



HUMAN DEVELOPMENT INNOVATION FUND



# MAKING INNOVATION WORK FOR GIRLS AND WOMEN IN TANZANIA

OCTOBER 2017

# ACKNOWLEDGEMENTS

The **Human Development Innovation Fund (HDIF)** is a £39m United Kingdom Department for International Development (DFID) innovation programme in Tanzania managed by a Palladium-led consortium with KPMG, Newcastle University (EG West Centre), Loughborough University (WEDC), and the Institute of Development Studies (IDS).

With a focus on innovations from non-state actors and the effective utilisation of information and communication technologies for development (ICT4D), HDIF seeks to accelerate the experimentation, commercialisation, and diffusion of innovations in health, education, and water, sanitation and hygiene (WASH). Further details can be obtained at [www.hdif-tz.org](http://www.hdif-tz.org).

The **Commission for Science and Technology (COSTECH)** is the government partner to HDIF and a key strategic partner for the project. HDIF and COSTECH work together to realise a shared goal: to accelerate innovation and effective use of technology to increase and improve opportunities for health, education and WASH in Tanzania. Further details can be obtained at [www.costech.co.tz](http://www.costech.co.tz).

**UK Department for International Development (DFID)** funds HDIF as part of the UK Government's investment in development in Tanzania. Through its Strategic Vision for Girls and Women,<sup>1</sup> DFID has articulated the agency's commitment to stop poverty before it starts while strengthening the potential of girls and women to have greater voice in decision-making, complete education, and benefit from paid work and opportunities, and have control over their own bodies and mobility. Further details can be obtained at [www.dfid.gov.uk](http://www.dfid.gov.uk).

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*Disclaimer:* All opinions included here represent those of HDIF and not those of DFID.

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**Front cover:** Children from Bunju Primary School, Dar es Salaam  
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# FOREWORD

Our vision at HDIF is to accelerate innovation in human development across Tanzania. Embedded in this lofty ambition are challenges and opportunities related to technology uptake, business enabling environment, policy landscapes, rule of law, sector-based challenges, and culture. As our team began actively engaging local businesses, government partners and ambitious youth looking to change their world, two common themes emerged where stakeholders wanted to hear about learning from HDIF: what are the enablers of technology adoption in Tanzania, and, what is the relationship between our investments and gender equity.

My experience leading and representing HDIF has reflected our stakeholders' requests. From high-level fora to engaging aspiring entrepreneurs at start-up hubs, to reviewing thousands of funding applications, I have heard stories about women and girls in innovation in Tanzania and experienced the low levels of active participation and leadership by women and girls in decision-making around science, technology, engineering and mathematics (STEM). With the strong backing of Jane Miller and Liz Taylor from DFID, HDIF began and continues a multi-year process of examining ourselves and using our experiences in Tanzania as a learning platform about the relationship between gender and innovation in the development context. In so doing, we aspire to generate positive impact for women and girls and gender equity;<sup>2</sup> to mitigate harm potentially created by investments in innovations, to support female innovators, to develop specific strategies to engage women and girls fully in the design, use, diffusion and scale-up of innovations, and to share valuable learning with development practitioners, policymakers, funders and the next generation of innovators.



**Students gain ICT and entrepreneurship skills at a VETA centre in Arusha through the 'Cycle of Transformation' programme run by World Vision.**

This White Paper is our first formal publication of our initial insights and learning around this intersection and presents recommendations to funders and policymakers who, through their work, have an opportunity to shape the discourse around women and girls in Tanzania. As such, this White Paper draws from data and experiences from HDIF-supported projects, stakeholders and partners in Tanzania and abroad. Through the HDIF approach, we have identified four drivers of greater gender equity in innovation, which are explained in this White Paper. The drivers are helping us and our partners assess how change happens when gender and innovation intersect to address girls' and women's well-being, to understand if and how innovation can deepen girls' and women's decision-making power and self-determination, and ultimately if and how innovation can shift gender relations. In addition

to looking at each of the drivers independently, HDIF and our partners will examine if and how the four elements affect one another, and ultimately how they can build to create broad-based shifts in societal norms and practices.

We welcome your comments and feedback to help us shape our learning and approach, and will continually incorporate lessons from grantees' work and the ecosystem overall to positively impact girls' and women's lives and gender relations through innovations.

Finally, I would like to personally thank the HDIF staff, grantees, partners and technical advisers for their efforts to design and deliver these insights.

**David B McGinty**

Director, Social Innovation + Technology, Palladium Group

# EXECUTIVE SUMMARY

Women and girls typically experience the most extreme poverty because they face greater burdens of unpaid work, limited assets and productive resources compared to men, less access to education, and cultural factors that limit life-chances including early marriage.<sup>3</sup> In addition, while there is a growing body of evidence showing that innovation has the power to transform women's lives, there is minimal information globally and from Tanzania on how innovations may differentially impact the lives of girls and women, how gender dynamics affect innovation, and what may be successful approaches to addressing these challenges.

