Financial behaviour patterns observed among rural BoP households in India and The Philippines: Some early findings and the challenge they may pose to value creation for BoP ventures

Financial behaviour patterns observed among rural BoP households

Draft 30th July 2009, Peer Reviewed August 2009 by Brett Hudson Matthews

Niti Bhan (corresponding author)
Emerging Futures Lab
Design Factory
PO Box 7700, FI-02015 TKK Finland

www.nitibhan.com

This research study was carried out with the aid of a grant from the iBoP Asia Project (http://www.ibop-asia.net), a partnership between the Ateneo School of Government and Canada's International Development Research Centre (www.idrc.ca).

Abstract

The challenge faced by BoP ventures has been the lack of knowledge about their intended target audience from the point of view of business development whereas decades of consumer research and insights are available for conventional markets. What little is known about the BoP's consumer behaviour, purchasing patterns and decision making tends to assume that there are no primary differences between mainstream consumers and the BoP except for the amount of their income - pegged most often between $2 to $5 a day.

In practice, the great majority at the BoP manage on incomes earned from a variety of sources rather than a predictable salary from a regular job and have little or no access to conventional financial tools such as credit cards, bank accounts, loans, mortgages. This is one of the biggest differentiators in the challenge of value creation faced by BoP ventures, particularly among rural populations (over 60% of the global BoP population lives in rural areas).

Exploratory research was conducted in the field among rural Indian and rural Filipino populations in order to understand how those on irregular incomes managed their household expenses. Empirical data collected by observations, interviews and extended immersion led us to identify patterns of behaviour among the rural BoP in their management of income and expenditure, 'cash flow' and 'working capital' and the significance of social capital and community networks as financial tools. Practices documented include 'conversion to goods', 'stored wealth', 'cashless transactions', and reliance on multiple sources of income that mature over different times.

This paper will share our observations from the field; identify some challenges these behaviours create for business and also explore some opportunities for value creation by seeking to articulate the elements that BoP ventures must address if they are to do business profitably with the rural 'poor' based on their own existing patterns of financial habits and norms.

[Literature review section to be added]

Data collection and methodology for fieldwork

Our objective was to understand how the BoP in rural regions managed their household expenses on an irregular and sometimes uncertain income flow. The methodology used for data collection was based on tools from the field of human centered design, primarily user research conducted in a broadly focused exploratory manner. This consists of immersion in the field, observing the target audience in their daily lives, conducting both indepth interviews as well as 'guerrilla interviews' and documenting practices over the course of some days in the form of photographs, notes, video and audio.

Locations

Since the grant from the iBoP Asia Project was meant for the ASEAN region, they requested that the primary focus be the rural Philippines. However, since the goal of the project was to discover if there were any general patterns of financial behaviour among BoP households that may help the design of payment plans for irregular incomes, it was felt one geography would be insufficient to provide a balanced insight. Thus, India was selected as a complementary location in Asia primarily for its familiarity, as this would permit prototyping of research methodology in the field. Immersion in the local way of life for a period of approximately ten days each was carried out in two geographies - Cabatuan *barangay*[1] in Iloilo Province of The Philippines and Sawai Madhopur district in Rajasthan, India. In addition, for comparative purposes, remote research was outsourced in the region surrounding Blantyre, Malawi, in south eastern Africa.

Selecting profiles for sampling

Our intent was to select approximately 6 to 8 people who would provide a reasonable approximation of the local population demographics such as education level, source of income, age and gender. Furthermore since our goal was to understand household financial management on irregular income, we wished to ensure the sample pool would capture best snapshot of the local economy. A matrix was developed in the field (in India, which was considered the prototype location) by which potential 'user profiles' were evaluated:

[3Kmatrix photo]

'Kitna' or Amount was first column and 'Kaab' or When (day or date) was the second - each individual's ability to predict their cash flow, that is the accuracy of their estimates of amount and date of arrival was evaluated accordingly. A continuum of accuracy seemed to emerge:

1. an employee in a salaried job at one end, who knew exactly how much money he would receive and on which day and date;
2. an experienced farmer somewhere in the middle who was able to guesstimate the yield from looking at a field as well as when it would be ready to harvest;
3. and at the other extreme, an odd jobs manual labourer who was unable to predict what kind of work he might get on any given day, if at all, and thus how much he might get paid and when.

