

# Frugality in Indian Context: What Makes India a Lead Market for Affordable Excellence?

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## Abstract

In recent years a phenomenon called “frugal innovation” has increasingly got traction in the scholarly discourse; and as research reveals, it is often brought in connection with India. Apparently, India has quietly acquired the role of a pioneer for innovations that aim at combining affordability with excellence, cutting across sectoral boundaries. But what is it that makes India a forerunner for an innovation paradigm with increasing global relevance? In this paper, I propose that the “lead market” theory can explain to a quite good extent the attractiveness of India for frugal solutions. On one hand, there are concrete economic factors that give rise to resource-efficient and affordable solutions to problems faced in day-to-day life. On the other hand, frugality has been long regarded as a virtuous social value in India and the socio-cultural context of the country provides a fertile environment for the acceptance of frugal products and services on both demand and supply sides.

This paper, apart from dwelling on the concept of lead markets and its application in the context of frugal innovations in India, also presents some qualitative results of an empirical survey conducted by the author with Indian students that underscore the role of culture as a key determinant for the acceptance of frugal innovation by relevant stakeholders.

**Keywords:** Lead Markets; Frugality; Frugal Innovation; Culture; India; Reverse Innovation

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## **1. Introduction**

In recent years, a phenomenon called “frugal innovation” has increasingly and consistently gained traction cutting across boundaries of disciplines, industries and professional domains (see, e.g., Economist, 2009; Bhatti and Ventresca, 2012; Tiwari and Herstatt, 2012; Brem and Ivens, 2013; Arnett and Claas, 2015; Radjou and Prabhu, 2015; Rosca, Arnold, and Bendul, 2016). If we take Google Scholar, as an indicator, then the number of entries for academic papers containing the term “frugal innovation” increased impressively from 11 at year-end 2009 to 1,490 by mid-July 2016. Academics as well as practitioners; engineering sciences as well as management sciences; medicine as well as humanities; developing countries as well as developed nations are trying to comprehend this phenomenon and its (potential) implications for their respective domains, as is documented in chapter 2 of this contributed volume.

A recent review of published scholarly articles on frugal innovation showed that “research on frugal innovation has been predominantly contextualized for emerging economies, especially India” (Tiwari, Kalogerakis, and Herstatt, 2016b: 11). A keyword analysis of published peer-reviewed, journal articles on frugal innovations showed that “India” was explicitly cited as a keyword in about 18% of the articles, whilst three other terms (“Jugaad”, “Bottom of the Pyramid”, and “reverse innovation”), often associated with India, accounted for another 56% (Tiwari *et al*, 2016b). Apparently, India has quietly acquired the role of a pioneer for innovations that aim at combining affordability with high quality, cutting across sectoral boundaries. But what is it that makes India a forerunner for an innovation paradigm with increasing global relevance? Some very obvious factors that contribute to this image are described below.

The prevalence of English language in the country makes reports on innovations emanating from India in the era of the Internet instantly accessible to the global village. Business press has thus created a virtuous cycle for India’s pioneering role in affordability-driven solutions (e.g., Philip, 2008; Economist, 2009; Saraf, 2009; Lamont, 2010; Lavallee and Veach, 2010; Menon, 2011; Mitra, 2011; Economic Times, 2012).

The scholarly discourse on innovation paradigms concerned with affordability, inclusion and emerging markets has been often set in the context of India, which has been a large and growing economy beset serious levels of poverty and infrastructural difficulties, giving rise to a discourse on inclusive innovation (Dutz, 2007; Hall, Matos, Sheehan, and Silvestre, 2012; Reficco and Márquez, 2012). Then, India also turned into a leading destination for business-

and knowledge- process outsourcing, partly also contributing to innovative solutions of global firms (Kobayashi-Hillary, 2005; KPMG, 2008; Immelt, Govindarajan, and Trimble, 2009; Kumar and Puranam, 2012; Tiwari and Herstatt, 2014a). Indian multinational enterprises (MNEs) started to invest overseas creating a scholarly curiosity in these MNEs and their product profiles (Pradhan, 2008; Bruche, 2009; Pradhan and Singh, 2009; Sauvant, Pradhan, Chatterjee, and Harley, 2010; Schuster and Holtbrügge, 2011; Bruche and Wäldchen, 2013; Holtbrügge, 2013). This has given considerable visibility to India and innovation activities taking place there in the corporate sector and beyond (see, e.g., Cappelli, Singh, Singh, and Useem, 2010; Bound and Thornton, 2012).

