

SUSTAINABILITY = BEYOND GREENING + GLOBAL GROWTH AT THE BOP

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Introduction

Sustainability has become the current buzzword in business, largely due to the need for multinational corporations to be proactive in global government relations and global marketing. Many people assume that sustainability refers exclusively to “Green” initiatives that will add costs to products, services, and the supply chain or network. In fact, sustainability is about reducing costs and developing new markets. Sustainability refers to a branch of global business strategy that encompasses product development, material sourcing, product formulation, material reuse, product targeting and segmentation, product distribution, transportation networks, context-sensitive package development, business line sustainability, global scope, and optimal service to the widest customer base. These categories of focus can be divided into two general aspects of sustainable business effort: “Beyond Greening” and global growth at the “Base of the Pyramid”—BOP.

According to Stuart Hart (p. 88), strategies for greening include a focus on existing products, processes, suppliers, customers, and shareholders by using an incremental approach that seeks continuous improvement and rationalization of the existing industry. In contrast, strategies for “Beyond Greening” focus on emerging technologies, markets, partners, needs, and stakeholders by using a discontinuous approach that seeks creative destruction of the existing industry and creation of a restructured industry. While some of the categories of focus mentioned above fall both under Beyond Greening and global growth at the BOP, those that are Beyond Greening include: product development, material sourcing, product formulation, material reuse, transportation networks and reverse logistics, and package development. The BOP is defined as the 4 billion people in the world who have annual per capita incomes under \$1,500. The applicable categories of focus that fall under global growth at the BOP include all of the focus areas in the first paragraph. In other words, a Beyond Greening strategy contributes to a global growth at the BOP strategy: these strategies are intertwined and inseparable. A Beyond Greening strategy is often a subset of a global growth at the BOP strategy, but some reuse strategies that reduce costs in a top of pyramid economy may not fit a BOP economy.

Traditional corporate strategy and economic thinking targets the wealthy and middle classes because, “they have the money.” Some corporations are becoming so large and so ubiquitous in serving these markets that further corporate growth in the home markets of these companies appears to be limited by the size of the traditional target markets. Stock prices get stuck in neutral as an indication of the widespread perception that growth is in the past. However, two paths to growth remain: expansion of product/service offerings to existing markets and finding new “Greenfield” markets in underserved populations. This essay highlights finding and developing new markets. Historically, the wealthy and middle classes were much smaller than they are today. Disruptive technologies were both the cause and the effect of an expanding middle class in renaissance Europe, the U.S. of the Twentieth Century, and in the more recent trend of global growth. One feeds on the other and both trends accelerate.

Disruptive Technology, Creative Destruction, and Creative Creation Affect Societies

Just as happened before, what is required to take the next step in global growth is creative destruction. After this step, companies must carry through beyond creative destruction to creative creation. Disruptive innovations start out inferior to existing products, but develop into entirely new product categories (e.g., transistor radios and PCs—Hart, p. 113). If the best buggy whip makers of 1905 had recognized the coming trend, they could have become the best automobile drive belt manufacturers. If the best carriage makers had become the best chassis

makers, they would still be known today. Better yet, the carriage maker could develop into an engine manufacturer. Henry Ford wanted to be able to sell his cars to the class of people represented by his assembly line workers. He succeeded. However, his decision to force black as the color of all Model “T” automobiles, limited the appeal of his product and allowed GM to pass Ford in sales. He created a breakthrough but did not recognize that cars would soon become a consumer product, requiring consumer choices. Ford participated in the expansion of the middle class in the U.S., but failed to recognize the implications of the new purchasing power of the larger base. He also failed to address the preferences of this expanding population. As their situation improved, people expressed their preferences in their purchases. By the time Ford offered options in the Model “A”, GM had developed expertise and acquisitions that provided consumers with more options and choices than Ford could match. The growth of GM followed its ability to fulfill the preferences of a rapidly expanding market. When World War II ended and economic expansion accelerated, GM was ready with the right business strategy for the U.S. at that time. They proceeded to export their cars throughout the world. Two decades later they met a force that was even stronger than the trend towards an expanding middle class in the U.S.: globalization.