This White Paper presents HDIF's initial learning about the relationship between innovation and gender including critical learning from five HDIF-supported innovations and other partners. These innovations – AFPHTA, Ubongo, Dageno, Camfed and Fundación Paraguaya, as well as two examples from the innovation ecosystem – are helping women and girls to access better-quality services and become emboldened to make positive changes to their lives. Looking to the future, these innovations and others like them hold the potential to catalyse shifts in the norms that shape and govern gender relations, bringing large-scale change to individuals and societies alike.

To explore learning about the relationship between innovation and gender, HDIF's approach looks at four drivers of gender equity when testing and scaling innovations. The drivers represent the impact of innovations that result in positive shifts in the lives of women and girls. The drivers describe three elements of women's and girls' lives that move them towards greater autonomy and agency.<sup>4</sup> Underlying all three are the key

societal factors – economic, social and cultural – that shape the lives of women and girls. The four drivers are:

▫ **Access:** This reflects the way in which innovations can benefit women and girls through improving their ability to access quality basic services that advance their well-being. Increasingly, digital products are bringing services and information closer to women and girls; new learning platforms are improving educational outcomes; digital innovations are making maternal and child health information systems possible; and better sanitation is improving health outcomes for women, girls and their families.

▫ **Self-determination:** This reflects a more active engagement between the innovation and the individual, resulting in: personal empowerment and increased autonomy; opportunities to advance personal and family well-being; and deepening girls' and women's belief in their own capabilities. Examples include female business owners whose economic security and personal standing in the family have been significantly advanced through successful, expanding businesses.

▫ **Enabling:** Women developing their abilities and moving into positions where they can act as leaders and role models, being able to support other women and girls to advance through these levels, and advocating and changing attitudes in their community by example and through their own voices. Examples include female entrepreneurs who are visible and influential in creating livelihood and job opportunities for themselves and others, which further raises the status of these women to act as role models in their community.

▫ **Society:** The laws, cultural norms and attitudes, and economic and social structures that make up any society strongly influence the issues described in the first three drivers; however, they are difficult to change in the short term. Changes in the first three drivers will slowly contribute to changes in society, but it is probably unrealistic for any one project to have significant influence on society.

Critical learning from HDIF's grantees and innovation stakeholders demonstrate that:

**Lesson 1:** Key players in the innovation ecosystem are aware of gender inequities, but often do not adequately consider the complex lives of girls and women, or their unequal access to resources and influence, when designing and implementing activities focused on testing and scaling innovation.

**Lesson 2:** When women and girls are central to the design of innovations, those innovations have the potential to empower girls, deepen girls' agency, promote girls' voices, and support them to be a part of change at individual, family and community levels.

**Lesson 3:** In education programmes, peer and group learning activities that integrate entrepreneurship and problem-solving skills can improve confidence and provide a good basis for girls to become active innovators and future entrepreneurs.

**Lesson 4:** Innovations which promote access to business financing and skills can empower women to grow and sustain their enterprises, leading to women's greater economic security.



Women wait for their children's vaccinations at a health facility in Shinyanga, delivered as part of Amref's 'Boresha Chanjo' programme.

The learning reflects the potential of the four drivers to generate change in the lives of women and girls, and in gender relations. Five key recommendations have been extracted from the learning and case studies that aim at strengthening the intersection of gender and innovation, and harnessing innovation to drive gender equity in Tanzania.

The key recommendations are:

**Recommendation 1:** HDIF and other ecosystem players should further investigate the effect of cultural factors and the most effective strategies to support better

participation of women and girls in the innovation spaces, hubs and labs. This would need to be supported by tools, resources and examples of best practice.

**Recommendation 2:** Strengthen positive gender messages in the communications and interactions of every innovation. HDIF, innovators and other partners should examine the messages and images related to their innovations to understand the type of gender messages being conveyed. Ecosystem actors should be supported to use opportunities to create and promote

positive content, messages and images that enhance perceptions of, opportunities for, and engagement with girls and women as well as boys and men.

**Recommendation 3:** Challenge innovators and partners to put girls and women at the centre of innovation design, and make them central actors in the creation, use and scale-up of innovations. In addition, extend school-based business experiences to girls who are not in school to provide opportunities for them to secure livelihoods, recognising that girls who are out of school are typically the most vulnerable. Explore the extent to which girls who are in school could serve as positive role models for other girls in the community and lend support to create a ripple effect.

**Recommendation 4:** Create and expand mechanisms to finance the ventures of small-scale entrepreneurs who have been unable to access bank loans, particularly women, who often lack collateral. Link entrepreneurs to markets to expand their business opportunities.

**Recommendation 5:** Where possible, combine educational interventions with initiatives that boost the economic security of current and former students – with an emphasis on female students – to meet the holistic needs of women and girls in Tanzania.

