The poor, of course, have many unmet needs. It would be wonderful if business could satisfy all (or even most of) these needs and make a profit in the bargain. It would be a painless, even a profitable, way to solve the problem of poverty. That is the seductive appeal of the ‘bottom of the pyramid’ proposition popularized by C.K. Prahalad in his book The Fortune at the Bottom of the Pyramid. Unfortunately, this solution does not work. The consulting firm Monitor Group concluded, after an extensive survey, that there are very few examples of profitable businesses that market truly beneficial goods in low-income markets and operate at a large scale. The problem is that the market for selling to the poor is just too small, and the poor have very little purchasing power, which makes the market not all that attractive for companies.

However, there are some, even though limited opportunities to make profits and simultaneously help alleviate poverty. The challenge is to design creative market-based solutions for alleviating poverty, which implies profitable businesses that sell beneficial products and services to the poor that genuinely improve the quality of their lives, at prices they can afford. That is the focus of this article.

The 4 C’s of Marketing

It is quite easy to make profits by exploiting the poor by selling them products (product is used generically here to include services) that are harmful for them. To understand the poor as a market, we need to start with making judgments about whether the products are beneficial or harmful for the poor. The libertarian approach argues that if the poor buy the products, then they must be beneficial for the poor. Development economist Esther Duflo calls this the ‘moronic revealed-preferences’ argument. What is really needed is to look beyond the expressed preferences and focus on what is truly in the self-interest of the poor. The poor like everyone else sometimes make bad choices. The poor are particularly vulnerable because of lack of education, lack of information, and economic, cultural and social deprivations.

The second dimension in understanding the poor as a market is whether the market for a particular product is profitable or not for companies in that market. Figure 1 categorizes the markets of the poor along these two dimensions. The iconic products in the four quadrants are cigarettes, colas, cell phones, and condoms — the 4 C’s of marketing to the poor.

Cigarettes quadrant includes products that are profitable for firms but harmful to the poor. Given that the poor are vulnerable consumers, it is quite easy to make profits by selling products such as tobacco and alcohol to the poor. Another way a product can harm the poor is by diverting their scarce money away from more useful expenditures such as nutrition, health, and education. Because the poor are vulnerable consumers, there is a need to impose constraints on free markets to protect the poor from exploitation. There are four sources of constraints on markets: voluntary corporate social responsibility, industry self-regulation, social activism by civil society, and government regulation.

The market for selling to the poor is just too small, and the poor have very little purchasing power, which makes the market not all that attractive for companies.

Colas quadrant includes products that are neither profitable for companies nor beneficial for the poor.
The most common examples in this quadrant are various consumer-packaged goods. The poor have higher priority needs and would be better off not buying these products. Many of these products are too expensive and the poor do not buy them; hence the firms are not profitable. There is no need for outside intervention here. Free markets work and penalize the firms with losses, and the market size for these products remains very small. A representative example of this is Coca-Cola’s experience in India.

Coca-Cola in India launched in 2003 its low-price, affordability strategy, which hinged on raising the overall consumer base by offering carbonated soft drinks in smaller pack sizes of 200 ml at Rs. 5, which is equivalent to about €0.26 at purchasing power parity rates. The poor cannot afford such a high price for a discretionary product like Coca-Cola. Facing complaints from its bottlers and retailers, the company reversed this low-price strategy and began to raise prices by 2004.

Cell phones quadrant includes products that are both profitable for firms and beneficial for the poor. Cell phones have achieved significant penetration among the poor, and at the same time have improved the welfare of the poor. This is a win-win solution. This is free markets at their best. The problem, however, is that there are very few examples in this quadrant. The challenge is to create more opportunities in this quadrant.

Condoms quadrant includes products that are unprofitable for companies but beneficial for the poor. These are all the unmet needs of the poor. Unfortunately, there are too many examples in this quadrant. The problem is that the cost of the product is higher than the poor consumer’s willingness to pay. It is not that the poor do not value the products; they just do not have the money to be able to afford them. Condoms are clearly beneficial for the poor for two reasons: pregnancy avoidance and prevention of sexually transmitted diseases. The prices of condoms, however, are very high and many poor people cannot afford them. In most developing countries, the government distributes free condoms or has social marketing programs to sell condoms at subsidized prices to the poor.

In this quadrant, free markets do not work to satisfy the unmet needs of the poor. There is a strong need for governments or civil society to subsidize these products. Civil society usually does not have enough resources to subsidize products on a large scale, which implies that government subsidy is critical. The only other alternative is to creatively design a profitable business model that moves a product from the condom quadrant into the cell phone quadrant. This article presents insights for
developing such business models.