Furthermore, the scholarly discourse on these kinds of innovations has also seen a relatively large participation by Indian-origin academics. For example, the discourse on grassroots innovations has been largely influenced by works of Anil K. Gupta (e.g., 2000; 2003; 2010); the debate on the “Bottom of the Pyramid” (BOP) has been shaped by works of the late C.K. Prahalad (see, e.g., Prahalad, 2002; Hammond and Prahalad, 2004; Prahalad and Mashelkar, 2010; Prahalad, 2012); and the concept of “reverse innovation” got traction with works of Vijay Govindarajan (Immelt *et al.*, 2009; Govindarajan and Trimble, 2012; Govindarajan and Ramamurti, 2013). Also the concept of “frugal innovation” has seen many (co-)involvements of Indian-origin scholars (see, e.g., Agarwal and Brem, 2012; Singh, Gambhir, Sotiropoulos, and Duckworth, 2012; Tiwari and Herstatt, 2012; Basu, Banerjee, and Sweeny, 2013; Radjou and Prabhu, 2013; Rao, 2013; Tiwari, Kalogerakis, and Herstatt, 2014; Radjou and Prabhu, 2015; Ramdorai and Herstatt, 2015; Tiwari *et al.*, 2016b). A recent bibliometric analysis showed that 4 of the top-5 cited first authors (natural persons) in papers on frugal innovation were of Indian-origin; among top-10 the number was 5 (Tiwari *et al.*, 2016b). The large involvement of Indian (co-)authors would almost necessarily implicate that they would report on innovative products and services that they more easily come in contact with, resulting in a positive, and not necessarily false, perception about the innovativeness of the country.

However, I posit that the above mentioned factors cannot explain the actual emanation of so many commercially successful (and of even those that are lesser successful) innovative products and services including business models that aim at combining affordability with excellent quality and the “right” amount of functionality. The above-mentioned factors, in my opinion, are more a result than the cause of the actual developments on the ground. After all, we have seen India acting as a “test lab” for scores of domestic and global innovators in their pursuit to create highly disruptive and affordable products and services in fields as diverse as

healthcare, automobiles, space research, consumer and household goods, or mobile technologies, to name but a few.

In this paper, I propose that the “lead market” theory can explain to a quite sufficient extent the attractiveness of India for frugal solutions and for their subsequent diffusion overseas (“reverse innovation”). On one hand, there are concrete economic factors that give rise to resource-efficient and affordable solutions to problems faced by people and companies in day-to-day life. On the other hand, frugality has been long regarded a virtuous social value in India and it is the socio-cultural context of the country that provides a conducive environment for the acceptance of frugal products and services on both demand and supply side.

For the purpose of this study, we work with the following definition of frugal innovations (Tiwari, Fischer, and Kalogerakis, 2016a: 17):

“Frugal innovations seek to create attractive value propositions for their targeted customer groups by focusing on core functionalities and thus minimizing the use of material and financial resources in the complete value chain. They substantially reduce the cost of usage and/or ownership while fulfilling or even exceeding prescribed quality standards.”

That frugal innovations do not necessarily have to be restricted to commercial products and services but can also encompass marketing methods and organizational processes is evident from the definition. An interesting example for this is provided by the Punjab Police, which while fighting an armed insurgency in the state in 1990, came up with the idea of “mobile-cum-naka contingents” to free-up resources tied up at police pickets and barricades; and thereby created an additional and effective operational force with little extra expenses (Chandan, 2013).

This study is conceptualized as a qualitative investigation based on thick description (Barzelay, 1993) to generate some potentially significant insights and create impulses for future research. This paper, apart from investigating the concept of lead markets and its application in the context of frugal innovations in India, also dwells on presents some qualitative results of an empirical survey conducted by the author with Indian students at Hamburg University of Technology. The results underscore the role of cultural factors. The paper is structured as follows: After this brief introduction, in section 2 the concept of lead markets is introduced and applied to India in regard to frugal innovations. In section 3 culture is connected with the concept of frugality and anecdotal evidence from India is generated

regarding its acceptance of frugal lifestyle and solutions. In section 4 selected results of an empirical survey are presented that differentiate between responses by Indian and non-Indian participants. This non-representative survey helps in generating some interesting insights. For example, it appears as if frugal solutions are especially popular with Indian respondents. The paper concludes with section 5.

## **2. Lead Market Factors in India**

Lead markets are generally national markets that can be seen as pioneers in specific product categories. Innovations that succeed here have good chances to succeed in other markets as well (Beise, 2001; 2004; Cleff and Rennings, 2012). According to Bartlett and Ghoshal (1990: 242 p.):

“In most industries, a few key markets lead the industry’s evolution. They are often the largest, most sophisticated and most competitive markets in which the nature of impending global changes is first mirrored”.

They were long thought to emerge and exist in the economically developed countries. More recent research, however, has shown that developing countries too, despite lacking in high per-capita income and customer sophistication, can acquire the role of a lead market if they are large enough and possess technological capabilities (Quitow, Walz, Köhler, and Rennings, 2014; Tiwari and Herstatt, 2014a). The likelihood of the emergence of lead market in a developing country is greater, “if the product does not require path-breaking, high cost research; or if the innovation process can be contextualized in [open] global innovation networks to reduce market and technological uncertainty” (Tiwari and Herstatt, 2014b: 70). Research by this author had identified the emergence of a lead market for small cars in India (Tiwari, 2013). Meanwhile, according to one report, 31% of all small cars sold globally in fiscal year 2014-15 were manufactured in India (IBEF, 2016).

