WIDESPREAD INNOVATIONS AND INCLUSIVE GROWTH AT THE BOTTOM OF THE PYRAMID: EVIDENCE FROM INDIA AND ANDHRA PRADESH

Dr. Uma Gummadi

Senior Faculty, Department of MBA (International Business)

Acharya Nagarjuna University, Andhra Pradesh, India

Email: gummadiuma@gmail.com

Abstract

Purpose – To examine how widespread business and social innovations are extending the benefits of economic growth to people at the Bottom of the Pyramid (BoP) in India.

Design/methodology/approach – Secondary data are used to compare the number of people below the poverty line (BPL) in 2004–05 for India and Andhra Pradesh under the Uniform Reference Period (URP) and Mixed Reference Period (MRP) methods. Innovations in fast-moving consumer goods (FMCG), durable goods and essential services, such as drinking water, health care, education, transport, financial services and telecommunications, are then reviewed.

Findings – The URP method gives a larger BPL population than the MRP method for India (about 301.7 million against 238.5 million). In Andhra Pradesh, rural BPL persons outnumber urban BPL persons under both methods. Single-serve packaging and nano marketing have brought branded goods within BoP reach.

Research limitations/implications – The analysis relies on secondary data for 2004–05 only.

Practical implications – Similar innovation is needed in essential services, with firms, civil society organisations, local governments and public–private partnerships working together for inclusive growth.

Originality/value – The paper links poverty estimates under two measurement methods with innovations serving BoP consumers.

Keywords – Bottom of the Pyramid, Innovation, Inclusive Growth, Poverty, FMCG

1. Introduction

Mahatma Gandhi was among the earliest leaders to draw national attention to the lives of people in rural India. Even after several decades of independence, however, the fruits of economic growth have not fully reached those living below the poverty line (BPL). C. K. Prahalad (2010) describes this segment of the population as the Bottom of the Pyramid (BoP) and argues that it represents a large and largely unserved market. Most companies target consumers at the upper tiers of the economic pyramid and overlook the business potential at its base.

Business practices that pursue inclusive growth can therefore be a source of long-term success for firms as well as a means of improving the lives of the poor. Although the purchasing power of an individual BoP consumer is low, the aggregate purchasing power of BoP communities is large. Serving this segment, however, requires innovation in products, packaging, pricing, distribution and business models.

Against this background, the paper examines the status of the BPL population in India and Andhra Pradesh, innovations in the FMCG sector aimed at BoP consumers, the rising consumption of durable goods, and the availability of essential services for the poor. The remainder of the paper is organised as follows. Section 2 sets out the objectives, data and method. Section 3 presents the poverty estimates. Section 4 discusses FMCG innovations. Section 5 considers consumer durables. Section 6 reviews essential services. Section 7 discusses the findings, and Section 8 concludes with suggestions and limitations.

2. Objectives, Data and Method

2.1 Objectives

The study has the following objectives:

- To examine the status of the population below the poverty line in India and Andhra Pradesh, using the 2004–05 estimates produced under two measurement methods.
- To examine innovations in the fast-moving consumer goods (FMCG) sector that have reached BoP consumers and contributed to inclusive growth.
- To examine the status of other goods and services for the BoP, namely consumer durables, financial services, telecom services, health care, education, sanitation and safe drinking water.

2.2 Data and method

The study is descriptive and relies on secondary sources. Poverty estimates are the Planning Commission figures based on the National Sample Survey (NSS) 61st Round (2004–05), as published in the Handbook of Statistics on Indian Economy (Reserve Bank of India, 2010). Information on telecommunications is drawn from the Department of Telecommunications annual report (2010), and information on financial inclusion from Subba Rao (2010). Examples of innovation in FMCG, health care and other services are drawn from company information, newspaper reports and institutional websites listed in the references.

The Planning Commission used two methods to estimate the BPL population. Under the *Uniform Reference Period* (URP) method, household consumption of all items is recorded over a reference period of 30 days. Under the *Mixed Reference Period* (MRP) method, consumption of some items, such as clothing, footwear, durable goods, education and institutional health care, is recorded over a reference period of 365 days, while the remaining items are recorded over 30 days. The two sets of estimates are compared in Section 3.