Data Collection

Since one must navigate respectfully through the social norms in rural communities, it was finally decided that a formal lengthy questionnaire on income, expenses, decision making and values would not necessarily be contextually relevant or appropriate - of primary importance were lowering the barriers to information flow and increasing understanding across language and culture. Thus, four

---

1 A barangay is the smallest administrative division in the Philippines and is the native Filipino term for a village, district or ward. Barangays are further subdivided into smaller areas called Puroks (English: Zone).

simple questions were identified that covered the broad spectrum of situations faced and were considered suitable to build rapport and get a conversation started that would permit further leading questions when matters of interest emerged. A preliminary introduction included background information on the research area and emphasized that we understood the challenges of trying to manage daily life when one didn't have a predictable salary to give context to the questions.

The questions were:
1. How do you manage your daily household expenses? (when you cannot plan or predict)
2. What do you do when there is an emergency? (sickness or injury, death in the family, natural disaster etc)
3. How do you plan for major expenses? (that are known or expected, such as a wedding, education, building a house, funeral etc)
4. Do you notice any patterns in your income flow over the course of the natural year? sonality)

Documentation
Observations and insights from the field were shared on a project specific blog as a requirement of the original research grant. Daily notes were kept on observations as well as interviews conducted. In addition to individual user profiles, elements of their 'profession', daily life, income sources and household goods (where possible) were documented photographically. In each location - rural India and rural Philippines - these were supported by visually documenting everyday activities in the locale, the markets and shops, as well as ad hoc interviews with individuals met along the way (a cobbler, a freelance beautician etc). Note: While interviews were conducted directly in rural India and The Philippines, a young student was sponsored to conduct 8 interviews based on the above four questions in Malawi. He submitted a written report on each individual accompanied by a small set of photographs.

Analysis & Synthesis
After the fieldwork was completed, a weeklong workshop was held by three participants from the design research field, both BoP and mainstream, in order to parse the data collected from all the interviews as well as the general observations made in each location. This was done primarily by using pattern recognition techniques in order to cluster findings into similar groups of behaviours that occurred across the geographical locations, as well as to identify similarities within each region. The findings were then presented at two occasions to an extended team of researchers at the Helsinki School of Economics, Finland.

Observations

One can roughly consider the relative income (or wealth) across three regions where observations were conducted on a continuum where the Indian village was the 'wealthiest' while the Malawians were living closest to the edge. However, on synthesizing the combined data collected across geographies, patterns of financial behaviour emerged that showed similarities of intention and goals.

For example, non-perishable food grains such as wheat in India or rice in the Philippines were considered a form of wealth that could be stored, acting as savings or insurance. A portion of the harvest would be held back, to be either sold on demand for cash, over the course of the year or as a source of food. Wealth was also stored, as security, for the longer term, in the form of silver ornaments (in India) or as an investment, in the short term, as livestock - pigs, chickens or a milch cow.

Also, people rarely held on to money in the form of cash for any length of time, for the most part due to lack of access to banks and/or the high cost of maintaining an account proportionate to their incomes. Available cash was usually converted to "kind" - either goods or livestock- the choice of which reflected careful prioritization. These tangible purchases then acted as financial tools depending on their 'convertibility'- long-term security (silver); planned savings (buying building materials on a piecemeal basis over time until a house could be built); insurance or a "cushion" against shocks (a pig that could be sold to raise cash or eaten as food) and finally, investments (milk-bearing cow, young piglets to rear to maturity, culling high margin 'fighting cocks' from chicks).

Cashless transactions, thus, were frequently observed. These behaviours were most complex in India; where a sophisticated mechanism allowed a group of farmers to negotiate the annual retainer for the services of a carpenter in the form of a number of sacks of wheat to be paid during the harvest and the local shops would set a 'currency' conversion rate of a kilo of wheat to the rupee to be used for buying sundry provisions. The shop that insisted on cash only transactions priced its goods about 10% cheaper than the rest. Barter was far simpler in Malawi, where a mobile phone could fetch its equivalent price in goats.

Here, it must be noted that very often, each household's resources such as a store of fuel (cow dung in India; firewood elsewhere), chickens or a kitchen garden and assets like milch goats or cows, would be pointed out with pride. For their possession implied an independence from cash money - in almost every interview, people would emphasize how little they needed to purchase in the store or nearest town for their daily needs as they were self sufficient in these demonstrated requirements. Often it would be added that in a city, you had no choice but to purchase everything you needed.

Thus the use of purchased resources were optimized for maximum cost/benefit and their use extended as much as possible before replenishment. For example, if a household had access to cooking gas, they would still use firewood or charcoal for foods that took longer to cook while the more expensive fuel was used for foods that cooked quickly.

