

**Van R. Wood**

Virginia Commonwealth University, USA  
School of Business Administration  
E-mail: vrwood@vcu.edu

**Tom Gillpatrick**

Portland State University, USA  
School of business Administration  
E-mail: tomg@pdx.edu

**BUSINESS GROWTH IN UNDERSERVED  
MARKETS: DOING WELL AND DOING GOOD  
THROUGH GREATER UNDERSTANDING OF  
VULNERABLE POPULATIONS, FOOD DESERTS,  
AND BOTTOM OF THE PYRAMID CONCEPTS**

Review

UDK: 364.65-058.5

JEL classification: I31, O12

***Abstract***

*This paper, guided by the literature concerning vulnerable populations, food deserts and bottom of the pyramid markets, presents a new conceptual model to further our understanding of how businesses can do good, while doing well in under-served/under-nourished/under-employed markets that exist around the world. Practical implication and calls for further research based on the proposed model are also offered.*

***Keywords: Vulnerable Populations, food deserts, bottom of the pyramid markets***

**1. INTRODUCTION**

Vulnerable populations have been defined as clusters of people who have lesser societal and environmental resources and amplified relative risks toward poor health status, higher morbidity and mortality (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4162317/>). More specifically, resources include income, employment opportunities, access to capital and neighborhoods characterized by high crime levels, limited food options and limited transportation options. Relative risk is exposure to or embrace of less-than-healthy lifestyles, daily behaviors and choices.

The term “food desert” has its origins in a 1995 report by the Nutrition Task Force Low Income Project Team of the United Kingdom Department of Health (*Cummins 1999*). It is defined as “areas of relative exclusion where people experience physical and economic barriers to accessing healthy foods,” (Reising and Hobbiss 2000). Food deserts exist in many areas in our world, including the developed, emerging and underdeveloped nations.

Prahalad and Hammond, (2002) and Prahalad and Hart (2002) first coined the term “bottom of the pyramid” (BOP) and defined it as those billions of people on the planet with per capita income below \$1,500 per year or \$4 per day. Since then, the forces of globalization have significantly reduced this number, but still the size of this population is enormous (Wood 2016). Both extant literature and practical examples indicate that the BOP marketing offers opportunities to create value for the poor (“doing good”) while also creating significant profits for companies that engage this market (“doing well”).

This conceptual research focuses on the realities of food deserts and the vulnerable populations that inhabit them in developed societies (e.g., the United State of America). It also examines the realities of the vulnerable populations at the “bottom of the pyramid (BOP)” in developing societies (e.g., India, Africa, South America and others). By examining the approaches to appreciating and improving the realities of valuable population in both societies (developed and developing) a more holistic understanding of the underserved in our world may be possible. Likewise, insights from such understanding can perhaps, help organizations who invest in and serve such populations be more successful.

## **1.1 Vulnerable Populations and Food Deserts: Realities in the U.S.**

Food desert – as noted previously, the term was first documented in a 1995 report by the Nutrition Task Force Low Income Project Team of the United Kingdom Department of Health. It is defined as “areas of relative exclusion where people experience physical and economic barriers to healthy foods” (Cummins 1999, 2002). In the U.S., food deserts are identified as parts of the country with only limited access to fresh fruit, vegetables, and other healthful whole foods. Food desert are typically located in poverty-ridden parts of cities, but can exist in rural areas as well. This is largely due to a lack of grocery stores, farmers’ markets, and healthy food providers (Wood and Thomas 2016).

Food deserts and the vulnerable populations living (existing) there in, represent a dishonor to and failure of both social institutions and economic systems. Food deserts are often devoid of well-stocked, up-to-date grocery outlets, especially those that carry fresh fruits, vegetables, dairy products and protein. Urban food deserts are often replete with local (but not locally owned) fast-food retail options that provide processed foods, sugar-laden treats, and saturated fat choices (fried food warmed all day by heat lamps, and pizza), that

are known contributors to obesity, cardio-vascular and respiratory disease and diabetes (Reising and Hobbiss 2000; Rose and Richards 2004). It has been said, that “in an urban U.S. located food deserts one can purchase fried chicken, pizza and old bananas, while also picking up an alcoholic beverage and pack of cigarettes, but that’s about it” (Lee 2016). Urban food deserts in the U.S. are populated by vulnerable populations, predominately African American who are at high risk of experiencing violence, crime, personnel degradation, economic poverty and long-term despair over the full course of their lives (Shivayogi 2013). An often ask question evoked by this reality is - how did this happen?