Cell phones have achieved significant penetration among the poor, and at the same time have improved the welfare of the poor. This is a win-win solution. This is free markets at their best.

The ‘Cost of Capital’ Trap

A lot of misunderstanding on the business opportunity results from confusion with the notion of “social business,” as put forth by the Nobel Prize winner Muhammad Yunus. Yunus founded the Grameen Bank and other “social businesses” based on the theory that the poverty problem can be solved by creating what he calls ‘not-for-loss’ businesses, by analogy to ‘not-for-profit’ initiatives. While traditional not-for-profit initiatives might not be sustainable in the long run because they depend on donations, not-for-loss businesses are viable because they cover their operating costs. The problem with not-for-loss businesses is that they still do not cover the opportunity cost of capital.

Yunus deliberately ignores the cost of capital, whereas private profit-seeking firms cannot afford to do so. The objective of private firms is not just accounting profits, but rather ‘economic profits,’ defined as accounting profits minus the opportunity cost of capital. The logic for determining the cost of capital is the opportunity cost of foregoing other alternative investments, adjusted for risk. The ability to generate accounting profits is not enough; economic profitability is necessary to make a project truly viable in the long run, along with being scalable by attracting additional capital.

The Unmet Needs Trap

The unmet needs of the poor are often presented as offering a huge untapped business opportunity. For example, half of the world population on average needs to wear spectacles. But in India the penetration of eyeglasses is dramatically lower at only 7% because the poor do not have access to eyeglasses and/or cannot afford them. It is often concluded from this that there must be a huge business opportunity for a firm to market eyeglasses to the needy.
The major flaw in this logic is that an unmet need does not constitute a market. A market exists only to the extent that there are buyers willing and able to pay a price higher than the total costs, including the opportunity cost of capital, of the sellers. The perceived consumer value must exceed the price; and the buyers have to be willing and able to pay this price. A firm is willing and able to sell at this price only if its revenues exceed its total costs. The basic rules of economics have not been repealed for the poor. Essilor International, with a global market share of about 30%, dominates the ophthalmic lens industry. In 2005 Essilor initiated an innovative project targeted at the Indian rural poor by operating 'refraction vans', i.e. mobile optician shops, that sold eyeglasses at about €3. So far the project has not succeeded because many poor people cannot afford even this price for a product they is very beneficial.

Assessing the size of the unmet need is easy, but that should not be confused with an estimate of the potential market opportunity. For example, assessing the size of the unmet need for eyeglasses in India is quite easy. A starting plausible assumption is that the percentage of the population having refractive problems is the same in India as other countries for which detailed data are available. The number of eyeglasses sold in India is also readily available. Hence, it is fairly easy to assess the size of the unmet need for eyeglasses. Estimating the size of the potential market, however, is far more difficult. Assuming a price of €3 per pair of eyeglasses, how many poor people will be able and willing to buy them is a very difficult question to answer. Conducting market research among the poor is significantly more difficult than in more affluent and developed markets. The logistics of reaching the poor is more demanding and expensive. The poor are often not well informed about the product and cannot easily answer a questionnaire about future willingness to buy the product. There are few comparable products from which one can extrapolate by analogy.

A more extreme reason why these markets are so small is that many poor people are not well informed or not well educated enough to fully appreciate the value of the product being offered. A survey in Timor-Leste found that 55% of rural women were unwilling to pay even €0.75 for eyeglasses; this is despite the significant impact of eyeglasses on worker productivity and quality of life. A major cost for firms serving these markets is the cost of educating the potential consumers.

The Affordability Trap

In order to make products affordable by the poor, firms need to achieve large price and cost reductions. A significant improvement in technology could reduce costs dramatically, as for example in telecommunications. Unfortunately, there have not been such technological leaps in most other product categories. It is thus often necessary to reduce quality in order to reduce costs significantly; the challenge is to do this in such a way that the cost-quality trade-off is acceptable to poor consumers. Firms targeting the markets of the poor need to emphasize the appropriate cost-quality trade-off from the perspective of the poor. A simple or minor adaptation of the business model from affluent markets usually results in products that are too expensive and not affordable by the poor. A significant reduction in quality might be necessary. Selling low-quality products to the poor might seem unethical. However, selling products at the appropriate cost-quality trade-off is not only ethical, it is socially virtuous.

Creating efficient and viable marketing and distribution support networks is an even bigger challenge than reducing the manufacturing cost of the product.