For the purpose of this study, we work with the following definition of lead markets (Tiwari and Herstatt, 2014a: 205): “A lead market is a national market, which primarily on account of the size of its domestic demand, its access to technological capabilities and its embeddedness in the global economy provides key innovation impetus to a particular category of products.”

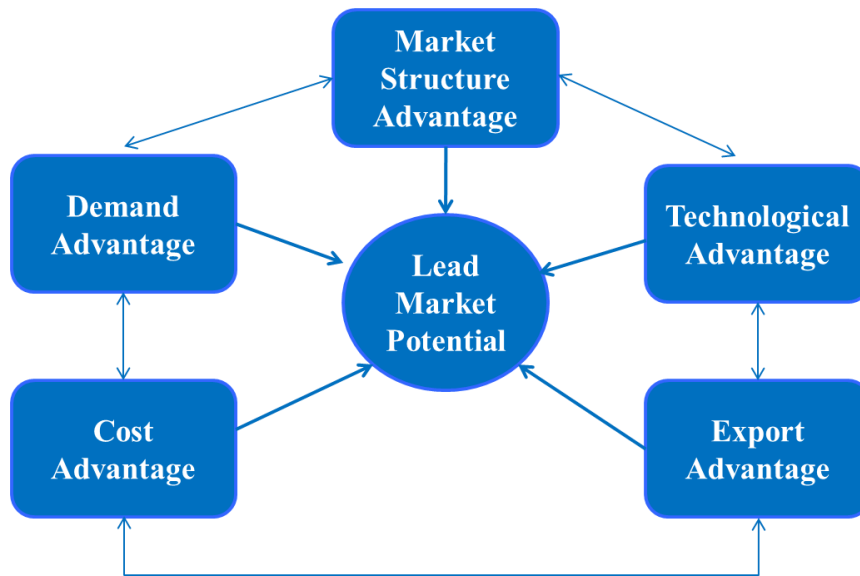


Figure 1: The 'lead market' model

The lead market potential of a country is dependent on several factors such as market structure advantage, which means that a sufficiently deep value-chain network is available and that there is enough competition amongst firms to motivate them to innovate. This can be illustrated with one example from the automobile sector, which has changed from being a seller's market in the *license raj* era prior to economic liberalization to a fully competitive market now. The biography of K.P.S. Gill, former Director General of Police (DGP) in Punjab and often credited with putting down a militant insurgency, mentions that in the 1990s the Punjab Police was told by India's Union Home Ministry to wait for "two-three years" for placing an order for bulletproof cars. Hindustan Motors, then the only licensed manufacturer of passenger cars ("Ambassadors") in India was able to produce only five bulletproof cars a month and was having a huge backlog (Chandan, 2013). Today, India is the seventh largest manufacturer of automobiles with a healthy mix of domestic and global players.

The country is still a low-cost nation in international comparison and the opportunity to benefit from large economies of scale helps secure a cost advantage. Similarly, India's membership in the World Trade Organization (WTO) and other multilateral organizations ensures an unrestricted access to most overseas markets. India has become increasingly integrated in the global economy. According to available data, the stock of outward FDI by Indian firms at the end of 2015 stood at USD 139 billion up from less than 0.5 billion in 1995; in case of inward FDI by foreign MNEs, the stock at the end of 2015 was about USD 282 billion (UNCTAD, 2016).

India possesses a very significant demand advantage in the field of frugal innovations. As per Census 2011, the country is home to 247 million households of which many still lack basic assets like refrigerators, televisions, telephones, computers, mediums of mobility, or access to formal banking services (GOI, 2012). For some items the penetration was reported as low as 3% (access to the Internet) or 5% (ownership of a four-wheeler). India is a growing economy. Its GDP/capita is expected to increase by USD 1,000 from USD 1,617 in 2015 to USD 2,617 by 2021 (IMF, 2016), creating a lot of consumption potential. Apart from standard, known solutions, this also presents an opportunity for disruptive, non-conventional frugal solutions, e.g. on the basis of share economy or through social entrepreneurs. For the opportunities for affordability-enabling, excellent solutions in all industry and customer segments (e.g. public sector, B2B and B2C) are abundant in the growing economy that is also home to a very young population.