Now, we have a popular non-fiction book by Thomas Friedman proclaiming that “The World is Flat” and competition is not limited by national boundaries. I would offer a different analogy for the same phenomenon: the sun does not set on the world of economic growth. As we travel the world, there is no fixed horizon representing the limits of need and hope globally. There is no limit to the competition to serve these needs. As long as there are needs and hopes, there is opportunity to address those needs. Business growth strategists sometimes say that to view the economic pie as being sliced into ever smaller pieces would ignore the possibility of increasing the size of the pie. There is tremendous pent-up demand in the 4 billion people at the Base of the Pyramid (BOP), but there are not enough materials in the world to create products to serve everyone using the methods of the past. The pent-up demand will be captured by companies that innovate products and services needed by these people. One of the most serious health concerns in Africa is insect-borne diseases, like malaria. Pyrethrum is the active ingredient in many S.C. Johnson pesticides, such as **Raid®** and **Baygon®**. S.C. Johnson addresses its markets in Africa and the U.S. in a sustainable manner by supporting human-powered irrigation projects for pyrethrum farmers in Kenya to create a stable source of natural pyrethrum to use in its products. As Kenyan farmers increase their productivity and economic power, they can begin to buy **Raid®**. In this way, S.C. Johnson creates local sourcing for African distribution and a stable supply chain for its North American and European operations. The raw material is a short-acting pesticide that has reduced environmental effects relative to long-acting pesticides. The production of natural pyrethrum has a lower environmental impact than synthetic substitutes. So, the choice to source from Kenya supports African Greenfield market development, while creating a stable, low-cost supply for the developed world with production values consistent with S.C. Johnson’s “Greenlist” efforts to reduce the environmental impact of the life cycles of their products (http://www.scjohnson.com/pr05/ecv_4_cvk.asp).

Beyond Greening: from Formulation to Packaging

In 2005, S.C. Johnson demonstrated that product formulation is part of a policy of sustainability. They state on their website that they “Reformulated **Windex®** glass cleaner — the leading glass cleaner in the market — and replaced a 0-rated solvent with a 3-rated solvent and unique cleaning-ingredient system. The new formula removed more than 1.8 million pounds of volatile organic compounds (VOCs) and gave **Windex®** glass cleaner 30 percent more cleaning power” (http://www.scjohnson.com/pr06/using_results.asp). In S.C. Johnson’s Greenlist, 0-rated means restricted use material (RUM), 1-rated is “Acceptable”, 2-rated is

“Good”, and 3-rated is a “Best” material. In the process of reducing toxins in their formulation, they reduced handling costs, material costs, toxic process byproducts, and increased safety in the homes of their customers. In this case, sustainable product formulation lowers costs, while increasing profits and safety. Let us turn next to package material reuse.

In the U.S., beverages used to be distributed in glass bottles and steel cans. There was no glass recycling at that time, only bottle reuse. In this setting, the development of aluminum cans was particularly disruptive. Steel beverage cans were heavier and had seams that were sealed with solder. The steel formed rust if there was moisture on the outside of the can. Once the can was opened, the steel soon reacted with the beverage to form rust inside. The tops and bottoms were made of a different material. The multiple materials made them difficult to recycle and sharp edges limited reuse. Aluminum cans, in particular, can be recycled forever. Recycled aluminum is much cheaper and uses only 5% of the energy required to mine bauxite and create virgin aluminum (<http://www.earth911.org/master.asp?s=lib&a=aluminum/facts.asp>). The stamping process of forming aluminum cans creates no seam and the lid is made of the same material. Even the pop-top remains attached, since aluminum is much more malleable than steel. Aluminum cans offer the following improvements over previous cans: one material; lower costs; lighter; easy to recycle; no waste. This is a good example of “Cradle to Cradle” product development: no aluminum need be lost. It is also an illustration of Beyond Greening, which is characterized by creative destruction (former containers were made obsolete) and a restructured industry (machines were replaced, not retooled). Aluminum can technology was so disruptive that within a few years, no beverages were in steel cans. This example of Beyond Greening fits top of pyramid economies better than the BOP, because while it is cost-effective, it requires the customer to carry the 1¢ cost of the container during product use. This is negligible to top of pyramid beverage consumers, but a barrier to the BOP for a product that is a luxury. We have discussed disruptive product development, sourcing, formulation, and reusable packaging. Next, we will discuss strategies for enterprise global growth by serving the BOP.

Global Opportunities at the BOP

An acronym that summarizes a global growth strategy is B24B, or “business to 4 billion.” As an example of how a disruptive product strategy can affect a multinational corporation, Unilever developed an affordable detergent, Wheel, in India through subsidiary Hindustan Lever, Ltd. This product became the leading seller for Hindustan Lever in just five years from 1995 to 2000, with an annual return on capital employed of 93% from a gross margin of 18%, while the subsidiary’s profits grew 25% per year. In addition, Unilever adapted this sales model to Brazil with a new product, Ala. Now, 20% of Unilever’s global sales come from the BOP, due to this and other product developments (Hart, pp. 138-139). Clearly, Unilever has shown the transforming potential represented by adapting its business model to serve the BOP. The BOP is properly viewed as a Greenfield market for multinationals that learn how to address 4 billion people with great needs and high motivation to improve their lives (Prahalad, p. 105). Local competitors are limited in scope and technologies to address these markets in a sustainable manner, both with respect to business systems and environmental systems. Multinationals can take a perspective that places efforts in one market segment or supply segment into a global strategy.

