

41st WEDC International Conference, Egerton University, Nakuru, Kenya, 2018

**TRANSFORMATION TOWARDS SUSTAINABLE
AND RESILIENT WASH SERVICES**

Improving WASH in informal settlements of Kigali, Rwanda through diverse marketing exchange mechanisms

A. Tsinda, J. Chenoweth & P. Abbott (Rwanda)

PAPER 2862

Diseases related to poor water, sanitation and hygiene (WaSH) are major causes of mortality and morbidity. While the current marketing approaches to WaSH to improve health outcomes is often narrowly associated with monetary exchange, the empirical findings show how households in two informal settlements of Kigali (Gitega and Kimisagara) attempt to meet their WaSH needs through a mix of both market-based and non-market based exchanges. Identifying social relationships by focusing on what exists rather than what does not exist, WaSH practitioners may be able to foster WaSH diverse marketing exchange mechanisms consistent with local context and capabilities, in turn improving lives of poor communities in informal settlements.

Introduction

The World Health Organization (WHO)/UNICEF Joint Monitoring Programme (2015) estimates that 32% of the world's population does not use a safe sanitation facility and 9% a safe water source (WHO / UNICEF, 2015). Diseases related to unsafe water, sanitation and hygiene (WaSH) products and services are major causes of mortality and morbidity (Prüss- Ustün et al., 2014). In seeking progress, WaSH practitioners across the globe facilitate interventions to provide improved products and services and encourage preferred WaSH behaviours. Many of these approaches focus on stimulating demand for WaSH products and services by motivating changes to personal behaviours (Evans et al., 2014).

Recent studies by the authors as part of a larger study which aimed at catalysing self-sustaining sanitation in informal settlements of East African Cities (3K-San Project) describes a mismatch between supply and demand in the existing sanitation markets of informal settlements of East African Cities (Tsinda et al., 2015, Tsinda and Abbott, 2017, Okurut et al., 2015). However, capturing the multi-dimensional aspects of marketing of WaSH services, requires going beyond supply and demand in monetary terms, especially in the context of low-income countries. Behind this simplistic dualism of supply and demand is a far more complex picture of WaSH services marketing. In fields such as WaSH, marketing does not always have to involve a monetary transaction (Bisung and Elliott, 2014), or for that matter, be conducted by a dyadic set of exchange partners, such as a buyer and a seller (Barrington et al., 2016). Instead, the marketing literature construes exchange more broadly as a voluntary trade of things of value, including those that are undertaken on the basis of social currencies (e.g., caring for one's friends when they are ill), or through philanthropic avenues (e.g., donating to a homeless person) (Barrington et al., 2016).

Marketing research also recognises many different types of exchange partners and their motivations (Laczniaak and Murphy, 2012, Sridharan et al., 2015). This definition of exchange, suggests that programs which foster sanitation marketing, and indeed WaSH marketing more broadly, could involve a myriad of exchange partners interacting through monetary and nonmonetary transactions to enhance health, through both improved WaSH products, services and behaviours and an increase in social capital derived from the exchange itself (Mohnen et al., 2011, Yip et al., 2007, Poortinga, 2016). Furthermore, researchers have criticised the marketization approach for its potential to inflict damage if it becomes the defining feature of human activity (Conway and Heynen, 2006, Tsinda, 2014).

Building on social exchange theories, marketing classifies exchanges into four categories: (i) market-based, (ii) non-market-based, (iii) command-based and (iv) culturally-embedded. In a market-based exchange, a buyer and a seller voluntarily deal in products and services on the basis of a pricing mechanism established by competitive markets or negotiation (Tsinda et al., 2015). In a non-market based exchange, a supplier donates a product or service to help in some circumstance of disadvantage (e.g., charity) and receives no payment in return (Barrington et al., 2016). In a command-based exchange, an institutional authority (e.g., a government utility) is regulated in how it makes available products and services by a provision requirement rather than profit motive (Layton, 2007, Sridharan et al., 2015). And in a culturally determined exchange, a provider and recipient exchange value in ways sanctioned by local traditions and social norms (Belk, 2014, Bisung and Elliott, 2014).

The term non-market is used here in order to be consistent with established economic literature to denote the work of civil society organisations (CSOs). However, we do acknowledge that in fact the two other categories of command-based and cultural exchanges also refer to that which happens outside the market, and thus will be categorised under the ‘non-market’ label in this paper. This paper attempted to apply the WaSH marketing literature and identify existing marketing exchange mechanisms with the focus on non-marked based interventions (based on traditional customs) in the context of informal settlements of Kigali, Rwanda.