In the Philippines, cashless transactions were rarely in the form of goods but tended to involve time or physical labour, primarily as a form of social capital in the community. These complex webs of the rural community's social networks of trust were obvious in the patterns of sharing and cooperation seen in every country. Groups would invest and save together, for example, the extremely sophisticated cooperative ladies lending circle which had expanded over time to include the services of a local bank in India; or the beekeepers cooperative in Malawi where half the annual profits were saved in a common account while the other half was equally shared.

In addition to the behaviour patterns mentioned above, an external factor was observed to be of great significance in the management of rural household expenses. While it naturally differed in timing and reason from region to region, every household and profession could predict, within reason, the ebb and flow of income based on the seasons of a natural year. In fact, many other observed behaviours were often directly linked to these expected peaks, such as the harvest season, and lows, for example the dry season when fields lay fallow. This pattern of expected ups and downs or seasonality in income flow was seen to affect even those who were not directly involved in agriculture, as the local economies were closely knit and interdependent.

Discussion

One can conclude from synthesizing the data collected across the geographies and the range of "BoP" income levels that rural households demonstrated similar patterns of behaviour in their management of household expenses on irregular income streams. These are:

- the rapid conversion of cash into tangible assets such as goods or livestock,
- the subsequent storage of wealth in this form,
- the ability to conduct cashless transactions by mechanisms both simple and sophisticated
- shared or cooperative financial tools such as investments, loans, purchases and savings
- the use of multiple resources allocated by cost and usage
- knowledge and experience of seasonal ebb and flow influencing cash flow management

The irregularity of cash flow or income over time in the households studied can be said to be a combination of the known - such as the ebb and flow of income over the course of the year, either directly due to the natural seasons or due to other unnatural but predictable factors such as Christmas or vacations; and the unknown - either the truly unpredictable such as a natural disaster or the simply random, such as not knowing how many customers will make a purchase on any given day.

The known component or the "reasonably predictable through experience", is less a matter of the actual amount of income earned and more about knowing when to expect peaks and lows in cash flow. This element of seasonality would be a critical component of knowledge pertaining to a particular region or market for BoP ventures seeking to create value through successful introductions of products or services.

For example, in the rural region of The Philippines, January to approximately April or May (or until the rains begin) is considered the annual "summer" or "dry" season - unless a farm is very lucky to have access to sufficient water for rice growing regardless of rain, the farmers can only start planting when the rains arrive and are dependent on it for their second harvest as well. So overall, whether its tiny *sari-sari*[2] stores supplying everyday essentials, snacks and cold drinks or some other business - even those selling necessities like food, all consider this a lean period. Those who earn daily wages helping farmers plant the rice have little work, farmers live on their stockpiled rice, everyone tends to spend less but along with the rains all of this changes and the pattern of spending increases until the annual Christmas peak. For some, wholly dependent on what they can earn locally (receiving no remittances from relatives abroad) this can mean a difference of 100% in their weekly earnings between the "wet" and the "dry" season. The Indians and the Malawians were influenced in similar ways, only the actual timings varied due to geography.

Whatever the reasons in any particular region, when evaluating the purchasing power of those who manage with irregular and unpredictable income, the first question to ask is if there are any known patterns of ebb and flow in their cash flow.

It is the unknown component that creates the unpredictable volatility that those on irregular income streams must deal with in order to manage their household expenses with any degree of control. The behaviours observed listed above, taken together, can be summarized to state that each household managed what could be called a "portfolio of investments" that acted as deposits maturing over time. They either maintained multiple sources of income simultaneously since available cash was often converted into these investments, spreading the risk of any one source failing when needed or

---

2 A sari-sari store is a convenience store found in the Philippines. The word sari-sari means 'variety' in Tagalog, the national language. Such stores form an important economic and social location in every Filipino community.

stored their wealth accordingly. Maximizing available resources based on their cost and intended usage along with the tendency towards minimizing the need for cash based transactions all worked together to smoothen the volatility of the household‘s income.

For example, one family in Malawi reared pigs for sales (or food in emergencies), grew vegetables and maize for their own needs, distilled wine from sugar cane for cash sales and also kept bees with a cooperative for annual harvest of honey. Cash was thus available in varying amounts from a variety of sources at different points of time. In the Philippines, an extended household living together in one compound pooled their resources from a kitchen garden, stored fuel in the form of bamboo and dried coconut husk, kept chickens and occasionally a pig, as well managed on the small amounts of cash earned daily through running at small *sari-sari* store on the premises. While in the Indian village, even the silversmith who made ornaments only during the harvest peak, used his metalworking skills and workshop the rest of the year to make doors, windows and grillwork.