In the U.S., the long and torturous journey of those who make up the vast majority of vulnerable inhabitants of food deserts – African Americans – can perhaps best be captured by first understanding the historic realities of slavery and Jim Crow laws. Between 1525 and 1866, according to the Trans-Atlantic Slave Trade Database (see - [www.slavevoyages.org/](http://www.slavevoyages.org/)), 12.5 million Africans were shipped to the New World. Of those, 10.7 million survived the dreaded Middle Passage, disembarking in North America, the Caribbean and South America. Of those 10.7 million Africans, only 388,000 were shipped directly to North America. The overwhelming percentage of these African slaves were shipped to the Caribbean and South America. Brazil received 4.86 million Africans alone. Some scholars estimate that another 60,000 to 70,000 Africans arrived in the United States, after touching down in the Caribbean first, which would bring the total to approximately 450,000 Africans who arrived in the United States over the course of the slave trade. From these slaves came most of the 42 million members of the African-American community living in the U.S. today (Gates 2014). Denied their freedom, wages for their labor, and many other common dignities, African slaves were seen as less than human, and as inhabitant of the earth that needed specific oversight by those who were granted superior faculties by god, namely Caucasians of European decent (Campbell 2012).

By the end of the 18th century, the American Revolution freed the colonies from British rule and led to the creation of the United States. It did not, however, free the slaves. That took another seven decades involving the war-between-the-states and the Emancipation Proclamation, issued by President Lincoln in 1863. In 1865, the Civil War ended, and the Thirteenth Amendment to the U.S. Constitution abolished slavery throughout the U.S. (see – <http://www.infoplease.com/timelines/slavery.html>). Again, however, this did not end the plight of these new “African Americans.” Institutionalized segregation, discrimination and class structure continued the subjugation of black Americans and ultimately led to today’s current urban food deserts and the vulnerable populations residing there-in.

This brings us to the second historical antecedent to food deserts in the U.S. – namely Jim Crow laws. When state legislatures passed laws of racial segregation directed against blacks at the end of the 19th century, these became known as Jim Crow laws (see - Woodward and McFeely 2001). In essence, Jim Crow laws represented the “de jure” continuation of white dominance over blacks though violence, intimidations and state approved discrimination as

often carried out by the Klu Klux Klan and other “hate groups” (see – Southern Policy Law Center - <https://www.splcenter.org/fighting-hate/extremist-files/groups>). Jim Crow laws legally enforced racial segregation in most if not all public facilities. These laws institutionalized numerous economic, educational and social disadvantages to blacks. Moreover, these realities, while not “de jure” law in the north, eventually became “de facto” law in northern states over time, as well. Thus, the whole of the nation basically bought into a philosophy of “separate but equal,” resulting in conditions that were consistently inferior for blacks in America, when compared to whites. (Woodward and McFeely 2001).

After World War II, African Americans increasingly challenged segregation. The civil rights movement, and landmark Supreme Court rulings such as those that mandated school segregation (*Brown versus the Board of Education of Topeka* – 1954), the historic Civil Rights Act of 1964 (outlawing discrimination in public accommodations), and Voting Rights Act of 1965 (ending legally sanctioned state barriers to voting for all federal, state and local elections), effectively ended Jim Crow. Nevertheless, the reality of segregation, discrimination and underfunding of basic services in predominately African American communities in the U.S. continued and continues today. Indeed, the vulnerability of this population is largely a reflection of lingering historical effects (see **Hosea 2013**; Campbell 2012).

The economic realities faced by the urban poor in the United States can perhaps be best understood by understanding the term “redlining” and the effects it has reaped. Redlining is the practice of denying services, either directly or through selectively raising prices, to residents of certain areas based on the racial or ethnic makeup of those areas (<https://en.wikipedia.org/wiki/Redlining>). It refers to the practice of marking a red line on a map to delineate the area where banks would not invest and later became the term used to describe discrimination against any people based race or sex irrespective of geography, although the inner city “ghettos” were a frequent target of this process (Dedman 1988; Sagawa and Segal 1999).