3. Status of the Population below the Poverty Line

3.1 India

Table 1 presents the estimates for India in 2004–05. Under the MRP method, 1,702.99 lakh persons in rural areas and 682.00 lakh persons in urban areas were below the poverty line. Under the URP method, the corresponding figures were 2,209.24 lakh and 807.96 lakh. The URP method therefore shows a larger BPL population than the MRP method in both rural and urban areas. For the country as a whole, the URP estimate is 3,017.20 lakh persons against 2,384.99 lakh under the MRP method, a difference of 632.21 lakh persons.

Table 1: Population below the poverty line, India, 2004–05 (lakh persons)

Sector	MRP method	URP method	Difference (URP – MRP)
Rural	1,702.99	2,209.24	506.25
Urban	682.00	807.96	125.96
Combined	**2,384.99**	**3,017.20**	**632.21**

Source: Planning Commission estimates based on NSS 61st Round, as published in Reserve Bank of India (2010). The difference column is computed by the author.

3.2 Andhra Pradesh

Table 2 gives the corresponding estimates for Andhra Pradesh. Under the MRP method, 46.21 lakh rural persons and 45.50 lakh urban persons were below the poverty line in 2004–05. Under the URP method, the figures were 64.70 lakh and 61.40 lakh. As at the national level, the URP method gives a larger BPL population than the MRP method in both rural and urban areas. Under both methods, the number of rural BPL persons exceeds the number of urban BPL persons in the state. Taking rural and urban areas together, the poverty ratio is 15.80 per cent under the URP method and 11.19 per cent under the MRP method.

Table 2: Population below the poverty line, Andhra Pradesh, 2004–05

Sector	MRP method	URP method	Difference (URP – MRP)
Rural (lakh persons)	46.21	64.70	18.49
Urban (lakh persons)	45.50	61.40	15.90
Total (lakh persons)	**91.71**	**126.10**	**34.39**
Poverty ratio (%)	11.19	15.80	4.61

Source: Planning Commission estimates based on NSS 61st Round, as published in Reserve Bank of India (2010). Totals and differences are computed by the author; the combined poverty ratios are as reported in the source data.

The gap between the two methods arises because the MRP method uses a longer reference period for infrequently purchased items. This records higher consumption for the same households and therefore classifies fewer of them as poor. The choice of method matters for policy, since it changes the number of people regarded as poor by several crore at the national level.

4. Innovations in the Fast-Moving Consumer Goods Sector

4.1 Overview

The FMCG sector is an important contributor to India's industrial production and gross domestic product. It is the fourth largest sector in the economy and a significant source of employment. By bringing standard consumer goods to the doorstep of the people, the sector has also drawn consumers at the bottom of the pyramid into the market and contributed to inclusive growth. This has been achieved largely through simple innovations. Growth is usually associated with product innovation, but the revolution in packaging has transformed

the consumer market. BoP consumers have lower purchasing power than those at the top of the pyramid, yet they have become a new class of FMCG consumers in recent years.

4.2 The single-serve (sachet) revolution

The single-serve revolution, also called the sachet revolution, refers to the strategy of launching a wide range of pack sizes and prices to suit the purchasing preferences of value-conscious BoP consumers. Daily earners who cannot afford a bottle or a large pack can buy a small quantity for immediate use at a price within reach of their cash in hand.

CavinKare Private Limited pioneered the small-sachet revolution in India. The company began in 1983 with a single product sold in small sachets, a path that was then uncommon. It now markets ten major brands in 13 countries, including the USA, Singapore, Malaysia, Sri Lanka, Nepal and Bangladesh. Products such as Chik shampoo, Meera shikakai shampoo, Fairever, Spinz, Ruchi pickles, Tex (home care) and Indica (herbal hair colour) are sold in small sachets that meet the needs of BoP consumers. By combining sachet packing with prices of 50 paise and Re 1, Chik shampoo changed the way shampoo is packed and used in India. This success encouraged other firms to adopt the same strategy to reach BoP consumers and to increase their sales and profits.

4.3 Nano marketing

In the early 1990s, Hindustan Lever, a subsidiary of Unilever, is credited with coining the term *nano marketing* when it introduced its products in small sachets. Multinational and Indian firms such as Procter & Gamble, Dabur, Palmolive, Godrej and Himalaya extended small packs across almost every FMCG segment, including oil, shampoo, biscuits, toothpaste, health drinks, tea and coffee, pickles, jam, sauces, snacks, beauty care, milk products, detergents and beverages. The single-serve and sachet revolution has thus led to significant growth and profits for large firms, and it has encouraged the industrial sector to innovate in the production of a wide range of consumer goods for the BoP.

