

Towards Aspiration as a Development Indicator: The Case of Information and Communication Technologies

Abstract— This paper examines how changes in aspirations among the poor should be understood in the context of ICTD interventions. We argue that aspirations associated with ICTs (or with other interventions) can be seen as interim indicators of development when these aspirations stem from enhanced human capabilities rather than from distant desires. This entails understanding if and how ICTs and ICT-enabled services open up pathways by which the aspirations of the poor can be actualized.

Index Terms— aspirations, information and communication technologies, development

I. INTRODUCTION

Governments, multilateral organizations, non-profits and high-tech companies have all converged on the idea that information and communication technologies (ICT) enabled services can bring about rapid economic and social change in developing countries[1]. Expected, and reported, development outcomes from ICT for Development (ICTD) projects include, but are not limited to: greater access to markets and market prices [2]; information accessibility [3]; better health care [4]; and more efficient government service provision [1, 5]. At the same time, the ICTD enterprise has been critiqued for not resulting in significantly improved development outcomes, particularly for the poor [6, 7].

The literature reveals, however, that even in the absence of concrete development outcomes for the poor, ICTD projects are frequently associated newly expressed aspirations. Comments such as “it’s a new world and PCs are the key to success” or “computers changed my life” are regularly reported, especially after a first exposure to ICTs, in which the technologies themselves are spoken of as autonomous actors [8]. These expressions are in part reflections of the enormous hope, mystique and symbolism that ICTs have generated[9]. Media messages in the urbanizing South that advertise computer classes and mobile phones appeal to mass aspirations for a better life, often with the lurking promise of instant benefits (“Change the way the world sees you, take a computer class”). But what is the relationship, if any, of these aspirations to development as it is commonly understood?

In this paper we ask: How should changes in aspirations among the poor be understood in the context of ICTD interventions? We argue that aspirations associated with ICTs (or with other interventions) can be seen as interim indicators

of development when these aspirations stem from enhanced human capabilities rather than from distant desires. We use the term “aspiration” in the sense of Appadurai (2004) in which the “capacity to aspire” is not the expression of a want but the capacity to identify the pathways through which a potential want can be actualized. Aspirations as capacity are thus essential components in the will and ability to improve the quality of life. The desired improvements can be symbolic or material; the key requirement is that they be associated with a roadmap by which they can feasibly be achieved.

We begin by examining how the concept of aspirations has been treated in the broader development literature. We review a number of cases in the ICTD literature to understand the treatment of aspirations in this field. We then make the case that to take the aspirational component of ICTD seriously, we must show if and how ICTs and ICT-enabled services open up pathways by which the aspirations of the poor can be actualized.

II. ASPIRATIONS AND THE DEVELOPMENT LITERATURE

A. *Development and Aspirations*

Development has many definitions but it has always included progress or improvements for the poor. These improvements are inextricably linked to the concept of aspiration, but often only implicitly so. From the start, economic growth lay, as it arguably still does, at the foundation of the many understandings of “development”. The key measure of a country’s overall economic performance was its per capita Gross National Income (GNI) or Gross National Product (GNP). The two assumptions embedded in this measure are that higher levels of per capita GNI will eventually improve the condition of the poor, and that the poor aspire to the betterment of their economic conditions. As Adam Smith put it: “An augmentation of fortune is the means by which the greater part of men propose and wish to better their condition” [10: 140]. Without this premise, GNI per capita could not be justified as a development indicator.

Other definitions of development privilege a reduction in poverty or “pro-poor growth” over increases in the (average) per capita GNI. This type of indicator is reflected in the first Millennium Development Goal which calls for “halving the rate of absolute poverty during 1990-2015” [11: 420]. It also finds expression in propositions that development should be measured as the percentage change in the GNI of the lowest quintile [12]. Macroeconomic theories of growth and development analyze how individuals trade off current

consumption for future income by saving and investing a portion of their earnings [13]. In all these economic arguments we find the (implicit) assumption that people have aspirations (or “preferences”) for their futures and make rational decisions based on their aspirations and their constraints.

Moving away from an exclusive focus on income measures, the Human Development Index uses a range of indicators such as health, education or gender equity (e.g. UN Human Development Report 2007/2008 <http://hdr.undp.org/en/>). The most inclusive expression of “development”, and one in which the aspirational content of the term receives explicit acknowledgment, is the now classic Development as Freedom [14]. Sen argued for the importance of bringing freedom and dignity into the sphere of conventional economic analysis, and for understanding development as a process of capability enhancement:

“A person’s ‘capability refers to the alternative combinations of functionings that are feasible for her to achieve. Capability is thus a kind of freedom: the substantive freedom to achieve alternative functioning combinations (or, less formally put, the freedom to achieve various lifestyles)” [14: 75].