Resource-constraints, in an aspiring environment, are known to trigger cost-effective, good-quality solutions (Gibbert, Hoegl, and Välikangas, 2007; Sharma and Iyer, 2012). NASA's space research to develop "affordable excellence" under resource-constraints is well documented (McCurdy, 2001; Majchrzak, Cooper, and Neece, 2004). Significantly less study of economic aspects of space research by Indian Space Research Organization (ISRO) has taken place, even though it has managed to achieve significant technological accomplishments like Lunar and Mars missions on a shoestring budget. But the role of resource-constraints in creating affordable, high-tech solutions in India's space program is well documented in works of Dr. Abdul Kalam, former President of India, who had a long association with ISRO (Kalam and Tiwari, 2002; Kalam, 2003).

One of the reasons why India has become a hotbed for frugal innovations seems to lie in the prevailing socio-economic conditions of the country, which has motivated people to innovate for social welfare. For example, Cyrus Poonawalla, founder of the Serum Institute of India, "got down to developing vaccines because that was the dire need in an agrarian country such as India" (Pawar, 2016: 245). Poonawalla, originally a student of commerce went on to study immune-biology, motivated by a desire to help the society, and is reported to sell "his vaccines on a 'no loss, no profit' basis in India" (Pawar, 2016: 245)

Let us now turn our attention to technological advantage. A country is thought to possess technological advantage if it is endowed with the necessary technological infrastructure and has access to tacit, first-hand knowledge (Tiwari and Herstatt, 2014a). Ever since independence Indian state and the private sector have continuously invested in creating

technological capabilities (Gupta and Dutta, 2005; Herstatt, Tiwari, Ernst, and Buse, 2008), which has helped create a domestic technology base with certain pockets of excellence, e.g. in information technology, chemical industries and pharma. Indian companies have learnt to innovate within high resource-constraints (see, e.g., Mashelkar, 2011; Maira, 2015) and are traditionally open to both collaborative and non-technical forms of innovations. Arun Maira, former Head of Boston Consulting Group in India who earlier also worked in various management positions at TELCO, as Tata Motors was earlier called, recounts one of his experiences from the pre-economic liberalization era in the 1980s (Maira, 2015: 57 pp.):

“If TELCO wanted to enter the light commercial vehicle market, the government ruled that TELCO would not be allowed to import either technology or parts. The products would have to be designed in India and all parts would have to be made in India. The company decided to take up the challenge. [...] An audacious goal, with very high levels of cooperation within the team, enabled TELCO to produce a very successful 4-tonne commercial vehicle, the Tata 407, within eighteen months. This was a world record in new product development time. Moreover, the Tata 407 was better suited to Indian conditions than the Japanese products.”

Another interesting example is delivered by the Punjab Police, which, while engaged in combating insurgency in the state, reportedly “established a working alliance with research labs all over the country” to overcome resource-constraints (Chandan, 2013: 146). This recourse to “open innovation” produced some very interesting results, apparently leading to certain radical innovations, as described in the biography of then-DGP KPS Gill by author Rahul Chandan (2013: 147 p.)

“Gill laid emphasis on locally produced, low-cost improvements, rather than expensive imported equipment. A workshop was established [...] developed bulletproof vehicles, bulletproof tractors, bulletproof mobile morcha, infrared torches, robots to handle live explosives and mobile elevated police posts/nakas. These innovations proved their mettle during anti-terrorist operations and were highly acclaimed improvisations. [...] The local laboratories also developed an electronic timer detector for time bombs. The device was, at that time, not available even in the international market. The cost of this device was only four percent of the commercial cost of comparable equipment after it was subsequently launched in the international market.”

But also on the formal R&D front, India’s expenditure has increased 7-folds within about two decades, as per the last available figures, see Figure 2 (GOI, 2013).