Redlining led to a lack of generational wealth creation and resulted in whole communities without proper public transportation (mobility), with high un- and under-employment, and dependence on food stamp and other public programs for survival (Maxwell and Immergluck 1997; Eisenhauer 2001). Redlining has been shown to severely retard the housing market, lower property values in redlined communities and encourage property owner abandonment, resulting in a segregated population density skewed towards those that are most vulnerable. Abandoned structures in such area often serve as shelters for drug dealing and other illegal activity, which in turn leads to spiraling social problems and continued reluctance of people to invest in these areas (Wilson 1996). What housing does exist is overwhelmingly “public” in nature, which garners little pride in upkeep and maintenance by residents. In general, public housing communities became ripe with crime, unemployment, limited mobility, poor overall healthcare, degradation of infrastructure, limited and poorly funded education and dependence on government programs, all of

which in combination lead to a “cycle of institutions” and a challenge to family structure. The majority of families in public housing communities are led by a single parent (predominantly females). Taken together, this toxic swirl creates an urban environment that fully represents what a food desert is - a community of vulnerable people (Walter 2003).

The vulnerable populations in food deserts in America remain tattered and stressed. Overcrowding (in public housing “projects”), limited mobility, broken family structures, abundance of drug use and poverty-based crime, high under and unemployment, lack of wealth creating enterprises and a preponderance of marginal food outlets all combine to form a cycle of institutional “pass-throughs,” where an individual’s life path may be represented by a series of underfunded and thus relatively bleak experiences in grade school, middle school and high school. This is followed by gang membership (for respect and safety), leading to criminal activity, which in term is followed by lengthy incarceration, followed by a return to the only home available, the food desert. Moreover, in the end, a now twenty-seven-year-old “pass-through” finds himself or herself with no skills, no credit and no hope, where personal vulnerability may continue for a lifetime in his familiar public housing community (Curtis Lee 2016).

Existing literature indicates that access-related concerns (e.g., sustainable transportation to and from healthy food outlets), and lack of education (with respect to food options, preparation of food varieties and general principles of nutrition), are significantly correlated with premature death among vulnerable populations living in U.S. food deserts (Rose and Richards, 2004; Walker, Keane, and Burke, 2010, Wood and Thomas 2016, Wood and Thomas 2017). For example, census tract data indicates that life expectancies are shorter by almost 20 years among those living in the Fairfield Court public housing community in the “East-End” of Richmond, Virginia (a notable urban food desert located in the eastern region of the U.S.), when compared to the city’s more affluent neighborhoods just five or less miles away in the “West-End.” The average life-span in Richmond’s East End food desert is 60 years. The average in its affluent West End neighborhood is 80 years (Wood and Thomas 2016)

## **1.2 Vulnerable Population at the Bottom of the Pyramid**

The bottom of the pyramid literature has created a high amount of interest, particularly in the developing world (e.g., South America, Africa, India). For marketers it combines the appeal of social action and profit. The tantalizing prospect of helping the poor while earning revenue speaks to the idealism within marketers. The ultimate prospect arising from marketing to the BOP is an increase in global prosperity with probable declines in conflict. The thought that inequities in income and opportunities fuel resentment and discord that leads to strife and war is a paradigm that has been present for centuries. Over time, researchers and practitioners have sought to implement bottom of the pyramid (BOP) concepts in a variety of settings. Some have borne fruit; others have failed. As a result, the image of doing social good while doing well financially has become less cut and dried. As our understanding increases (and

related literature matures), the opportunities and challenges of marketing to the BOP have become clearer and more nuanced. Both market profile and market strategy must be carefully considered (Wood, Pitta and Franzak 2008).