Appadurai (2004) goes beyond Sen’s work to define not just feasible functionings as capabilities but the aspiration to function itself as a “capacity”. Aspiration is a cultural capacity in that aspirations are situated in the norms and presumptions of what constitutes a good life and of what is possible. Appadurai argues that both the poor and the rich can express desire, but that the capacity to aspire is not distributed evenly. The well-off have a more developed capacity to aspire; they are able to build pathways to connect their ends and means “because they have a bigger stock of available experiences of the relationship of aspirations and outcomes” [15: 68]. Appadurai concludes that the capacity to aspire is a “navigational capacity” and the poor lack opportunities to practice using this capacity. It follows that as one’s opportunities change the capacity to aspire and the objects of desire also change. It also follows that poverty can partly be seen as a failure of aspirations [16] and as a failure to acquire relevant information [17]. Appadurai’s construction of aspiration would see development as the strengthening of this cultural capacity, so the poor can seek and gain the resources to overcome their poverty.

B. ICTD and Aspirations

Unlike the broader development literature in which the role of aspirations is often not explicit, a number of ICTD studies find evidence of altered aspirations in their work. The relationship of these aspirations to development indicators, however, is either lightly hinted at or not specified at all. In these works ICTs are frequently linked to notions of upward mobility. These visions of mobility are both material and symbolic in their content, reflecting both the potential for economic gains and for the identification with status and modernity that ICTs

seem to promise. A range of expressed aspirations has been captured in ICTD case studies over a range of geographies.

Burrell and Anderson (2008) (“I have great desires to look beyond my world: trajectories of information and communication technology use among Ghanaians living abroad”) shows that internet and mobile phone use patterns among Ghanaian immigrants in London could in part be explained by the aspirations that motivated their migration (such as the desire to travel, to be wealthy, or to create businesses). They used the internet to imagine accessing and learning about other destinations after their emigration from Ghana. Revealing the frequent disconnect between ideas and reality the authors found that computers represented “change and transformation in a way that was abstracted from their utility” [18: 219]. ICTs allowed migrants to feel more modern and their use symbolized their new way of life in a foreign country.

Radhakrishnan (2007) (“Rethinking knowledge for development: Transnational knowledge professionals and the “new” India”) connects ICTs to newly forming aspirations and to changing views of “being Indian”. The author found that, among the poor in urban India, the image of the financially secure software worker had become the Indian ideal to which to aspire. She argued that these aspirations reflected larger trends in the country in which knowledge professionals become “producers of individualistic ideologies, which were then consumed by the majority” [19: 157]. Here we find ICTs tied to class-specific expressions of aspirations and of Indian-ness.

Kuriyan and Kitner (2009) (“Constructing Class Boundaries: Gender, and Shared Computing”) examine the extent to which telecenter projects in India and Chile were benefiting women, and were bridging the gender digital divide. The authors found that women were constructing personal identities, and either trying to cross class boundaries or to hold on to their middle class positions through the use of ICTs. Further, although the computer education programs were implemented in the name of the poor, semi-middle class rather than poor women were the dominant user group. The authors found that women participated in computer education programs to ensure a better life for themselves and their children. However, few women were able to articulate specific benefits from their telecenter usage or to imagine actual pathways to the better lives that they sought.

In a similar vein, Pal et al. (2007) (“My Child Will be Respected: Parental Perspectives on Computers”) found that the expression of new aspirations was practically the only tangible outcome of ICTD projects. In this study of computer aided learning centers in four rural districts in Karnataka, parents expressed the value of computer courses in enabling economic mobility even when they did not understand the functions and uses of computers. This sense of value came from having seen people using computers in a range of situations, and against a background of jobs in agriculture

losing prestige and value. In this new world, “computers can make you powerful” [20: 5].

In Illiane and Sherry (2008), a study of the informal sector in Morocco (“Joutia: street vendor entrepreneurship and the informal economy of information and communication technologies in Morocco”), ICTs once again played an aspirational role for individuals. This is a rich ethnographic account of an entrepreneur called Samurai who sold mobile phones in the black market. In addition to the economic aspirations (and gains) associated with these phones, the authors found that ICTs allowed Samurai to engage in what was perceived to be “cleaner” and more prestigious work than his previous career as an auto mechanic. Finally, using and possessing a black market mobile phone gave entrepreneurs the opportunity to (re)assert and aspire to their historically Arab/Muslim identities. Thus “the appropriation of foreign imported goods was, in many ways, as much a political as an economic strategy” [21:249].