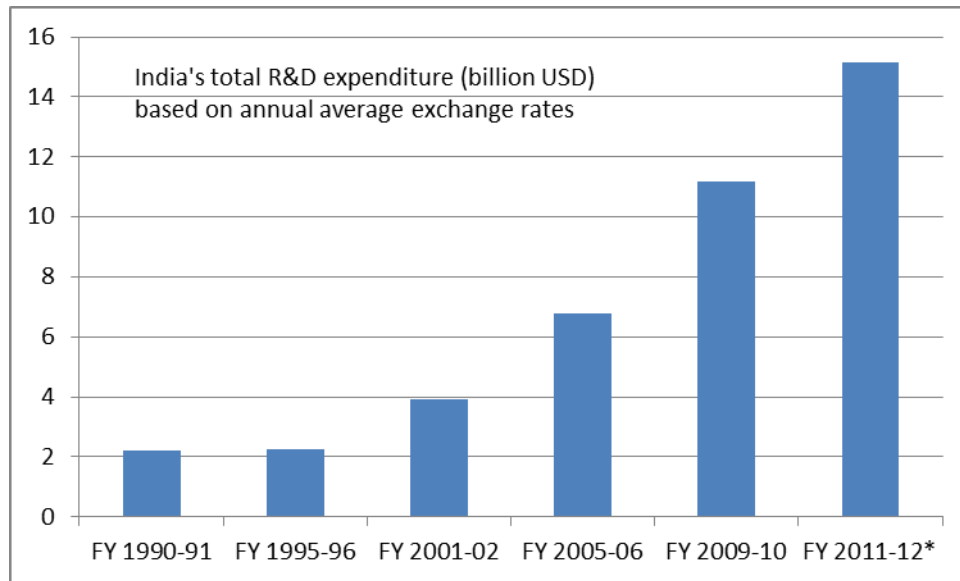


Figure 2: Trends in India's R&D expenditure in billion USD

India is estimated to have had a 28% market share in the USD 72 billion-strong global sourcing market for engineering, R&D and product development services, according to industry body NASSCOM (2016). This resultant experience of designing products for global companies and providing engineering and R&D services creates tacit knowledge, which increases the innovative capability of the domestic industry.

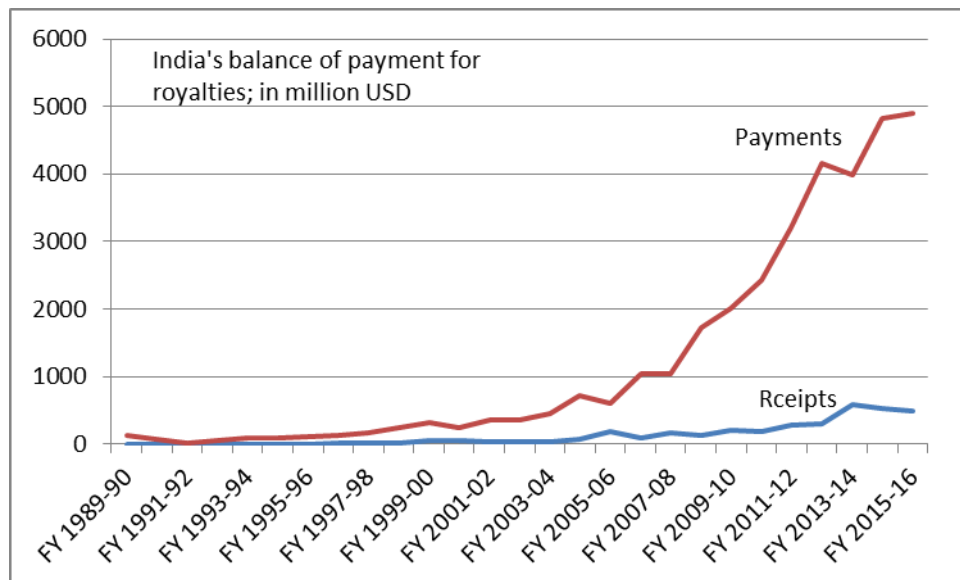


Figure 3: India's balance of payment for use of intellectual property<sup>2</sup>

The integration in the global economy has given rise to new avenues in terms of technology-access for firms (Pradhan and Singh, 2009; Tiwari, 2011), and made it possible for firms to

<sup>2</sup> Self-construction based on RBI data from various years; data from FY 2011-12 onwards in in the BPM6 format (1.A.b.8: "Charges for the use of intellectual property n.i.e."). Prior data relates to payments and receipts for royalties.

engage in “open global innovation networks” in the post-liberalization era (Tiwari and Herstatt, 2012). As Figure 3 shows India’s payments for using intellectual property of overseas entities have grown almost exponentially, from being practically non-existent in the early 1990s, they climbed to almost USD 5 billion in FY 2015-16 as per data released by the Reserve Bank of India (RBI). The data also reveals that Indian organizations too, even if on a low base, have started to generate revenues for their intellectual property.

Table 2 summarizes the most important factors for the individual advantage groups at a meta-level. It documents that overall India has a very high potential to turn into a lead market for frugal innovations.

<b>Group</b>	<b>Factor</b>	<b>Endowment</b>
Demand advantage	Size of domestic demand (B2C; B2B)	Very large
	Growth prospects (unsaturated market)	High
	Overall share of “frugal solutions” in the market	Very high
	Need for low cost of ownership (a proxy for innovation resistance against small cars; negatively correlated to per-capita income)	Very high (GDP/capita \$1700)
Cost advantage	Economies of scale (see size of demand, above)	Very large
	Manufacturing costs	Low
	State incentives for production of “frugal” solutions	Exist
Export advantage	Significant cost arbitrage (low cost manufacturing)	Yes
	Similarity of demand with key target markets/customer segment	Developing Asia, Africa, South America
	Embeddedness in international trade	Yes
	Overseas presence of domestic MNEs (a proxy for estimating avenues of sales; measured in no. of foreign affiliates and/or outward FDI stock)	Outward FDI stock USD 138 billion
Market structure advantage	A large and competitive industry	Yes
	Presence of strong domestic and “quasi-domestic” players	Yes
	A large base of domestic & global players	Yes
	Strong base of other supporting industries	Yes
Technology advantage	Availability of skilled professionals & Technical manpower	High
	First-hand, tacit understanding of customer needs/wishes in resource-constrained contexts	High