Traditional views of the phone industry market segmentation would ignore the BOP, because BOP people cannot afford to spend \$200 or more per year on phone service. In 1976, Professor Muhammad Yunus created a model of bank microlending in Bangladesh. For people with a per capita income of less than \$300 per year, the prospect of a woman in a rural village accumulating \$175 to start a small business is daunting. So, the Grameen Bank formed rural village lending units. The bank used five-member groups to decide who among them gets the

first loans. Social ties are strong enough that the recipient of the first loan will pay it back so that her neighbor can be the next one to receive a loan. The rate of repayment is 98.5%, which is higher than the repayment rate in developed economies for small business loans with collateral. Using this structure, Grameen Bank teamed with multinational cellphone companies to bid on bandwidth in the national auction. Grameen Phone sold cellphones to rural women who had taken out loans with Grameen Bank. The women then provided the first phone service available in their village. Villagers were glad to pay to use the phone rather than travel to the city, pay bus fare, and waste one or two days in order to do their business. These rural phones generated four times more revenue for the phone consortium than phones owned by individuals for private use. The infrastructure investment to create the cellphone network is much less than to create a landline network. So, the members of the phone consortium benefited from a highly profitable Greenfield market. The women entrepreneurs created income and paid back their loans with interest. The villagers benefited from a valuable, productivity-enhancing new telephone service provided at low cost. The project started as a pilot in 1997. In 2003, profits to the consortium were \$74 million on \$300 million in revenues. The Grameen Phone subscriber base in August, 2004 was 2 million, providing phone access to 50 million. Of these subscribers, 75,000 were phone ladies averaging \$1,000 per year in earnings, who started with Grameen Bank loans. Now, Grameen Phone is expanding its portfolio to include internet Kiosks. N-Logue, a telecom startup in India, has adopted a similar business model, but is taking advantage of newer technology to lower costs (Hart, p.121 and <http://www.grameen-info.org/bank/hist.html>).

Innovations that improve the productivity of people at the BOP are the key to unleashing their latent economic power. The Grameen Phone example works as a disruptive innovation because it allows villagers to increase their productivity while also increasing economic multiplier activity in their village. Travel to the city to conduct business when a phone call will suffice wastes capacity on busses and cars, costs more than a phone call, and wastes work hours for the villager. The only way to increase efficiency and lower costs to the extent needed to serve the BOP is to reduce waste, in all of its forms. Our world is resource limited when serving an additional 4 billion people, so reuse of scarce materials is essential. Pollution results from the waste of materials. One key to reducing waste is to design products and packaging to be recyclable or reusable. Another key is to design reverse logistics systems for recyclable materials and packaging using backhaul lanes in transportation networks.

An example of how the BOP regards materials is the experience my family had when we lived in a poor neighborhood of Estelí, Nicaragua, from 1985 to 1987. Our neighbors lived on about \$10 per person per month, although they had government-subsidized food and water. My wife and I were volunteers with Mennonite Central Committee, which supported us with food and expenses (we had a motorcycle and a house) plus \$43 per person per month as spending money. So, even as volunteers, we were the richest residents of our neighborhood of 5,000 people or more. Our house was 20 feet by 20 feet with a tile floor, a galvanized steel roof, no glass, painted wooden walls, and open-air beams that let air pass between roof and walls. Most of our neighbors had 10-12 people living in identical houses, sleeping in hammocks that were taken down during the day. A few had TVs. In this environment, my family was very frugal with resources. We learned that an empty jar is great for storing flour. A burlap sack is good for holding bananas. In spite of our conscious efforts to be frugal, the irregular times that the garbage truck came by was an occasion for our neighbors to offer to help us with our trash. They would inevitably find treasures that we overlooked and discarded. That is how we learned the value of a jar and a sack. Later, we learned that a discarded piece of paper could help children do their homework and serve as a dustpan in the house. Plastic jugs with handles stored liquids until they broke and then they could scoop water for baths. Cardboard boxes

were broken down and used to cover the set table, keeping dust off of the place settings. Discarded food fed pigs.