4.4 Low-cost product innovation

Innovation is not confined to packaging. The Tata group, known as a “salt-to-steel” conglomerate, introduced Swach, a low-cost water purifier priced at Rs 499 and Rs 749, which makes drinking water available to a five-member family at less than Re 1 per day. Swach competes with higher-priced purifiers such as HUL’s Pureit and Eureka Forbes’ Aquasure.

4.5 Responsiveness of BoP consumers to publicity

BoP consumers are becoming a force in assessing product quality, prices and the options available to them. Information technology can spread news of good bargains, and of bad experiences, very quickly. FMCG consumers are easily influenced by advertisements and television channels. Firms and multinational corporations must therefore take care over the quality of their products and the content of their advertising. Some soft-drink companies, for example, have faced adverse reactions in the consumer market.

4.6 Prerequisites for nano marketing: the "Three As"

Creating the capacity to consume among BoP consumers rests on three prerequisites, which may be called the "Three As".

Affordability. Whatever the pack size, the main determinant is affordability without any sacrifice of quality or efficacy.

Availability. The purchasing capacity of BoP consumers depends on the cash they have in hand at a given time. Products must therefore be available in sizes and prices that match this cash flow.

Access. Distribution must take into account where the poor live and how they work. Most BoP consumers must work the whole day before they can earn enough to buy the day's necessities, so their shopping often begins only after 7 p.m. Stores should therefore be within a short walk, which calls for geographically intensive distribution.

5. Consumer Durable Goods

It is commonly believed that the poor have no purchasing power and spend what they have on non-essential items. In reality, the purchasing power of an individual consumer may be low, but the aggregate purchasing power of poor communities is large. Poor households also buy durable goods to improve their standard of living. Many BoP households now spend on pressure cookers, gas stoves, television sets, water filters, refrigerators and air coolers even though they do not live in *pucca* houses. Since a *pucca* house is expensive and beyond their budget, they give priority to durable goods that improve the quality of daily life. Unlike the middle class, they tend to spend on consumption rather than save for contingencies. This pattern was first observed in urban slums, but the rural poor have also been influenced over time by the demonstration effect.

Changes in consumption patterns have been reflected in the revision of official price indices. The new series of the Wholesale Price Index, with 2004–05 as the base year, includes items widely used by the middle class, such as ice cream, mineral water, flowers, microwave ovens, washing machines, gold, silver, ready-made food, computer stationery, VCDs, crude petroleum and computers. The new index covers 676 items against 435 items in the earlier series, giving a better picture of price variation.

Businesses have begun to recognise that the BoP is a large consumer base. Treating the poor as consumers brings immediate benefits for business expansion and, in turn, supports inclusive growth. To participate in these markets, however, the private sector must develop many more consumer-friendly innovations.

6. Essential Services for the Bottom of the Pyramid

Gordon, in his paper on indicators of poverty and hunger prepared for the United Nations, argues that poverty is caused by the deprivation of basic needs. These include food, safe drinking water, health, sanitation, shelter, primary education, information, transport and access to financial services. Provision of these needs should be treated as an integral part of inclusive growth. This section discusses the more significant of them.

6.1 Safe drinking water

In many villages, drinking water is contaminated by fluoride and by human-induced causes, and this results in many water-borne diseases. Safe drinking water is, however, increasingly being supplied at reasonable prices even in villages.

6.2 Health care

The poorer sections of society are prone to disease because of inadequate nutrition, unsafe drinking water and poor sanitation. Many of them benefit from state government schemes such as Aarogyasri in Andhra Pradesh, which finances treatment for serious illness. The scheme does not, however, cover certain conditions, including AIDS and viral fevers such as dengue, and it should be extended to cover seasonal diseases as well.

Newly established private medical colleges have also rendered valuable service. Because they must maintain an attached hospital with a minimum number of beds, many of them send buses to nearby villages, bring patients to the hospital and treat them free of cost, including the cost of diagnosis. Villagers around these colleges are able to identify health problems

early and obtain free treatment. Non-governmental organisations (NGOs) and service clubs also contribute to inclusive growth in this way.

The L. V. Prasad Eye Institute (LVPEI) is an example of care designed for the BoP. Its focus is eye health, which is only one part of the health-care spectrum, but its impact on visually challenged people at the BoP has been substantial. The institute recognised more than two decades ago that access to high-quality care cannot be limited to cities, and that care for the poorest cannot compromise on quality. It developed the LVPEI Eye Health Pyramid, a service-delivery model that runs from community-level vision centres for primary care (one per 50,000 population) to a centre of excellence for advanced tertiary care (one per 50 million population). The model aims to provide high-quality and sustainable eye care in rural and underserved urban areas by setting up new centres staffed by trained eye-health workers and by upgrading existing facilities, thus creating a network integrated with local community infrastructure (L. V. Prasad Eye Institute, n.d.).