Method

In order to apply the WaSH marketing related framework, a case study was thought to be the most appropriate research strategy. Yin states that case studies are the preferred strategy when “how” or “why” questions are being asked, when the researcher has little control over events, and when the focus is on a recent issue within a practical context (Yin, 2003). As our research sites, we selected two informal settlements (Gitega and Kimisagara) of the City of Kigali, Rwanda. The characteristics of these two informal settlements of Kigali are summarised as follows: (i) poor housing with the unauthorised building, (ii) lack of access to quality health care and transportation, (iii) an unhealthy environment, (iv) poor drainage systems, (v) poor sanitation facilities and (vi) high density of settlements.

We applied a participatory and consultative research approach to collect and analyse qualitative data including a literature review, interviews and focus groups discussions with relevant actors (community health workers in study settlements, village leaders, representatives of women and men, service providers in the settlements, etc.). Finally, we organised a one day workshop to get views of stakeholders on preliminary findings and provide more insights on WaSH related marketing exchange mechanisms in the study settlements.

Key findings

The findings show that WaSH products and services were supplied by the market-based, non-market-based mechanisms or a combination of both. There was a general consensus among participants in the workshop that the following WaSH products and services are provided by the market-based mechanisms. These include: (i) purchase of water from privatised (government-regulated) utility; (ii) fetching of water from public utility, (iii) purchase of ecosan model or semi-ecosan toilet or construction of Ventilated Pit Latrine (VIP) (or other latrine technologies recommended by the Government) from local service providers, (iv) purchase and/or construction of septic tanks by households, (v) upgrading house and existing sanitation facilities (e.g. from a pit latrine to an Ecosan model, or adding cement, door, etc.), (vi) selling of water from one household to another, (vii) purchase of soaps from private business or construction of *kandagira ukarabe*¹ equipment, etc.

However, stakeholders in the workshop also revealed that WaSH products and services in the informal settlements of Kigali are not always supplied by the market-based exchanges. As mentioned by a number of stakeholders in the workshop, there is a clear evidence that a number of WaSH products and services are provided by command-based and culturally-embedded exchange types.

Box 1. Traditional customs that have been used in WaSH area

- **Imihigo:** a practice where people publicly committed themselves to the achievement of a given task (e.g. having a hygienic sanitation facility, etc.);
- **Ubudehe:** the tradition of mutual assistance or local collective action especially in farming, used to encourage community support for poorer households without the ability to finance improved sanitation facilities. The Ubudehe targeting approach is used by a number of social protection interventions to identify beneficiaries of social protection programmes. The 2015 *Ubudehe* categorisation covered a total of 2,358,488 households (10,382,558 people) across the country and classified them into 4 categories reflecting their degree of social and economic status: Category 1 (16%), Category 2 (29.8%), Category 3 (53.7%) and Category 4 (0.5%). Those in Ubudehe category 1 are eligible for non-contributory benefits provided that they meet additional eligibility requirements;
- **Umuganda:** a traditional cultural practice predating the colonial years that has been used in various forms to mobilize labour, usually for work on public projects and support for vulnerable households (e.g. constructing houses including sanitation for widows, etc.);
- **Umunsanzu:** the tradition of support for the needy and contribution to the achievement of a common goal;
- **Urugerero:** an ancient home-baked custom that has been resurrected and incorporated into society whereby youth after completing secondary schools get a chance to participate in the construction of houses including sanitation facilities for vulnerable households, etc. With this, youth get a chance to assist in developing the nation with hands-on experience. This activity is done for three-six months each year, evaluation is done and certificates are awarded to volunteers.

In the command-based exchanges types, it is generally seen as central and/or local governments responsibility to guide, sensitize and influence better-off households within communities to support their neighbours who are poor (those in category 1 and 2 in *ubudehe* classification, See Box 1). This is the case for the construction of new toilets or emptying toilets once the existing ones are full in the informal settlement of Kigali, or the purchase of semi Ecosan toilet or construction of Ventilated Pit Latrine (VIP) or other latrine technologies recommended by the Government by better-off households or Rwandans living in Diaspora for the benefit of poor households.

Within the culturally-embedded exchange types, traditional values are often used to impede improvements in WaSH. For example, rather than acquiring a product or service, i.e. drinking water, purchase of ecosan model from local service providers, upgrading house and existing sanitation facilities (e.g. from a pit latrine to an Ecosan model, or adding cement, door, etc.), construction of new toilet or emptying once the existing one is full, with a non-monetary exchange (e.g. child minding, use of *ubudehe*, *umuganda*, *urugerero*, *umunsanzu* (see Box 1) to support poorer households without the ability to finance improved sanitation facilities.