Materials discarded are materials wasted. Marketing to the BOP requires a similar attitude about materials and containers. Coca Cola markets to third-world tiendas, which do not let their customers take the bottle for fear that it would break. The proprietor pours the Coke or Fanta into a sandwich bag with a straw for the customer and sends the bottle back to the distributor. The cost of the straw and bag is an acceptable incidental when buying a luxury item like a Coke. For necessities, people at the BOP are happy to bring their own container if they can buy a useful product cheaper. Companies selling powders and liquids in bulk can create another profit center or marketing device by designing and selling a reusable container ideal for holding their product. Distribution may go through supercenters, tiendas, or small entrepreneurs. The key is to focus on a mass market approach to selling something that makes life better (Prahalad, p. 105). In most BOP countries, the fraction of the population that is wealthy and middle class is small, so products aimed at the wealthy will have a very limited market. Efficient use and reuse of materials and packaging are keys to tapping the market potential of the BOP, by lowering costs to a level of affordability at the BOP. Sustainability at the BOP requires both Beyond Greening (products designed to conserve materials and avoid toxins) and mass appeal approaches to create growing profit centers. Products that achieve success with the BOP can more easily be made with added features and costs to appeal to the wealthier members of society than to try taking a product with extra costs and strip out the costs while keeping value for the BOP.

Many companies are focusing on China (1.3 billion people) and India (1 billion people) as global growth markets for their products and services. However, most of the focus is on the 80 million Chinese and 40 to 50 million Indian residents that are rich or middle class, because “they have the money”. This strategy is inadequate for several reasons. This strategy ignores the BOP in each country: over 1.2 billion Chinese and nearly 1 billion Indians are poor. Grameen Bank/Grameen Phone, Unilever, and S.C. Johnson have each created highly profitable businesses in the portion of their enterprise focused on the BOP. Characteristic of these successful businesses is the tendency for smaller gross margins but larger returns on capital employed than the firms’ typical performance. This is to be expected when selling to previously underserved people with limited financial resources. The BOP responds to good value en masse. Ironically, once a product or service catches on with the BOP in a country, the upscale market becomes more accessible to a strategy of adding features (at an added cost) and differentiating the upscale product by charging more. So, even the rich and middle classes in a culture are accessed best when targeting the BOP first. When Toyota emerged in the U.S. market, they started with inexpensive cars. Over time, they created increasingly upscale brands like Lexus and full-sized pickups to broaden their coverage of the U.S. market. A further benefit in an upwardly mobile economy like China is that consumers who learn to trust a brand when they are poor, but on the path to more wealth, will tend to follow along as upscale products get introduced into the same product lineup (Prahalad, p. 14). In this way, a product or service can mature in the protected, underserved environment of rural and urban poverty. Once a brand is established in the BOP of a society, expansion and product segmentation to the upwardly mobile follows naturally. The result is a benefit to BOP people or they would not spend their precious and scarce money. Further benefits accrue to the surrounding society, due to the economic multiplier effect.

In 1951, when Sam Walton opened his store in Bentonville, AR, he incubated his business philosophy and retailing approach in small towns, away from urban competition and fickle fashions. Wal-Mart grew up in small towns by being the low-cost leader with customer-

centric products and longer store hours than competitors (http://en.wikipedia.org/wiki/Sam_Walton). Only later did Wal-Mart compete in the urban environment. Similar to most BOP approaches, Wal-Mart succeeds in a low margin industry by providing value to customers, which generates volume. High volume, in turn, provides high returns on capital invested. This model can work in other societies by competing first in underserved areas, while the lessons of providing value in globally diverse BOP settings accrue. Success in the relatively protected small town environment can later translate into success in upscale markets. When that transition takes place, success comes from a segmented approach to the upwardly mobile members of a society who have a favorable ideation of the brand. At this point, if added features and added services need to be included to serve the segments identified, the added costs will be contained within the added price that these segments of society will pay for what they want. To start with the rich leads to future downscale offerings that look cheap and unappealing by comparison to the original. Starting with the BOP of a society leads to a more sustainable business model and forces the enterprise to be efficient, to learn how that society defines value, and to conserve and reuse materials in order to meet the price points of the BOP.

Conclusion: Beyond Greening Leads to Sustainable Global Growth at the BOP

So, sustainability does not refer to green initiatives that increase costs. Sustainability actually refers to a “cradle to cradle” approach to product development, material sourcing, product formulation, material reuse, product targeting and segmentation, product distribution, transportation networks, context-sensitive package development, business line sustainability, global scope, and optimal service to the widest customer base. Sustainability is a disruptive business growth strategy that targets Greenfield markets at the base of the pyramid of society and incorporates both Beyond Greening and global growth at the BOP strategies. A sustainable strategy includes an ethic of designing disruptive productivity-enhancing products and services, making efficient use and reuse of scarce materials, while contributing to an upwardly mobile consumer base and positioning the enterprise to compete now and in the future. Create tomorrow’s disruptive technologies and techniques today by focusing first at the base of the pyramid.

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