, 2013). Socio-cultural issues affect genders differently in the rural BoP context (Kumbhar, 2013), and females face more hurdles than men (Mudliar, 2018). Marketers benefit from gender-specific messaging (Lancellotti & Thomas, 2018). Females perceive a higher risk than men. CC signals achievement of upward mobility more for females than males (Johnson et al., 2018; Segal & Podoshen, 2013).

Income difference results in the inability to perceive the economic benefits or conspicuously consume (Singh et al., 2015). Similarly, initial income is a moderator to the growth of poor individuals and their PEWB (Bluhm et al., 2018) and moderates the satisfaction of individuals (Duffy et al., 2017). A person cares about PEWB, and his/her level of care depends on his/her income level.

Based on the past literature study of these two moderators, it can be hypothesized that:

- ⇒ **H1_a** : Gender moderates the relationship between PEWB and transaction cost benefit for mobile-based AES.
- ⇒ **H1_b** : Income moderates the relationship between PEWB and transaction cost benefit for mobile-based AES.
- ⇒ **H2_a** : Gender moderates the relationship between CC transaction cost benefits for mobile-based AES.
- ⇒ **H2_b** : Income moderates the relationship between CC and transaction cost benefit for mobile-based AES.
- ⇒ **H3_a** : Gender moderates the relationship between PEWB and CC for mobile-based AES.
- ⇒ **H3_b** : Income moderates the relationship between PEWB and CC for mobile-based AES.

From the hypotheses mentioned above, the following model is proposed in Figure 1.



Instrument

Independent variables were aggregated items adapted from the PEWB and CC scales developed by Chaudhuri et al. (2011) and Hayhoe and Wilhelm (1998), respectively. Statements were modified as appropriate from the original items to measure the PEWB and CC for mobile based AES and appended after the references. The dependent variable was a single-item measure of TCB. Single-item measures are time and cost efficient (Gilbert & Kelloway, 2014) and have higher convergent validity for smaller sample sizes in comparison to multiple items (Cheah et al., 2018). Bergkvist and Rossiter (2007) have stated in their research that a single item measure is suitable if crafted carefully with a unanimous agreement on what is being measured (Diamantopoulos et al., 2012). The questions were translated into Hindi and verified by subject experts before being administered to the respondents.

A stratified random sampling technique was applied for data collection. First, districts within the county and, second, respondents within the short-listed district were randomly picked. The population comprises subsistence BoP farmers using mobile-based AES. The first strata encompassed eight Indian counties from the north and were segregated by terrestrial borders. The socio-demographic characteristic was determined by the income in each stratum. The respondents possessing a BPL card were selected randomly in each district. A BPL card is dispensed by the county administration, which permits the cardholder access to food grains (rice and wheat), health insurance, and fuel (kerosene) at subsidized prices.

Additionally, red-colored BPL cards form the basis for getting government benefits. The population of this study is composed of all mobile-based AES users in the eight rural districts of north Indian states. Mandore block of Jodhpur, Manpur of Gaya, Ghansaur of Seoni, Gannaur of Sonipat, Pindra of Varanasi, Bachharawan of Rae Bareli, Rengali of Sambalpur, and Pingla block of Kharagpur were earmarked as the strata. The Red BPL card holders list in each block served as the sampling frame. Farmers using mobile-based AES were the sampling units.

Data Analysis and Results

A two-stage method was applied for the analysis of data. In the first stage, the measurement model tested the reliability and validity of each of the constructs. The subsequent and final stage tested the structural model for the authenticity of the three hypothesized relationships.

Data was collected from 329 respondents during October to November 2022. Oral consent for participation in the survey of all the respondents was obtained; 62% of the respondents were male; 61.4% of farmers did not own their land; and 20.1 % possessed a land area of less than 2 acres. The majority of the respondents were graduates (66.9%), while 6.7 % were illiterate. A total of 76.9% had a family income of less than Indian Rupees 10,000 (US\$ 120) per month.

Measurement Model

Individual items of a construct with a factor loading higher than 0.7 (Wang & Stanley, 1970) are acceptable. Composite reliability values (Table 1) suggest that the construct is reliable as their values exceed the recommended cut-off point of 0.70 (Fornell & Larcker, 1981; Nunnally, 1967).