6.3 Sanitation

Sanitation remains a neglected area in rural and slum settlements. Unhygienic surroundings cause diseases such as typhoid, malaria, diarrhoea and dengue, and the problem becomes more severe in the rainy season, when it causes many deaths.

Small and marginal farmers, by contrast, take great care to keep their cattle sheds clean, with good ventilation, flooring, electric lights, fans and mosquito nets, because they regard their animals as valuable assets that must be protected from disease. This contrast suggests that households invest readily in hygiene when the benefit is tangible and immediate, and that awareness programmes on household sanitation could build on this attitude.

6.4 Primary education and financial literacy

Primary schools in rural areas are not adequate in number to meet the needs of the poor. Even where they exist, they suffer from a shortage of teachers and basic amenities. Enrolment is therefore low and dropout rates are high, which is also related to poverty and child labour. The Sarva Shiksha Abhiyan has improved the situation to some extent, but the problem needs continued attention. Private schools, charitable trusts and NGOs are also providing valuable service.

Financial literacy should be introduced in the school curriculum, in classes VI, VII, VIII and X, as part of inclusion. Andhra Pradesh could follow Karnataka, which has been the pilot

state for this initiative, so that students acquire the awareness needed to become self-sufficient after school.

6.5 Housing

In most villages, huts have been replaced by slab houses in recent years under government housing schemes. Many rural residents have built their own houses and toilets with support from state government schemes.

6.6 Transport

Rural transport presents a mixed picture. Many self-employed people have bought autorickshaws and trucks on hire purchase and earn a better livelihood. As a result, connecting services between villages, and between villages and urban or suburban centres, have increased significantly. Villagers enjoy more frequent services at lower fares and at their doorsteps than the road transport service provides.

This success has, however, weakened public transport. Because these services meet the needs of villagers and suburban residents more effectively, many bus services generate little revenue. Many depots of the Andhra Pradesh State Road Transport Corporation (RTC) have cancelled services to certain villages because of losses. School-going children, especially girls, senior citizens and physically challenged people have consequently lost the concessions offered by the RTC.

Safety is a further concern. The RTC follows safety and security norms for passengers, which are largely absent in shared autos. These vehicles often carry more passengers than permitted, particularly school children, and some are driven by friends or family members of the owner who do not hold a driving licence. Auto journeys have therefore become risky. From the point of view of inclusion, connecting services are welcome, but they need regulation.

6.7 Financial inclusion and insurance

If villages lack access to banking and the money of the poor remains outside the formal financial sector, rural development, and ultimately national development, will be hindered. The savings of the poor need to be brought into a safe financial system, for instance through no-fee accounts, credit facilities and Business Correspondents (BCs).

Financial inclusion is more than the opening of a savings account. The disadvantaged must be able to use banking services with confidence and to obtain credit, low-cost financial services, funds transfer, access to financial markets and micro-credit. The financially excluded groups

include marginal farmers, labourers, slum dwellers, migrants, minorities, socially disadvantaged groups, senior citizens and women. The then Governor of the Reserve Bank of India, Dr. D. Subba Rao (2010), urged banks to treat financial inclusion as a business opportunity rather than as an obligation.

The number of bank branches and accounts has increased significantly since liberalisation. Banks have come to recognise that there is profit potential at the bottom of the pyramid, since more customers and more accounts allow them to expand business per branch over time. Rapid branch expansion and mobile banking services have raised the savings potential of the household sector. Credit has also become more accessible, and more people in villages have bought two-wheelers, cars, autorickshaws, tractors and trucks. ATM facilities, however, have yet to reach rural areas adequately, and public sector banks still serve the BoP better than private sector banks.

Insurance has also widened. Following the Malhotra Committee recommendations and the opening of the sector to private companies under the Insurance Regulatory and Development Authority Act of 1999, private insurers have introduced life, vehicle and other products, and some of these reach the rural population. In commercial crops, insurers serve small and marginal farmers in rural areas.