This portfolio management approach to household expenses implies the manipulation of their span of control over elements of time such as periodicity and frequency as well as currency, i.e. cash or goods, in order to decrease the volatility of their cash flow, improve their ability to plan and while decreasing the variance between expenses and income.

Across the board, the particular characteristic that most stood out during conversations with the rural populace in India and The Philippines, echoing prior experience in the field elsewhere, was their undeniable pride in their degree of self reliance, and thus, their level of independence from the formal or cash based economy.

Over and over, people would proudly point to assets like firewood, livestock, kitchen gardens etc and emphasize that these resources were 'free' and didn't need to be purchased for cash, often in the same breath pointing out how everything needed to be bought if you lived in the city. Whether it was a nanny goat kept just to provide the daily cup of milk for morning tea or an extra sack of rice held back from the harvest sales, there was a distinct sense of achievement for every penny that didn't have to be spent.

This trait of minimizing the need for actual cash money also cropped up in other patterns of behaviour including the storage of wealth in the form of 'kind' or 'goods' (that could be liquidated when and if required); cashless transactions within the community, from the simple to the sophisticated; and the rapid conversion of surplus cash into goods or 'kind' (livestock, for example, as investment or planned savings in the form of silver or bricks for a future house). Expensive resources that required cash outlays such as fuel - diesel for irrigation pumps; liquid petroleum gas cylinders for cooking; or airtime minutes purchased on prepaid plans for the ubiquitous mobile phone, would be stretched out for as long as possible before the need for replenishment. For example, a common behaviour was the choice of cheaper or ’free’ fuel such as firewood or dried cow dung for cooking food which took a long time to cook such as beans or stews, saving the use of the more expensive gas stove for fast cooking items.

All of these behaviours, taken together, imply a challenge for businesses seeking to serve rural populations effectively since their relative lack of liquidity places them in a challenging position as future customers. Conventional business development methods include the use of market research to evaluate the disposable income or purchasing power of the target audience. When considering rural BoP households, these tools may not supply any meaningful data, skewing the perceived income levels or earnings of those studied.

In sum, it can be concluded that the challenges for value creation can be quite different for BoP ventures interested in addressing the rural markets. From the observations made in the field, we can highlight three key implications for business development. These are:

1. **Seasonality** - with the exception of the salaried, everyone else in the sample pool was able to identify times of abundance and scarcity over the course of natural year in their earnings. Identification of a particular region or market's local pattern of seasonality would benefit the design of payment schedules, timing of entry or new product and service launch, for example.
2. **Relative lack of liquidity** - The majority of the rural households observed tended to 'store wealth' in the form of goods, livestock or natural resources, relying on a variety of cashless transactions within the community for a number of needs. Conventional business development strategies need to be reformulated to take this into account as these patterns of behaviour may reflect the household's purchasing power or income level inaccurately.
3. **Increasing the customer's span of control over the timing, frequency and amount of cash required** - Since the availability and amount of cash cannot be predicted on calendar time, this implication is best reflected by the success of the prepaid mobile phone subscriptions in these same markets. When some cash is available, it can be used to purchase airtime minutes for text or voice calls, when there is no money, the phone can still receive incoming calls. Models which impose an external schedule of periodicity, frequency and amount of cash required may not always be successful in matching the volatile cash flow particular to each household's sources of income.

Conclusion

Broadly speaking, there was evidence of far more sophisticated cash flow management than has either been expected or assumed among the rural BoP households in the sample pool. In fact, one future task would be to parse out whether the terms ‘irregular’ or ‘unpredictable’ can be be applied. Certainly, income was not as predictable and regular as a salary, but on the other hand, neither were they totally random and unknown. At this point, it seems far more accurate to say that the rural BoP households do not manage their expenses on a “fixed amount arriving on a known day or date”.

Also to be reconsidered is whether those in the rural communities in developing countries should simply be lumped together with their urban brethren as an undifferentiated mass called “the BoP” or “the poor” - for one, living on $2 a day has an entirely different meaning where much of the hyper local economy may not even be based on cash transactions, or else, few daily requirements need to be purchased.

If we’re to seriously evaluate business development for BoP ventures, then a far more nuanced understanding of local culture, buyer behaviour and segmentation of these emerging consumer markets is required.

[references to be added]