Discussion

The above findings clearly indicate a different pattern reflecting a more ‘nuanced marketing’ approach while applying it to public goods. Participants’ views reveal that with cultural mixing and home/traditional-grown solutions (Box 1), households living together in informal communities have learned to hybridise their ‘traditional’ exchanges with market-based exchanges so as to optimise their own wellbeing to cope with the issues associated with poverty. These traditional customs are sometimes seen to impede improvements in sanitation in Rwanda. Many of these have been formalized into the administrative system, making it easier for national policies and targets to be implemented within a decentralized structure.

We therefore argue here that rather than promoting one-size fit all in WaSH marketing approaches, a more useful approach is to recognise the fluidity with which ‘hybrid’ exchange modes are produced and reproduced in Kigali informal settlements. In fact, when social capital is leveraged to enable exchange of WaSH products and services, it leads to an increase in hygienic practices. This was also reported in other settings (Bakshi et al., 2015, Poortinga, 2016, Venugopal and Viswanathan, 2015). This mixture of market-based exchange with an understanding and concern for the well-being of vulnerable (poor households, widows, people with disabilities, etc..) is consistent with our recent findings in informal settlements of East Africa Cities (Tsinda et al., 2017, Tsinda and Abbott, 2017).

However, these findings are unique because WaSH exchanges are triggered by the need to generate survival income for oneself (economics) but implemented in a humanistic way by supporting each other through command-based (e.g. local authorities influencing better-off households to support their neighbours, etc.) and/or culturally-embedded exchange types (e.g. *urugerero* by engaging the youth after completing secondary schools in the construction of houses including sanitation facilities to vulnerable households, etc.).

The research findings also show the complexity of WaSH services, because of their dualism character of having both public and private characteristics. In the context of developing sanitation-marketing approaches, our findings suggest that the dichotomy of purely profit-oriented or communally oriented are likely inaccurate and not useful. By leveraging existing fluid and hybrid exchanges, WaSH practitioners may be able to improve the WaSH situation in a way that is relevant to their context and self-guided by local forces within communities. However, this needs further research.

Conclusions

Our findings document the prevalence of diverse exchange mechanisms to acquire WaSH products and services. These exchange mechanisms include:

1. A market-based (e.g. purchase of ecosan model from local service providers in Kimisagara, purchase of soaps from private business or construction of *kandagira ukarabe* equipment in both settlements, purchase of water from privatised (government-regulated) utility in Gitega, etc....);
2. Non-market-based which include a typical non-market based exchange per se (e.g., sharing of toilets between households in Kimisagara, etc);
3. Command-based (e.g., construction of a house or new toilet or emptying once the existing one is full for a vulnerable household by youth in *urugerero* in Gitega, etc.)
4. And culturally-embedded exchange types (e.g. use of *ubudehe* to support poorer households without the ability to finance improved sanitation facilities)

This implies that WaSH initiatives seeking to improve lives of dwellers of informal settlement communities may embrace multiple forms of WaSH marketing mechanisms. However, it is to extrapolate or extend the practices of these settlements to other settlements of Kigali or any other city in the East Africa Countries because issues differ from country to country, city to city, settlement to settlement, what works in one place will not necessarily work elsewhere. A key question is concerned with the conditions under which the implications from these settlements will apply in other settlements?

Acknowledgements

This research was funded by the Swedish International Development Agency (SIDA) through University of Rwanda (UR) -Sweden Programme of Research, Higher Education and Institutional Advancement. It was also built on a larger project (3K-SAN Project) that was funded by SPLASH, Swiss Agency for Development and Cooperation (SDC). The authors would like to thank SIDA, SDC, UR and extend our gratitude to the communities we have worked with for their enthusiasm and involvement in this project.

References

- BAKSHI, R. K., MALLICK, D. & ULUBAŞOĞLU, M. A. 2015. Social capital and hygiene practices among the extreme poor in rural Bangladesh. *The Journal of Development Studies*.
- BARRINGTON, D. J., SRIDHARAN, S., SAUNDERS, S., SOUTER, R., BARTRAM, J., SHIELDS, K., MEO, S., KEARTON, A. & HUGHES, R. 2016. Improving community health through marketing exchanges: A participatory action research study on water, sanitation, and hygiene in three Melanesian countries. *Social Science & Medicine*, 171, 84-93.
- BELK, R. 2014. You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67, 1595-1600.
- BISUNG, E. & ELLIOTT, S. J. 2014. Toward a social capital based framework for understanding the water-health nexus. *Social Science & Medicine*, 108, 194-200.
- CONWAY, D. & HEYNEN, N. 2006. The ascendancy of neoliberalism and emergence of contemporary globalization. *Globalization's Contradictions: Geographies of Discipline, Destruction and Transformation*. London and New York: Routledge, 17-34.