6.8 Telecommunications

The spread of wireless devices among the poor is evidence of a market at the BoP. The technology helps low-income people to increase their connectivity and their earnings. India had an installed base of 6,706.20 lakh (about 670.6 million) wireless phones by the end of August 2010, and the market was reported to be growing at about 2.79 per cent per month and 46.83 per cent per year (Department of Telecommunications, 2010). Handset makers have made it easier for BoP consumers to buy phones by offering low-cost models, and service providers have introduced prepaid cards. Airtel, Reliance, Vodafone, Tata, Idea and Aircel compete for this segment with innovations such as per-second billing, lifetime validity and recharge cards priced as low as Rs 10. Competition has widened customer choice, and the public sector company Bharat Sanchar Nigam Limited (BSNL) has also introduced new products and technology to win market share.

The experience of Kerala illustrates how readily BoP consumers adopt new technology. After a day at sea, fishermen in traditional boats use mobile phones to contact several landing centres along the coast and sell their catch to the highest bidder. BoP consumers are more

willing to adopt new technologies because they have no established habits to unlearn. Moving to wireless from no connection at all is easier than moving to wireless from a strong tradition of efficient and widespread landlines.

It is disappointing, however, that public spending on infrastructure has remained lower than private spending. Transport, telecom networking, safe drinking water, primary education and primary health care are becoming more prominent in the inclusive growth agenda, and they require greater public attention.

7. Discussion

Three findings emerge from the analysis. First, the measured size of the BPL population depends on the method used. The URP method gives a larger BPL population than the MRP method both at the all-India level and in Andhra Pradesh, and in the state the rural BPL population exceeds the urban one under both methods. Policy targeting should therefore be based on a clear understanding of the method behind the estimates.

Second, the FMCG sector shows that BoP consumers respond quickly when affordability, availability and access are addressed together. Single-serve packaging, nano marketing and low-cost products such as water purifiers have made branded goods accessible, while the rising ownership of durable goods shows that the poor are active consumers whose aspirations for a better quality of life are visible in their spending.

Third, innovation in essential services has been uneven. Telecommunications and, to a growing extent, banking have succeeded through competition, technology and new delivery models. Health care, sanitation, primary education and public transport depend heavily on government schemes, charitable effort and a small number of institutional examples such as LVPEI, and gaps remain in coverage, quality and safety.

8. Conclusions and Suggestions

The study concludes that the URP method shows a larger BPL population than the MRP method at the all-India level, and that rural BPL persons outnumber urban BPL persons in Andhra Pradesh. Innovation in the FMCG sector, through the single-serve revolution and nano marketing, has contributed substantially to the growth of consumer goods consumption at the BoP in recent years, and the consumption of durable goods has also increased. Serving BoP consumers will continue to demand innovation in technology, products and business models.

The following suggestions arise from the study:

- Large firms should work collaboratively with civil society organisations, local governments and, through public–private partnerships (PPP), with the state, to achieve inclusive growth.
- Innovation should extend beyond consumer goods to essential services, namely safe drinking water, health care, sanitation, primary education and transport.
- Health insurance schemes such as Aarogyasri should be extended to cover seasonal and communicable diseases.
- Financial literacy should be introduced in school education, and banking services, including ATMs and Business Correspondents, should be extended to rural areas.
- Rural transport services should be regulated for safety, and concessions for students, senior citizens and the physically challenged should be protected where private services replace the RTC.
- Public spending on infrastructure should be raised to match the growth in private spending.

Limitations and scope for further research

The poverty estimates analysed here relate to 2004–05 and the telecom figures to August 2010, and the study rests on secondary sources. The findings should therefore be read as a baseline. Future research should update the comparison with the latest available poverty and consumption data, examine the BoP market using primary survey evidence from households and retailers, and assess the outcomes of the service innovations discussed above.

References

Department of Telecommunications. (2010). *Annual report 2009–10*. Government of India. http://www.dot.gov.in/annualreport/2010/final.pdf

Economic Times. (2007, February 9).

Gordon, D. (n.d.). *Indicators of poverty and hunger*. United Nations.

L. V. Prasad Eye Institute. (n.d.). *Eye health pyramid*. http://www.lvpei.org/eye-health-pyramid

Prahalad, C. K. (2010). *The fortune at the bottom of the pyramid: Eradicating poverty through profits* (Revised and updated 5th anniversary ed.). Wharton School Publishing.

Reserve Bank of India. (2010). *Handbook of statistics on Indian economy 2010*. Reserve Bank of India.

Shukla, R., & Kakar, P. [Title and source to be completed.]

Subba Rao, D. (2010, December 7). Look at financial inclusion as a biz opportunity. *Business Line*.