The aspirations generated by ICTs in many of these cases are highly varied and culture-specific. Kuriyan and Kitner (2009) see ICT-inspired aspirations as linked to a middle class identity and status. Radhakrishnan (2007) sees the middle class IT worker as producing a modern culture to which the ‘common person’ in India then aspires. Illiane and Sherry (2008) find that ICTs enable entrepreneurs to engage in “clean” and respectable work and to assume an Arab/Muslim identity. They show that Samurai not only aspires to new identities but that he and his ilk have become an economic force shaping the ecology of commerce for the city. Burrell and Anderson (2008) find that the internet allows migrants to feel part of a foreign world and a globalized lifestyle. Pal et al. (2007) see ICTs being valued as an alternative to declining agriculture and as holding a mystique for rural populations. All of these studies find that ICTs are routinely linked to material aspirations such as incomes, jobs and access to higher education. However, the pathways by which individuals can actualize the potential of ICT usage are not always clear. Most of these papers treat aspiration as an expression of desire and not as a capability or a capacity.

III. TOWARDS ASPIRATIONS AS A DEVELOPMENT INDICATOR

Cases such as those reviewed above illustrate the power of ICTs among the poor and the near-poor but it remains unclear how aspirations can be theorized in the context of ICTD. Are aspirations, as feared by [22], expressions of newly awoken desires that follow major technological and social change, but that can rarely be actualized within the political-economic structures of most societies? In this view, unmet aspirations may be socially worse than no new aspirations at all. Are aspirations to be considered positive outcomes of ICTD interventions because they are necessary (though not sufficient) conditions of poverty alleviation? In this view, the raising of aspirations through technological or social change is inherently beneficial.

We suggest that the aspirational component of ICTD interventions is symbolically and economically meaningful if, and only if, aspirations are treated as Appadurai’s navigational capacity. The “capacity to aspire” can then be seen as a concrete improvement on the status quo and as a step on a newly available pathway to get from here to there. The enhanced capacity to aspire becomes an interim development indicator.

What might an increase in the capacity to aspire with ICT services look like? [23] says: “aspiration relates to how people want to be in the future, for which reasons people use their existing capabilities differently from earlier.” For example, a woman living in rural India participates in a subsidized computer education course provided by the government. She subsequently says, “Now my children can have a better future because I know about computers.” To move from an expression to a capacity this woman could use her newfound computer skills as a tool to navigate between her current situation and her desired outcome. This does not mean that the woman should get a job in the IT industry. But it could mean that she start saving money in order to send her children to computer classes. Or it could mean that she use contacts made during her computer classes to send her children to a better school. Or it could mean that the prestige acquired by learning about computers gives her access to a higher paying job, even if the job does not use her computer skills. Her capacity to aspire has increased if she can “build a roadmap from where she is, to where she wants to be” (Nathan 2005).

Understanding aspiration as a navigational capacity, and as a group phenomenon as opposed to an individual one, broadens the scope of development research as well as the scope of development policy. Recent work in development economics suggests that role models and peer pressure play a role in the development of aspirations (e.g. Durlauf and Young 2001; Krishna 2004) and that some individuals can find a pathway from aspirations to outcomes through social networks. At the same time, the development literature suggests a key role for public policy in securing the benefits of development for the poorest, e.g. for hunger alleviation [24]; poverty alleviation [17, 25]; and culture-sensitive development [26]. These considerations raise an important set of questions for further research in the field of ICTD. How can public policy play a role in technology dissemination, or in creating the financial and institutional infrastructure to support technology dissemination, so that pathways are created through which the potential of ICTs can be actualized? How can aspirations at different scales (individual, group, state) be defined, and which of these would constitute measurable development indicators? ICTD research that goes beyond individually-expressed aspirations and outcomes to understand if group-specific norms and capacities are also changing, as Appadurai (2004) argues they must, could make stronger claims about the eventual achievement of development goals.

A shift in the poverty and development debates away from a focus on income and consumption measures alone to the

consideration of multiple dimensions of people's lives, such as aspirations, creates an opportunity for short term feedback to policymakers so that they can continually re-evaluate and improve upon their development strategies. Since actual changes in indicators such as literacy rates, health measures, upward mobility and gender equity may demand a 10-15 year time frame to become visible and measurable, incorporating interim development indicators into policy agendas has considerable value.

We have argued that an increase in the capacity to aspire should be considered an interim development indicator that can be incorporated into ICTD project goals and evaluations. ICTD interventions are positioned to build the capacity to aspire because their focus is on managing resources, providing information, and facilitating processes through ICT usage. We recognize, however, that the operationalization of this capacity as a development indicator may be difficult to generalize across space and time. Aspirations in this formulation are inherently varied (many pathways are possible towards the same goal) and class-specific (different classes are differently endowed with the capacity to aspire, and could well aspire to different end goals). This could limit their use in making cross-national comparisons, and in "tracking" progress over time. At the project level, however, an evaluation that includes the capacity to aspire, especially of the poor, is a meaningful indicator of progress towards longer term development goals.