It is becoming more accepted that the BOP marketing offers opportunities to create value for both the poor and for companies that engage this market (Karnani, 2007b). Two reasons for this are apparent including - 1) the real income of BOP consumers and 2) the sheer size of the BOP market itself. The oft-quoted BOP figures of 4 billion people with per capita income below \$1,500 per year or \$4 per day (Pralhad and Hart, 2002), and 4 billion people with per capita income below \$2,000 per year or \$6 per day (Pralhad and Hammond, 2002), have at times been questioned by researchers (Karnani, 2007a). These figures, and thus the scope of the BOP market were later cited by Prahalad (2004) as 4 billion people making less than \$750 per year or \$2 per day. Karnani (2007b) reports that the World Bank estimated the actual size of the market to be 2.7 billion (as opposed to the often cited 4 billion) and other respected sources characterized even the World Bank figure as an overestimation, with some estimating the poor at only 600 million (Economist, 2004). Indeed, differences ranging from a) earning of \$2000 per year to \$750 per year and b) 4 billion in total to 600 million in total are indeed large. Never-the-less, as our understanding of the basic profile of BOP markets has evolved, it is apparent that no matter what the size estimate is, this market is indeed potent. However, like any market, the BOP's potential contribution to any firm's profits needs to be tempered with a well-grounded understanding of key demographics (income and size).

Concepts related to successful marketing strategies aimed at BOP segments around the world have also evolved. Like most markets, there is no "one size" fits all plan for companies engaging or contemplating engaging the BOP market. However, there are two elements of the BOP proposition that have been identified as highly correlated to successful marketing to individuals that fall within this market no matter where they are. First, an accurate characterization of BOP individuals both as consumers and as producers is required to fully understand their needs, perceptions, and behaviors. Indeed, more often than not, BOP individuals are producers and consumers of specific goods (food, clothing, shelter, etc.) and thus the typical separation of production and consumption, common among developed markets, is not readily apparent here. The need for firms marketing to the BOP to carefully cultivate perceptions of transactions as "partnerships in cooperation" rather than "competitors and mercantile" is needed (see Rutherford, 2000, and Martinez and Carbonell, 2007). Second, it is important to recognize that marketing to BOP individuals often requires a different business model than one typically found in advanced markets, one incorporating access to micro-credit as well as micro-finance, and the adaptation of the marketing mix that emphasizes function (specific utilities relevant to those of limited means) and identity (where products and services are also perceived as a means to a larger world of cherished values, and not just tied to physical or material wellbeing – see World Bank, 2002 – *Voices of the Poor*).

One enduring impression of the BOP poor is that they have few options and few opportunities to exercise options. In India, for example, the historical realities of the “cast” system lead to on-going social and economic segregation. This system, which had its origins in ancient India, and was transformed by various ruling elites in medieval, early-modern, and, modern India resulted in centuries of stratified social status, specific types of work being reserved (or required) of specific casts, and senior government appointments allowed only to the upper castes (Dumont 1980). Likewise, the cast system limited where the lower casts (which make up a significant portion of the Indian BOP population) could live, with whom they could associate, and where and if they could acquire resources to build enterprise, and thus limited their ability to build generational wealth (Dirks 2006). Even today, their social and economic status constrains them to pay a BOP penalty for items they purchase. They typically do not or cannot travel to locations that have better distribution infrastructure, lower prices or product or service alternatives. Such constraints require BOP consumers to buy locally from the village monopolist who, having great market power can charge higher prices and thus further exacerbating this situation. Given this historical and contemporary reality, the consumption experience more often than not leaves BOP people suspicious of business in general and feeling powerless to do much about it. Add to this, the typically lower educational level of BOP consumers, and their relatively limited awareness of the “outside” world, BOP consumers have come to view most outsiders as suspicious and foreign entities that should be shunned (Venkatagiri and Nair, 2005).

In sum, BOP populations such as those in India or vulnerable and doing both good and well in BOP markets involves managing substantial challenges rising from historic, economic, social and cultural realities. Related to this, are a number of questions that need to be addressed. Gardetti (2005) articulated a number of these questions, including - how can companies transform their strategies aimed at wealthy markets into competitive advantage in BOP markets? What kind(s) of business model will work best in BOP markets? What messages resonate most with BOP individuals and how can they be used to build trust in this unique economy? And what is the larger role of business and society in the educational and social development of BOP markets? The ultimate question to firms examining such markets is - how can we do well, while also doing good in BOP markets? Clearly, appropriate marketing strategies aimed at BOP populations is central to answering this questions.