Standardized factor loadings estimate of 0.5 or higher and AVE estimates should be 0.5 or greater suggesting adequate convergent validity (Hair Jr. et al., 2009). The scales also hold discriminant validity as the square root of AVE is greater than their corresponding inter-construct correlations in Table 1 (Hair Jr. et al., 2009). A single-factor test, as suggested by Harman (1976), monitored for any common method bias in the collection of data. The analysis depicted that the first factor reported 13.21 % of the variance, which is lower than 50%. This

Table 1. Psychometric Properties and Hypotheses

	Mean	AVE	Composite Reliability	CC	PEWB	TCB	PEWB → TCB (H1)	CC → TCB (H2)	PEWB → CC (H3)
CC	3.18	0.562	0.7926	0.7497					
PEWB	3.10	0.645	0.8788	0.4739	0.8031				
TCB	3.19	1	1	0.4217	0.4409	1.000			
β							0.296	0.476	0.570
S.E.							0.107	0.143	0.071
t-value							2.765	3.325	8.033
P-value							0.006	<0.001	<0.001

leaves with no doubt for common method bias. The fit statistics of the measurement model are $\chi^2/df = 1.926$, RMSEA = 0.053, CFI = 0.947, TLI = 0.936, SRMR = 0.0484, which suggest a good measurement model fit (Hair Jr. et al., 2009; Kline, 2005).

Structural Model

The hypothesized relationships are analyzed using structural equation modeling (SEM) (Gupta & Savita, 2024), as in Table 2, suggesting that PEWB and CC positively influence TCB with *p*-values suggesting that the relationships are supported. The structural fit statistical values of χ^2 (58.451), GFI (0.957), CFI (0.947), and RMSEA (0.083) indicate an accurate fit. The ratio of χ^2 and the corresponding degrees of freedom, being 3.247, is also below the crossover value of 5.0. Further, the structural credibility is ascertained by the incremental fit indices of IFI (0.947), AGFI (0.914), NFI (0.926), and the parsimonious fit indices of PNFI (0.595) and PCFI (0.608) of the model. All of these markers are above their respective cut-off limits of 0.9 and 0.5 (Mulaik et al., 1989).

This study has been able to prove the entire three hypotheses as shown in Table 2. PEWB influences TCB ($\beta = 0.296$), supporting H1. CC influences TCB ($\beta = 0.476$), supporting H2. PEWB influences CC ($\beta = 0.570$) is proven by H3. Table 2 shows only H3b is moderated due to income.

Moderation and Interaction

ANOVA was conducted on the two categorical variables for both PEWB and CC separately. Individually, they did

Table 2. Gender and Income Moderation

		Male		Female		χ^2 Difference		Low Income		High Income		χ^2 Difference	
		Estimate	P	Estimate	P	CMIN/DF	p-value	Estimate	P	Estimate	P	CMIN/DF	p-value
H1a/b	PEWB → TCB	0.213	0.161	0.272	0.015	0.003	0.956	0.312	0.003	0.147	0.273	0.951	0.329
H2a/b	CCT → CB	0.328	0.046	0.436	0.003	0.271	0.603	0.314	0.009	0.501	0.004	2.345	0.126
H3a/b	PEWB → CC	0.760	0.000	0.536	0.000	3.585	0.058	0.591	0.000	0.259	0.007	4.268	0.039
CFI		0.930						0.937					
RMSEA		0.069						0.064					
CMIN/DF		2.542						2.325					
f^2 Effect Size		0.601796191						0.623981371					

not have a significant influence on any variable. However, the interaction effect of gender $\times$ income ($SS = 4.750$) is significant on PEWB.

As the PEWB increases, the increase in CC is more relevant for males than females. The PEWB proportionately increases the CC for both low and high-incomes. The rate of increase is higher for low-income groups than for high-income groups. Income ($R^2 = 38.42\%$, $f^2 = 62.39\%$) is an important moderator of the PEWB – CC relationship than gender ($R^2 = 37.57\%$, $f^2 = 60.18\%$).

Discussion

This study proves that PEWB motivates low-income customers to consume (Jaikumar et al., 2018) conspicuously. Moreover, this relationship is moderated by their income. Amplified income disparity is allied with bigger spending on CC as a portion of overall expenditure (Jaikumar & Sarin, 2015). Families in the BOP segment are disgruntled with their stage of overall physical ownership of goods and services in contrast to those at the higher echelons (Christen & Morgan, 2005) and believe that those who conspicuously consume are at a higher plinth of PEWB. This study supports that the BoP segment conspicuously consumes if they benefit in transaction cost, which is similar to another study in Sri Lanka where poor people conspicuously consumed in order to benefit in transactions (Senevirathne et al., 2016). Both these factors provide them with TCB. Low-income people displaying higher consumption is supported by a Russian study where income inequality leads to higher consumption (Gorodnichenko et al., 2010). This study reported underlying behavioral causes, such as PEWB and CC, which effect the upstream social marketing, contributing to scant knowledge of upstream social marketing (Truong, 2014).