Essilor’s initiative sells polycarbonate-based lenses, which are more expensive (and better quality) than simple glass lenses. The Essilor refraction vans are staffed by an optometrist and a technician who performed an eye-test for each patient and then prescribe and deliver customized eyeglasses. This is an expensive business model. An alternative and cheaper approach would be to sell pre-manufactured eyeglasses that do not require individual customization. If the poor cannot afford customized eyeglasses, they are better off with approximately correct pre-manufactured eyeglasses than none at all. The appropriate reference point for quality is not the standard prevailing in affluent
markets, but rather the status quo in markets of the poor, which is usually unfulfilled basic needs. A low-quality product is better than no product at all.

The Distribution Trap

Creating efficient and viable marketing and distribution support networks is an even bigger challenge than reducing the manufacturing cost of the product. Distribution networks to serve the poor, especially in rural areas, do not exist or are very inefficient. At the same time, creating a distribution network to reach the poor might be too expensive and contribute to the commercial failure of the project. Many companies are forced to create distribution networks in order to reach the poor rural consumers. This creates difficulties that are often underestimated. The strategic trend among large companies in developed countries has been to de-integrate their activities: unbundle the value chain, outsource what they can, and focus on their core business. Multinational firms are often ill-equipped to forward integrate into distribution, especially in the unfamiliar environment of the poor in emerging economies.

Essilor’s core strategy is to sell all its lenses through its own prescription laboratories, but not to integrate forward into retail, which remains the job of independent opticians or chains of optical shops. Essilor’s traditional clients are opticians, not patients. Essilor first went to Indian opticians and tried to get them engaged in the project. However, most of them rejected the idea, arguing that it was too costly, too demanding, and unprofitable to serve the rural poor. Essilor then decided to forward integrate into retail distribution by operating refraction vans. With this move, Essilor entered a business that the local specialists deemed unprofitable, and was beyond the company’s core competencies; it also became a low price competitor to its traditional customers.

Proprietary, exclusive, one-product distribution channels do not enjoy economies of scope and are very expensive, and unlikely to be the solution to the distribution challenge. This is part of the cause of the lack of profitability of the Essilor venture. Essilor understood this problem and tried to de-integrate from distribution by franchising its refraction vans to opticians. Potential franchisees immediately asked for permission to use the vans to distribute other products than spectacles equipped with Essilor lenses — they immediately realized the need for economies of scope. In addition to eyeglasses, some opticians also suggested selling non-competing items such as cell phones. Essilor management has been reluctant to accept these proposals.

The Multiple Objectives Trap

While trying to combine socially useful products with firm profitability is a major challenge, initiatives for selling to the poor often make this even harder by adding other social and environmental objectives.

Because of an alliance with eye care hospitals, the Essilor venture also had the social objective of diagnosing eye diseases. All ‘eye camps’ therefore involved two vans, operated by six people: Essilor’s ‘refraction van’ focused on mounting and selling spectacles while the hospital’s ‘tele-ophthalmology van’ performed eye disease diagnosis. This, of course, increases the cost and complexity of the initiative. It might have been more profitable to have a narrower focus only of correcting refractive problems without adding other public health objectives.
Mobile Phones

Mobile telecommunications is probably one of the best, and well-publicized, examples of successful ventures of selling to the poor. In 1995, there were more phone lines in Manhattan than in all of Sub-Saharan Africa. Today, the penetration of mobile phones in Africa is over 28%. In India, about 45% of poor households own a mobile phone, a penetration rate greater than that for radios, and second only to televisions.

The main perceived benefit of mobile phone usage among the poor is improved communication with family and friends. In addition, several studies have focused on the positive impact of mobile phones on the livelihoods of farmers, fishermen, and small entrepreneurs. There is also much enthusiasm about the potential for mobile phones to deliver other services to the poor, such as public health, financial services, education, government services, and disaster warnings.

The industry has successfully avoided both the ‘unmet needs’ trap as well as the ‘affordability’ trap through significant cost reduction. Nokia believes that a total cost of ownership of $5 or less per month would enable the poor to purchase a mobile phone. In 2008, 12 countries had achieved this $5 target, including India, China, Pakistan, Bangladesh, and Indonesia.

Technological advances, the learning curve, and economies of scale are largely responsible for the tremendous decrease in the cost of the handsets and mobile services over the last few decades. The worldwide mobile communications industry association GSMA’s Emerging Market Handset program achieved its goal of reducing the price of entry-level handsets to less than $30 in 2006. The cost structure of mobile phone service has two important characteristics: 1) high fixed cost and low marginal cost, and 2) services sold to affluent people and to poor people use the same capital-intensive infrastructure. This implies that it is economically profitable to cross-subsidize and sell services to the poor even at very low prices, so long as the price is above marginal cost. According to a study conducted by the consulting firm BDA with chamber of commerce Ficci in

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Designing a Business Model to Profitably Sell to the Poor

The Cost of Capital Trap
To be sustainable in the long term, a business has to earn more profits than the opportunity cost of capital employed in the business. It is not enough to just cover operating costs.