### **1.3. A Proposed Model**

Based on the brief background provided above, it appears that a number of commonalities exist with respect to historic and contemporary realities that have resulted in food desert populations (in developed economies like the U.S.) and bottom of the pyramid populations (in developing economies like India). Figure 1 (A Model of Vulnerable Populations in Food Deserts and the Bottom of the Pyramid – Antecedents, Moderators, Mediators and Outcomes) is presented as a starting point to our thinking and understanding of food desert and BOP populations and how to do good and do well in both.

Common “antecedents” include historical, economic, social and cultural dimensions. Slavery and Jim Crow laws (in U.S. food desert populations) and the cast system (in Indian society) laid the historic groundwork for the creating of these vulnerable populations. Redlining, lack of mobility, general wealth building deterrents and the presence of over priced goods reflect the economic past and current realities in both populations. Forced segregation in public housing and communities at large define the social landscape that existed and exists in both India” and the U.S.” vulnerable populations. And culture/community realities resulting in drug use, abject poverty and high crime; cycles of institutional pass-throughs in U.S food deserts, along with restricted association regulations, restricted employment and restricted living areas are apparent in these vulnerable populations to one degree or another.

The model shown in Figure 1 postulated that these antecedes (and their influence on the rise and sustainment of vulnerable populations in both developed and developing societies) can be moderated with education, sustainable transportation options and with an understanding that these populations should be viewed as both consumer and producers and as partners in any transaction. Education is the key to eating healthy foods and understanding how any individual can make his or her way out of a food desert or BOP community. Sustainable transportations allow access to and from necessities (quality food, retail shops and entertainment options), and allows access to employment opportunities.

Figure one also postulates that a clear understanding of the people that make up food desert and BOP populations, and a translation of that understanding into appropriate marketing strategies (that reflect a culture of partnership and cooperation) can mediate the suspicions prevalent in this population towards outsiders that have left them jaded for centuries.

In the end, the model suggests positive outcomes for all who truly understand these antecedents, moderators and mediator. That is, that the way to do both good (uplifting the economic and social realities) and do well (creating sustainable wealth for engaged organizations and business entities) is to engage vulnerable populations with a clear understanding of how they come to be and how they can be moved forward.

## **2. CONCLUSION – BUSINESS IMPLICATIONS AND FUTURE RESEARCH**

This paper presents an exploratory conceptualization and model that brings both Bottom of the Pyramid (BOP) and Food Desert literature together under the rubric of vulnerable populations. BOP and food desert populations exist in most countries and represent both a challenge to and opportunity for society and business organizations. The model presented here views both populations as having much in common (with respect to antecedents, moderators, a mediator and outcomes) posits that a fuller understanding of these commonalities can lead

to doing good and doing well in this environment. If the model holds true, then insights into what organizations and business firms should be considering when approaching these populations are within their grasp.

The issue becomes does this model capture the essences of both populations? Are there other antecedents, moderators, mediators and outcome that would enrich our understanding of these populations and how to address their situations better and more profitably? Future research should consider such questions and then move to empirically verify the model as a whole and the individual parts of it laid out here.

The need to improve the lot of vulnerable populations is both a moral and economic imperative. If the human endeavor is to truly arrive at a place of nobility some day in the future, then both BOP and food desert populations must be made a thing of the past.

## REFERENCES

Campbell, B. (2012), *Richmond: The Unhealed History*, Brandylane Publishers, Inc.

Cummins S, Macintyre S (1999). *The location of food stores in urban areas: a case study in Glasgow, British Food Journal Vol.101 No.7, pp.545–53.*

Cummins, Steven; MacIntyre, S (2002), ‘Food deserts’—evidence and assumption in health policy making, *British Medical Journal*, 325 (7361): 436–8.

Dedman, Bill (1988). *The Color of Money, The Atlanta Journal-Constitution.*

Dirks, Nicholas B. (2006), *The Scandal of Empire: India and the creation of imperial Britain, Harvard University Press, ISBN 978-0-674-03426-6*

Dumont, Louis (1980) [1966], *Homo Hierarchicus: The Caste System and Its Implications (Reprint, revised ed.)*, University of Chicago Press, ISBN 978-0-226-16963-7.