Managerial Implications

Diminishing costs of mobile-based AES has fast-tracked the disposition of process innovation in the BoP segment. These findings could form a vital chapter in forecasting the market development potential of mobile-based applications for populations detached from the majority. This is the first research that determines that PEWB predicts CC even for the BoP segment. We find that the relationship between CC and TCB is more influential than the relationship between PEWB and TCB. It has a practical and social implication that can be used to expand insights into the importance of understanding the changing nature of the BoP segment. These applications can improve the quality of life of the poorest in developing countries by substituting the need for visiting AES centers that people at the bottom of the income pyramid would otherwise find expensive to visit and gather information. TCB can be used as a measure to gauge the financial inclusion of BoP farmers in developing countries. Periodic psychometric surveys in the rural areas of the BPL card holders can find an increase in the betterment of social status.

The lower-income people feel that those who conspicuously consume are economically benefitting. The benefits are through the reduction of transaction acts. This belief can be advertised by all institutions for the upliftment of the BoP and profiteering by the manufacturers. Cultural and communal contexts should also be reflected by designing applications as desired by the farmers while formulating the nature and extent of farmers' benefits. This would enhance the utilitarian and the hedonic value of these AES applications as well. At the same time, this study substantiates the theory of compensatory compensation. This measure of TCB can be applied to other products or schemes launched by governments to check for the financial inclusion of the BoP farmers. A way to overcome the distributional outcome of growth is the diffusion of innovative products (Kaplinsky, 2011). Bottom of the pyramid innovations like mobile-based AES can empower the poor and make them more productive (Asian Development Bank, 2014).

People with no land resort to technology more than the people owning land. An upliftment in the social status of this BoP segment occurs with the mere use of mundane things like AES is a learning for social marketers. In order to achieve a higher social status, the conspicuous use of AES may force the entire community to adopt and subscribe to this application. Perceived higher income leads to a higher TCB. As the income level rises, the TCB rises. The use of AES fetches a higher crop yield, thereby more money or transaction benefits. Social marketers should carry forward this complex and multi-faceted notion of social marketing to this BoP community. PEWB and CC influence TCB. Mobile application services enable BoP customers' participation in consumption practices, which lessens their poverty and rallies their living standards. Inter alia, PEWB predicts CC. PEWB may also affect demographic decisions, such as desired mobile applications, investments in mobile technologies, and switching to other forms of AES decisions, thereby changing the BoP market dynamics.

This empirical study also establishes that income and gender moderate the PEWB-CC relationship. People with low income believe that an increase in mobile shall improve their PEWB and thus increase their CC. Policymakers need to highlight in their campaigns that the BoP segment, which has less income, can benefit from the use of AES as it results in a higher crop yield and, thereby, economic well-being. Similarly, males feel that a higher PEWB can increase their CC. Low-income males are prone to conspicuously use more than others. Firms can target these groups in different villages to sell their applications. Others would probably later on emulate this group. Gender should be taken into consideration by these firms.

Conclusion

This paper proves that a mobile-based application is a viable method that benefits the most vulnerable sections of society. Benefitting on transactions forms an important aspect of growth for the poor. These transaction benefits emanate if the BoP segment perceives economic benefits. Moreover, they shall conspicuously consume due to the perceived economic benefits. The paper researches if PEWB and CC influence TCB by using mobile-based AES in rural India by the marginally weaker sections. This article ascertains that the perception of superior economic well-being and CC leads to transaction benefits resulting in wealth creation for the BoP segment. Mobile-based AES plays an important role in generating TCB for this segment. We believe that this empirical research adds a great deal of insight to the role of innovative products and their adoption by the BoP segment strengthens and improves their status and economic benefits.

Limitations of the Study and Scope for Future Research

Though this study was conducted in the largest BoP market in the world, it may not be similar to BoP bazaars in other chunks of the universe. Therefore, future studies could duplicate this research in other BoP markets, such as South Africa, Congo, Nigeria, and Zambia. A longitudinal study should be conducted to ascertain the temporal effects of these relationships. The survey was administered by the author, who might have unintentionally influenced the responses to a small extent. These findings may not be true for the very poor who live on government subsistence.

Author's Contribution

Dr. Pranay Verma conceived the idea and developed a quantitative design to undertake the empirical study. He extracted research papers with high reputation, filtered these based on keywords, and generated concepts and codes relevant to the study design. Being the sole author, Dr. Pranay Verma verified the analytical methods and supervised the study. The numerical computations were done by him using AMOS 20 and SPSS 23.0. He wrote the manuscript as well.

Conflict of Interest

The author certifies that he has no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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