The Unmet Needs Trap
The size of a market is determined by the number of people willing to pay a price for the product that is higher than the cost of producing the product, not by the number of people who need the product.

Affordability Trap
The poor can afford only low-priced products because they have very little purchasing power and many competing demands on their meager income.

Adaptability Trap
It is usually necessary to reduce quality in order to significantly reduce costs; the challenge is to make the cost-quality trade-off acceptable to the poor. Starting with the product sold to affluent markets and adapting it to the poor often does not work.

Distribution Trap
Successful business models often piggyback on existing distribution networks and try to achieve economies of scope. Distribution networks to serve the poor often do not exist or are very inefficient.

Multiple Objectives Trap
Successful ventures have a narrow focus on profitably selling beneficial products to the poor. Trying to serve multiple social objectives usually leads to failure.
India, the top 9% of mobile phone users contribute 29% to the industry revenues and 45% of the profits; the lower end of the pyramid — 71% of subscribers — contributes a mere 27% to revenues and only 15% to profits.

The industry has further reduced the cost of serving the poor, especially the marginal cost, by selling prepaid phone services. This reduces the phone operator’s costs involved in credit checks, billing, and bad debts; instead of paying interest on working capital, the firm earns interest on the prepaid balances. Virtually all poor customers are prepaid subscribers.

In addition, in many developing countries there is a flourishing market for used mobile phones that further reduces the entry price for poor consumers. An innovative approach to reducing costs has been the shared-access model, whereby one person or organization owns the mobile phone subscription and rents airtime to others. In all developing countries, most phone users who are poor further lower their cost by sending and receiving 'missed calls,' that is calling a number and deliberately hanging up before the other person picks up the call. Missed calls can be used to send a pre-negotiated message (such as ‘pick me up now’), relational sign (such as ‘I am thinking of you’), and request a call back. Depending on the number of rings, different messages can be conveyed.

The industry has also avoided the distribution trap by selling prepaid phone cards through a large variety of retail shops including general merchandise kiosks. It is even possible to electronically buy prepaid credits and to transfer credits from one phone to another, further facilitating distribution. Even though mobile phones can be used to deliver other services (such as public health) that would be socially valuable, the industry did not weigh down the venture of selling to the poor with multiple social objectives.

**Successful Strategies**

The key challenge is to creatively design a business model that is both profitable and provides beneficial products to the poor. The dominant conclusion from my research analyzing many cases is that the central element of the new business model is a dramatic reduction in costs such that firms can earn a reasonable profit margin and still price the product at a level that the poor can afford. The challenge is to do this in such a way that the price-quality trade-off is acceptable to poor consumers. Selling cheap low-quality products does not hurt the poor. Insisting on not lowering the quality actually hurts the poor by depriving them of a product they could afford and would like to buy.

The myth is that low quality implies terrible, shoddy, or dangerous products. It is better to think of quality as a relative concept. Quality consists of many dimensions including performance, features, reliability, conformance, durability, serviceability, aesthetics, perceived quality, availability, timeliness, convenience, and customization. The customer takes into account all these dimensions and arrives at a subjective judgment of the overall quality of the product (or service), and is, by definition, willing to pay a higher price for a product with higher quality — this is the price-quality trade-off. To profitably serve the poor, firms need a deep understanding of the price-quality trade-off made by the target customers.

The biggest difference between the markets of the poor and of affluent people is the obvious but under-emphasized fact that the poor have very low purchasing power. Designing a business model to serve the poor has to start with this basic insight rather than a minor adaptation of the business model successful in affluent markets. Firms must shift from creating needs in existing markets to creating markets out of unmet needs.
About the author

Professor Aneel Karnani is faculty member of the Strategy group at the Ross School of Business, The University of Michigan. His interests are focused on how firms can leverage existing competitive advantages and create new ones to achieve rapid growth. He is also interested in global competition, particularly in the context of emerging economies. His recent research focuses on poverty reduction and the appropriate roles for business, government, and civil society. Professor Karnani is actively involved in executive development programs in companies all over the world. He also consults with firms on strategic planning process, and strategy analysis and formulation. His book Fighting Poverty Together is scheduled to be published in early 2011.

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