*Economist* (2004) ‘More or less equal’, *The Economist*, 13 March 2004: 84.

Eisenhauer, Elizabeth (2001), In poor health: Supermarket redlining and urban nutrition, *GeoJournal*, Vol. 53, No. 2.

Gates, Henry Louis, Jr. (2014), 100 Amazing Facts about the Negro: You might think you know, but you’re probably wrong. available at [http://www.theroot.com/articles/history/2012/10/how\\_many\\_slaves\\_came\\_to\\_america\\_fact\\_vs\\_fiction.html](http://www.theroot.com/articles/history/2012/10/how_many_slaves_came_to_america_fact_vs_fiction.html) (posted), (accessed January 6, 2016).

Gardetti, M. A. (2005) “A Base of the Pyramid Approach in Argentina” - *Greener Management International*, GMI Issue 51, pp. 65-77.

Hosea, Anthony (2013), *Walking While Black – Racial Profiling*, Published by Anthony Hosea, ASIN B00sejbebw.

<https://en.wikipedia.org/wiki/Redlining>

Karnani, A. (2007a). "The Mirage of Marketing to the Bottom of the Pyramid: How The Private Sector Can Help Alleviate Poverty," *California Management Review*, Summer, Vol. 49 Issue 4, pp. 90-111.

Karnani, A. (2007b). "Misfortune at the Bottom of the Pyramid," *Greener Management International*. pp. 99-110.

Lee, Curtis (2016), quoted during a Trolley Ride Tour of Richmond, Virginia's East End Food Desert (with VCU Professors, Administrators and Students), September.

Maxwell, Ann and Daniel, Immergluck (1997), "Liquorlining: Liquor Store Concentration and Community Development in Lower-income Cook County Neighborhoods" *Woodstock Institute*. <http://www.woodstockinst.org/document/liquorlining.pdf>, (accessed January 2016)

Martinez, Juan Luis and Maria Carbonell (2007). Value at the Bottom of the Pyramid, *Business Strategy Review*, August 2007, 51 – 56.

Prahalad, C.K. and A. Hammond (2002) 'Serving the World's Poor Profitably', *Harvard Business Review* 80.9: pp. 48-57.

Prahalad, C.K. and S.L. Hart (2002) 'The Fortune at the Bottom of the Pyramid', *Strategy and Business* 26 (January 2002): pp. 54-67.

Reising Vmt and A. Hobbiss (June 2000), "Food deserts and how to tackle them: a study of one city's approach," *Health Education Journal* Vol.59 No.2, pp.137–149.

Rose, D., & Richards, R. (2004). Food store access and household fruit and vegetable use among participants in the US Food Stamp Program. *Public health nutrition*, 7(08), 1081-1088.

Rutherford, Stuart (2000). *The Poor and Their Money*, OUP India.

Sagawa, Shirley and Eli Segal (1999), *Common Interest, Common Good: Creating Value through Business and Social Sector Partnerships*, *Harvard Business Press*. pp. 30.

Shivayogi, Preethi (2013), "Vulnerable Populations and Methods for their Safeguard," *Perspectives in Clinical Research*, January – March, 4(1), pp.53-57.

Southern Policy Law Center - <https://www.splcenter.org/fighting-hate/extremist-files/groups>.

Venkatagiri, Shankar and Madhavan Nair (2005). "Empowering the Bottom of the Pyramid from the Sky: A Case of Satellite-based Services," *IIMB Management Review*, (September), 57 - 67.

Walker, R. E., C.R. Keane, and J.G. Burke (2010). "Disparities and access to healthy food in the United States: a review of food deserts literature," *Health & Place*, Vol. 16, No. 5, pp. 876-884.

Walter, Thabit (2003), *How East New York Became a Ghetto*, NYU

Wilson, William (1996), *When Work Disappears: The World of the New Urban Poor*, Random House.

Wood, Van R. (2016), *Globalization, Sustainability and Marketing of Healthcare in Emerging Markets: Doing Good, While Doing Well*, Research Handbook of Marketing in Emerging Economies, vol. 1, Edward Elgar Publishing (An Edward Elgar Original Reference Series).