	A long-established R&D base of domestic firms	Limited
	Policy support for R&D (weighted tax deduction)	Yes
	Level of protection for IPR	Controversial/ improving
	Access to open global innovation networks	High

Table 1: A meta-level assessment of factors of lead market advantage<sup>3</sup>

### 3. Connecting Culture with Frugality

#### 3.1. Role of Culture

While frugal innovations are increasingly gaining relevance in today’s world, it is only recently that the role of interdisciplinary research, such as that of psychological and sociological factors as determinants of consumer acceptance for frugal products and services has been highlighted in scholarly discourse (Tiwari *et al*, 2016a). In the realm of culture, it is a rather undisputed fact that societies respond differently to human needs & desires. While some display greater permissiveness by allowing (immediate) gratification, other show an inclination towards restrain & postponement (see, e.g., Parsons, Shils, and Olds, 1951). In the following we examine some possible connections of the various dimensions of “national culture” (Hofstede, Hofstede, and Minkov, 2010) on the acceptance of frugality in a society.

In Geert Hofstede’s model, the societal preference for thrift or frugality explicitly impacts at least two dimensions of culture, i.e. “short-term vs. long-term orientation”; and “indulgence vs. restraint”. Societies that display a long-term orientation and/or that are more inclined towards restraint tend to display greater acceptance of thrift/frugality as a value. Indulgence, on the other hand, has been found to correlate “negatively with choosing thrift as a valuable trait for children” (Hofstede *et al*, 2010: 281). Cultures with long-term orientation seem to favor thrift and “being sparing with resources” as people are more willing to subordinate themselves for a purpose, whilst cultures with short-term orientation tend to create “social pressure towards spending” as these are more concerned “with social and status obligations” (Hofstede *et al*, 2010: 243).

Also other dimensions let themselves, to a varying degree and in specific contexts, let themselves connect to frugality or the lack thereof. For example, Hofstede and his co-authors

<sup>3</sup> Based on Tiwari and Herstatt (2014a: 191)

state that “status symbols are suspect” in cultures with low “power distance”, and that “subordinates will most likely comment negatively to their neighbors if their boss spends company money on an expensive car” (Hofstede *et al*, 2010: 74). Conversely, in cultures with high power distance there may be tendencies to acquire status symbols, leading to extravagance by some; but those not belonging to the elite class may be more open to frugal solutions.

Collectivist societies, on average, tend to having lower per-capita income in comparison to more individualist societies. As a norm, people in collectivist societies seem to be more open to sharing resources with relatives, whereas individualist societies prefer personal ownership of resources, even for small children (Hofstede *et al*, 2010: 113). Therefore, it seems probable that societies tend to be rather collectivist, would be more open for a frugal lifestyle and, as a consequence, more willing to adopt frugal solutions.

In societies tending towards masculinity, “challenges, earnings, recognition, and advancements are important”, and men are expected to be “assertive, ambitious, and tough”, whereas in more feminine cultures both genders are expected to be modest (Hofstede *et al*, 2010: 155). Relating this cultural dimension to consumer behavior, Hofstede *et al* (2010: 165) assert that “more status products are sold” in masculine societies. This would indicate that cultures that are rather feminine should be expected to be more open for frugal products and services.

Cultures with less need for “uncertainty avoidance” tend to feel “comfortable in ambiguous situations and with unfamiliar risks”, while people in cultures with high uncertainty avoidance feel more often threatened by unfamiliar risks (Hofstede *et al*, 2010: 203). As a result, we may expect that cultures with high uncertainty avoidance may more often seek “the perfect” solutions and therefore might be more skeptical of frugal solutions. This inference is in line with the observation by Hofstede *et al* (2010: 208) that in societies with strong uncertainty avoidance advertiser rather use the appeal of expertise than appeal of humor.

### **3.2. Conventional Role of Frugality in India**

Applying the Hofstede model to India we can observe (see Figure 4) that the country tends more towards restrain than indulgence. It also seems to be more inclined to less uncertainty avoidance, collectivism and long-term orientation. All in all, the scores suggest that the society, on average, may be more open to towards frugality in life.