- EVANS, W. D., PATTANAYAK, S., YOUNG, S., BUSZIN, J., RAI, S. & BIHM, J. W. 2014. Social marketing of water and sanitation products: a systematic review of peer-reviewed literature. *Social Science & Medicine*, 110, 18-25.
- LACZNIAK, G. R. & MURPHY, P. E. 2012. Stakeholder theory and marketing: Moving from a firm-centric to a societal perspective. *Journal of Public Policy & Marketing*, 31, 284-292.
- LAYTON, R. A. 2007. Marketing systems—A core macromarketing concept. *Journal of Macromarketing*, 27, 227-242.
- MOHNEN, S. M., GROENEWEGEN, P. P., VÖLKER, B. & FLAP, H. 2011. Neighborhood social capital and individual health. *Social science & medicine*, 72, 660-667.
- OKURUT, K., KULABAKO, R. N., CHENOWETH, J. & CHARLES, K. 2015. Assessing demand for improved sustainable sanitation in low-income informal settlements of urban areas: a critical review. *International journal of environmental health research*, 25, 81-95.
- POORTINGA, W. 2016. Social relations or social capital? Individual and community health effects of bonding social capital. *Social science & medicine*, 63, 255-270.
- PRÜSS-USTÜN, A., BARTRAM, J., CLASEN, T., COLFORD, J. M., CUMMING, O., CURTIS, V., BONJOUR, S., DANGOUR, A. D., DE FRANCE, J. & FEWTRELL, L. 2014. Burden of disease from inadequate water, sanitation and hygiene in low-and middle-income settings: a retrospective analysis of data from 145 countries. *Tropical Medicine & International Health*, 19, 894-905.
- SRIDHARAN, S., BARRINGTON, D. J. & SAUNDERS, S. G. 2015. Water exchange systems. *Routledge Handbook of Water and Health*. Routledge London and New York.
- TSINDA, A. 2014. *Financial and Market-Based Solutions for Improving Sanitation in the Informal Settlements of East Africa*. PhD, University of Surrey.
- TSINDA, A. & ABBOTT, P. 2017. Between the Market and the State: Financing and Servicing Self-Sustaining Sanitation Chains in Informal Settlements in East African Cities.
- TSINDA, A., ABBOTT, P. & CHENOWETH, J. 2015. Sanitation markets in urban informal settlements of East Africa. *Habitat International*, 49, 21-29.
- TSINDA, A., ABBOTT, P., CHENOWETH, J., PEDLEY, S. & KWIZERA, M. 2017. Improving sanitation in informal settlements of East African cities: hybrid of market and state-led approaches. *International Journal of Water Resources Development*, 1-16.
- VENUGOPAL, S. & VISWANATHAN, M. 2015. Developing customer solutions for subsistence marketplaces in emerging economies: a bottom-up 3C (customer, community, and context) approach. *Customer Needs and Solutions*, 2, 325-336.
- WHO / UNICEF 2015. Progress on Drinking Water and Sanitation: 2015 Update. Geneva: World Health Organisation/ United Nations Children's Fund
- YIN, R. 2003. K.(2003). Case study research: Design and methods. *Sage Publications, Inc*, 5, 11.
- YIP, W., SUBRAMANIAN, S., MITCHELL, A. D., LEE, D. T., WANG, J. & KAWACHI, I. 2007. Does social capital enhance health and well-being? Evidence from rural China. *Social science & medicine*, 64, 35-49.

Notes

¹ Step and Wash, system of encouraging people to wash their hands after the use of the toilets. It is a simple hand washing equipment where a small jar or container with clean water is positioned at the top and connected to a peddle that exerts pressure to open the flow of water from the container.

Contact details

Dr Aime Tsinda
 University of Rwanda and Institute
 of Policy Analysis and Research,
 IPAR-Rwanda
 Tel: +250 788305960
 Email: aime.tsinda@gmail.com
 www: <http://ur.ac.rw/> and
[http://www.ipar-
 rwanda.org/index.php?lang=en](http://www.ipar-rwanda.org/index.php?lang=en)

Dr Jonathan Chenoweth
 University of Surrey
 Tel: 01483 68 9096
 Email: j.chenoweth@surrey.ac.uk
 www: <https://www.surrey.ac.uk/>

Prof Pamela Abbott
 University of Aberdeen
 Email: p.abbott@abdn.ac.uk.
 www: <https://www.abdn.ac.uk/>