IV. REFERENCES

- [1] E. Brewer, M. Demmer, B. Du, M. Ho, M. Kam, S. Nedecski, J. Pal, R. Patra, S. Surana, and K. Fall, "The Case for Technology in Developing Regions," *IEEE*, 2005.
- [2] R. Jensen, "The Digital Divide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector " *The Quarterly Journal of Economics*, vol. CXXII, 2007.
- [3] [3] S. Arunachalam, "Reaching the Unreached: How Can We use Information and Communication Technologies to Empower the Rural Poor in the Developing World through Enhanced Access to Relevant Information?," *Journal of Information Science*, vol. 28, pp. 513-522, 2002.
- [4] M. Ho, R. Luk, and P. Aoki, "Applying User-Centered Design to Telemedicine in Africa," *CHI 2007 Workshop on User Centered Design for International Development*, 2007.
- [5] [5] S. Madon, "Governance lessons from the telecenters in Kerala," *European Journal of Information Systems*, vol. 14, pp. 401-416, 2005.
- [6] J. Thomas and G. Parayil, "Bridging the Social and Digital Divides in Andhra Pradesh and Kerala: A Capabilities Approach," *Development and Change*, vol. 39, pp. 409-435, 2008.
- [7] [7] R. Kuriyan, I. Ray, and K. Toyama, "Information and Communication Technologies for Development: The Bottom of the Pyramid Model in Practice," *The Information Society*, vol. 24, pp. 93-104, 2008.
- [8] L. Marx, "Technology: The Emergence of a Hazardous Concept," *Social Research*, vol. 64, 1997.
- [9] [9] K. Keniston, "Introduction," in *IT Experience in India: Bridging the Digital Divide*, K. Keniston and D. Kumar, Eds.: Sage Publication, 2004.
- [10] [A. Smith, *Wealth of Nations*. London: Methuen & Co., Ltd., 1776.
- [11] S. Klasen, "Economic Growth and Poverty Reduction: Measurement Issues using Income and Non-Income Indicators," *World Development*, vol. 36, pp. 420-445, 2008.
- [12] K. Basu, "On the Goals of Development," in *Frontiers of Development Economics: The Future in Perspective*, G. M. Meier and J. E. Stiglitz, Ed. Washington DC: World Bank, 2001.
- [13] E. Helpman, *The Mystery of Economic Growth*. Cambridge: Harvard University Press, 2004.
- [14] A. Sen, *Development as Freedom*. Oxford: Oxford University Press, 1999.
- [15] A. Appadurai, "The Capacity to Aspire: Culture and the Terms of Recognition," in *Culture and Public Action*, V. Rao and M. Walton, Eds. Stanford: Stanford University Press, 2004, pp. 59-84.
- [16] D. Ray, "Aspirations, poverty and economic change.," www.econ.nyu.edu/user/debraj/Courses/Readings/povasp01.pdf, 2003.
- [17] A. Krishna, "Escaping Poverty and Becoming Poor: Who Gains, Who Loses, and Why?" *World Development*, vol. 32, 2004.
- [18] J. Burrell and K. Anderson, "I have great desires to look beyond my world: trajectories of information and communication technology use among Ghanaians living abroad," *New Media and Society*, vol. 10, 2008.
- [20] S. Radhakrishnan, "Rethinking knowledge for development: Transnational knowledge professionals and the "new" India," *Theory and Society*, vol. 36, pp. 141-159, 2007.
- [21] J. Pal, M. Lakshmanan, and K. Toyama, "'My Child Will Be Respected': Parental Perspectives on Computers in Rural India," *Proceedings of International Conference: ICTD2007*, 2007.
- [22] H. Illiane and J. Sherry, "Joutia: street vendor entrepreneurship and the informal economy of information and communication technologies in Morocco," *Journal of North African Studies*, vol. 13, 2008.
- [24] C. Geertz, "Thinking as a Moral Act: Ethical Dimensions of Anthropological Work in the New States " in *Available Light: Princeton U Press.*, 2000.
- [25] N. Dev, "Seminar: Capability, aspirations and economic change," <http://www.ansiss.org/>, 2007.
- [26] J. Dreze and A. Sen, *Hunger and Public Action*. Oxford: Clarendon Press, 1989.
- [27] [A. Krishna, "Pathways Out of and Into Poverty in 36 Villages of Andhra Pradesh, India.," *World Development*, vol. 34, 2006.
- [28] C. Rao and M. Walton, *Public Culture and Action*. Stanford: Stanford University Press, 2004.