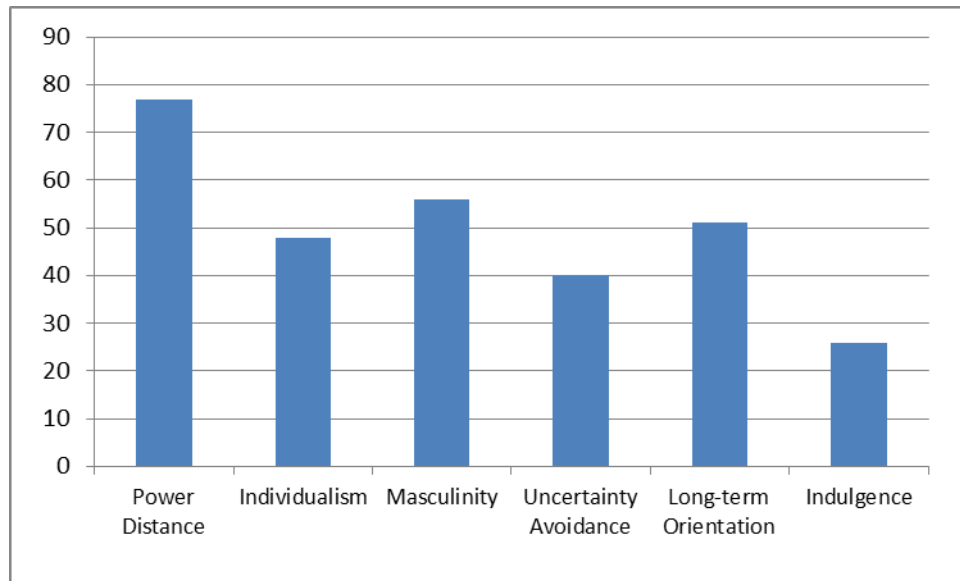


Figure 4: India's scores on the cultural dimensions of the Hofstede model

(based on values available at [www.geert-hofstede.com](http://www.geert-hofstede.com), retrieved July 16, 2016)

I now wish to cross-verify this indicator with anecdotal evidence from ancient and modern-day India to generate some potentially interesting, even if preliminary, insights about the conventional role of frugality in India.

Kautilya, master strategist and advisor in the court of Emperor Chandragupta Maurya (ca. 322–297 BCE) and renowned author of *Arthashastra*, a much-celebrated treatise on statecraft, advises the state to be *prudent*. According to a translation of original Sanskrit text, Kautilya, sometimes referred to as Indian Machiavelli, advises that “the state should run a diversified economy actively, efficiently, prudently and profitably” (Rangarajan, 1992: 74). Writing about the contemporary Indian society of Kautilya, later-day Greek geographer and historian Strabo (ca. 64 BCE – ca. 24 AD) reported that Indians “live sparingly and are healthy, even though their country produces everything in abundance” (Jain, 2011: 17). Quoting accounts provided by Megasthenes, Greek ambassador in the court of Chandragupta Maurya, Strabo writes further:

“The Indians all live frugally [...]. They lead nevertheless happy lives, being simple in their manners and frugal. [...] In contrast to the simplicity they observe in other matters, they love finery and ornament. They wear dresses worked in gold, and adorned with precious stones, and also flowered robes made of fine muslin. [...] they hold beauty in high esteem and resort to any device which helps to improve their looks” (Jain, 2011: 21).

Looking at the contemporary India one might get the impression that, leaving aside stark generalizations, not much has changed in this regard in the society. Writing about 2000 years

later, Mark Tully, the long-time correspondent of British Broadcasting Corporation in India and a prolific author, observed (Tully, 1992: 101):

“There is nothing that Hindus respect more than austerity in others, no matter how much difficulty they may find in practising it themselves. Austerity was one of the keys to Mahatma Gandhi’s success.”

So while the frugality of Indians in times of Chandragupta Maurya seems to be more of a voluntary/cultural phenomenon, Tully’s observations, if correct, would point to a set of ideals, which – though not achievable for everyone – act as a “moral compass”. Mahatma Gandhi’s choosing a frugal lifestyle has been also analyzed by Rajiv Malhotra (2011: 348), who dwells into the motives of Gandhi:

“The unsustainability of British industrialization was prominent among his [Mahatma Gandhi’s] concerns, making him arguably the first modern environmentalist. He noticed that the ever-increasing consumption in an industrial economy depletes the natural resources and destroys the self-sustaining villages which comprise the social fabric of India. In response to this he advocated and embodied a simple lifestyle. The sum total of all of his belongings were his glasses, a pair of sandals, a pen and a few dhotis.”

This brings to the fore a new dimension of another kind of voluntary simplicity, one which arises as a deliberate choice out of social/environmental concerns. Yet another dimension, namely that of involuntary frugal lifestyles in India has been highlighted by Shashi Tharoor (2007: 341) in this statement: “Asceticism always thrives better in penury”. This statement may well be true for many Indian consumers today. Prevalent cultural norms in India, in conjunction with given socio-economic factors, lead to acceptance of simplicity and frugality as a respected social value so that a person leading a frugal lifestyle, voluntary or otherwise, does not necessarily have to feel ashamed, as can be seen in this narration by Chetan Bhagat (2012: viii p.), a celebrated author from India, of his childhood:

“I come from a simple middle-class family. Both my parents worked for the government and I grew up in Delhi. Throughout my childhood, I remember the shortage of money being a constant theme in the house. We had enough to run the kitchen and pay for utilities but little to build assets on or make major expenses. For instance, we couldn’t repair a broken sofa for years. When guests came to our house, we found it expensive to serve Coke and served lemonade instead. We rarely ate out in restaurants and when we did, we did so with caution, figuring out the cheapest and most-filling items on the menu.