Wood, Van R., Dennis A. Pitta and Frank Franzak (2008), "Successful Marketing by Multinational Firms to the Bottom of the Pyramid: Connection Share of Heart, Global "Umbrella Brands," and Responsible Marketing," *Journal of Consumer Marketing*, 25 (7), 419-429.

Wood, Van R. and Manoj Thomas (2016), "Food Deserts: A Challenge to Health in America," Proceedings - Association for Marketing & Health Care Research 35rd Annual Conference, Crested Butte, Colorado o, February-March, (available on line <http://www.amhcr.org>).

Woodward, C. Vann and McFeely, William S. (2001), *The Strange Career of Jim Crow*, Oxford University Press.

World Bank (2002). *Voice of the Poor*, Washington DC.

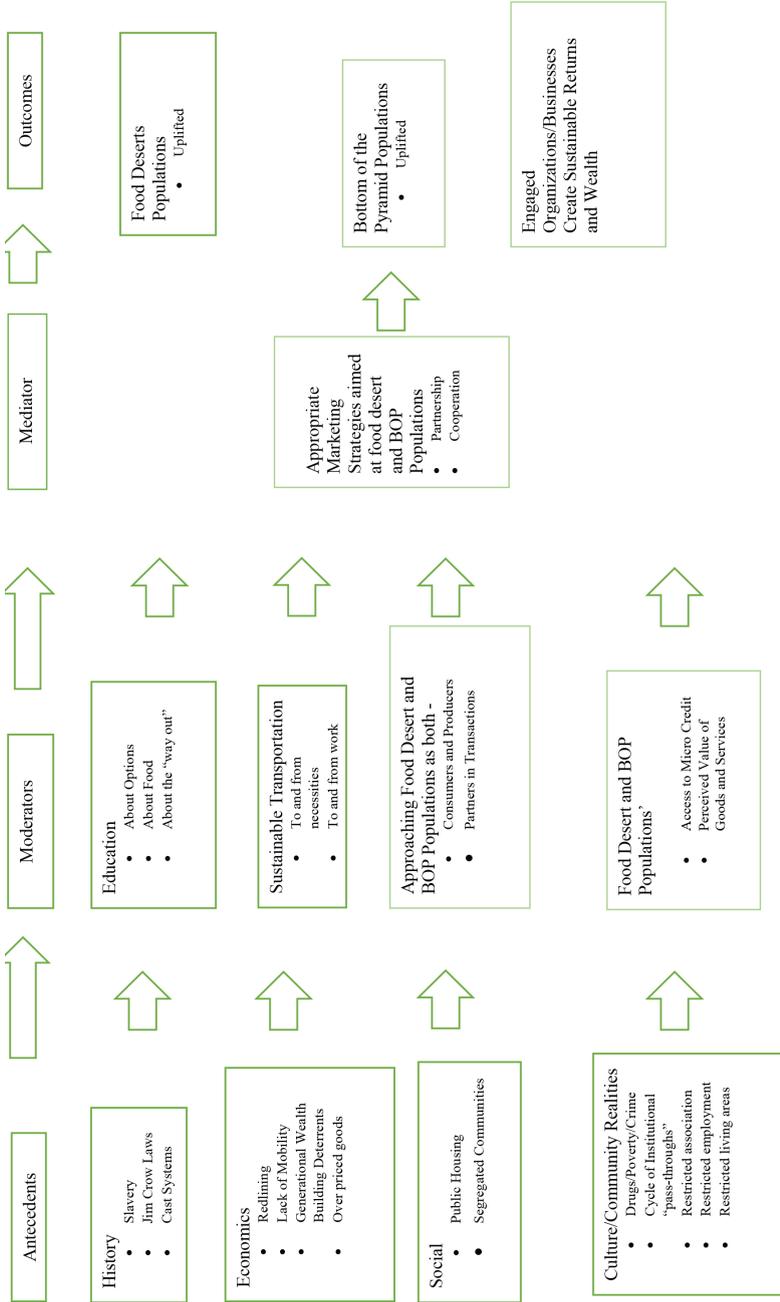


Figure 1 A Model of Vulnerable Populations in Food Deserts and the Bottom of the Pyramid – Antecedents, Moderators, Mediators and Outcomes