Funnily enough, we never felt deprived. I took the shortage of money as an essential factor of life. In a country like India, we were still better off than millions.”

## **4. Select Results of an Empirical Survey**

### **4.1. Survey Settings**

In a survey conducted with students of Hamburg University of Technology (TUHH) the respondents were asked to state their preferences in the hypothetical situation of purchasing a car. The respondents, who were international students of business-engineering related Master courses, all held an engineer’s degree in Bachelors and had visited one compulsory course in Intercultural Management and Communication; but they did not necessarily know about frugal innovation. The respondents were asked to imagine that they were about to purchase a car and had financial resources to be able to afford a high-end (premium) car with many technological functions or a frugal car with good-enough quality and better fuel efficiency so that its total cost of ownership (TCO) was 33% lower than that of the high-end car. Both models, otherwise, fulfilled the core needs (e.g. space, number of seats) in a similar fashion. The respondents were then requested to elaborate their answers and state lower and upper thresholds in terms of the “price point” and TCO. Later they were asked to relate their choice to any 3 dimensions of culture based on the Hofstede model and whether they thought their choice was in sync with their respective national culture.

### **4.2. Key Results and an Indian Perspective**

The survey returned 111 valid responses. Respondents displayed a remarkable preference for the frugal model, 76 of the 111 participants (68%) said they would chose a good enough car, while the rest said they preferred a high-end car. Amongst German students (n=62), 61% chose a frugal car. Amongst international students Indians constituted the largest group (n=22), here an overwhelming majority (18; 82%) stated to opt for a frugal model. In general students from developing and emerging economies (31 out of 40; 78%) had an above-average preference for the frugal car, while students from the industrialized world (47 out of 71; 66%) were also not far behind. Within the group of non-industrialized countries excluding India the preference for the frugal car stood at 73.3%.

Analyzing open-ended responses by participants and building categories led to identification of 8 motivation factors. This analysis brought to fore a few interesting perspectives (see Table 2).

<b>Motivation for Preferring a Frugal Car</b> (multiple options)	<b>Indian Respondents</b> (n = 18)	<b>Other Respondents</b> (n=58)
Save money (for some other purchase)	89%	78%
A car is a mere mode of transport	33%	53%
Avoid unnecessary technological functionalities	28%	29%
Simplicity as a moral principle	17%	10%
Chance to often purchase replacement products	6%	0%
Environmental concerns	6%	43%
Allows me to look different	6%	0%
I reject purchasing status symbols	0%	43%

Table 2: Comparison of motivational factors in preferring frugal solutions

While most respondents desired to save money by preferring a frugal car, this reason was even stronger with Indian respondents. Interesting to note is that this is almost the only dominant reason for survey participants from India, whereas among non-Indian participants many expressed the view that a car is a mere mode of transport and also a significant number cited environmental concerns for his or her choice. Not a single Indian respondent gave an answer, which could be interpreted as rejecting status symbols.

The results seem indicate that the frugality in India is often motivated by financial considerations that can be easily correlated to cultural dimensions like long-term orientation and restraint. It must be, of course, noted that this is a non-representative survey with a small group sample. The results are rather meant to generate some plausible working hypotheses for a more detailed study at a later stage and here they seem in alignment with the insights generated in other sections of this paper.

## **5. Conclusions**

This study set out to assess frugality in Indian context and then to investigate what makes India a lead market for affordable excellence. For this purpose we followed a two-pronged strategy. First, we applied the lead market model, at a meta level, to the Indian context and analyzed the various advantage factors regarding their lead market potential. These factors



revealed that India is endowed with many factors – especially on the demand and technological capabilities fronts – that make it a very attractive market for frugal innovations, which can be then introduced in other markets with comparable socio-economic conditions or even in the industrialized world. India’s increasing integration in the global economy provides a conducive atmosphere for that.

The second component of the research design for this paper was to analyze India’s penchant for frugality with the lens of culture. Our analysis showed that India traditionally has had, even if for a variety of reasons, a positive attitude towards frugality and resource-constraints have been used in India as a motivator to come up with an affordable yet high-quality solution. Finally, the survey with Indian students confirmed these insights and indicated that Indians continue to have a high preference for frugal solutions. The acceptance seems to be, however, primarily motivated by financial considerations and in that it varies from their global counterparts, who also put emphasis on environmental aspects in their pursuit of frugality. The results are, however, of preliminary nature and need to be confirmed in larger-scale, representative studies. But one thing may be said with relative certainty: India is endowed with a culture and other socio-economic factors that increase the acceptance of frugal innovations that are already diffusing into many other parts of the world. This trend can be expected to get stronger in the time to come.

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