HDIF will seek feedback from grantees and partners on the approach, case studies and recommendations, and explore if and how the approach applies to other grantees in the portfolio including innovations in the health and WASH sector and new grantees. In addition, HDIF has identified two priority issues for further exploration: the potential risks that technology can create for women and girls; and how best to engage men and boys in any strategy to realign gender relations and promote gender equity.

# INTRODUCTION

## Women and girls in Tanzania

In Tanzania, girls and young women face disproportionately worse outcomes in education and health. For example, while the proportion of girls enrolled in primary school is slightly higher than boys, at secondary school stage girls are much less likely to still be in school. At age 13, 18% of girls nationally are not attending school, rising to 34% at age 14, and 44% at age 15 (compared to 16%, 24% and 34% for boys of the same age). Just over one-quarter of adolescent women age 15–19 are already mothers or pregnant with their first child, virtually ending their opportunity to attend school.<sup>5</sup> In addition, girls and young women are disproportionately affected by HIV/AIDS: while HIV rates are declining overall, prevalence among women aged 20–24 is still double that of young men, climbing to approximately three times the prevalence rate among men 25–29 years old.<sup>6</sup>

## Innovation in Tanzania

The ‘innovation ecosystem’ is the term used to describe the large number and diverse nature of participants and resources that are necessary for innovation to take root and grow. The actors include entrepreneurs, investors, researchers, venture capitalists, business development and other technical service providers such

as accountants, designers and contract manufacturers, and providers of skills training.<sup>7</sup>

Tanzania has risen from position 123 (2014) to position 96 in the 2017 Global Innovation Index (GII), putting it ahead of many other sub-Saharan African countries, signalling the potential for adoption of new technologies and the associated growth opportunities. Tanzania, and

especially Dar es Salaam, has a relatively lively start-up scene, with innovation spaces, hubs and business incubators to support and catalyse it. Many of the key players in the Tanzanian innovation ecosystem are included on HDIF’s Innovation Ecosystem map, which currently shows 20 hubs and six incubators in Tanzania.<sup>8</sup> The map is a live document and new entries are continuously added. It can be viewed at [www.innovate.co.tz](http://www.innovate.co.tz).



Secondary School students from Dageno Girls Center.

## Gender and innovation in Tanzania

There is very limited evidence on gender and innovation in Tanzania, therefore global literature must in large part serve to inform what is likely to be relevant in Tanzania. Research shows that women innovate continuously, translating ideas into results so their families can survive and thrive.<sup>9</sup> As primary caregivers and labourers in situations of poverty, women create innovations, apply these innovations, change them as needed, and share them with friends and community members.<sup>10</sup> Women's full participation in the innovation process accelerates the possibility for innovations to meet the needs of women, their children and the communities,<sup>11</sup> yet men often dominate the use of interventions even if the intervention is meant to reach women, and women's views are considered only when marketers want to sell to them.<sup>12</sup> While innovation and technology can bring significant benefits to women and girls, so too can they potentially bring harm; innovators, funders and other partners must be vigilant in mitigating possible negative impacts in all stages of the innovation process. And lastly, the support of men and boys is critical to shifting gender norms. Men and boys are often 'gatekeepers' for women's access to resources, opportunities and services; therefore, excluding them and overlooking the relationships between men and women can reinforce, rather than reduce, the ways in which women are excluded from resources and opportunities.<sup>13</sup>

## HDIF as a learning platform about innovation and gender

HDIF's gender approach was developed under the knowledge management strategy and sets out actionable steps to bring gender more purposefully into its internal operations, the work of its grantees, and the



Women access clean water using a pre-payment system devised by Susteq.

innovation ecosystem in Tanzania. By examining these HDIF grantees as well as other ecosystem partners, the HDIF gender approach seeks to bring structure to the observed learning and presents a way to conceptualise how change can happen in the lives of girls and women when gender and innovation intersect. It is informed by initial learning from HDIF's grantees and by the limited evidence gleaned from global innovation, and takes

inspiration from the pyramid of change developed by the International Center for Research on Women (ICRW) to measure levels of empowerment and gender equity for women and girls.<sup>14</sup> The HDIF gender approach itself is an innovation; it is exploratory and will likely evolve as grantees test and adapt their innovations.

Eighteen of HDIF's current 35 grantees include a specific focus on bringing benefits to women and girls. The innovations supported cover a wide range of sectors, development challenges and target beneficiaries. For example, various HDIF-supported health innovations seek to alleviate stock-outs in childhood vaccines; improve timely, accurate and complete patient information for mothers and their infants; and establish emergency transport systems for pregnant women to reach health facilities during childbirth. HDIF's education innovations include: designing creative, tablet-based literacy and numeracy enrichment programmes in schools; expanding the reach of an e-learning platform in partnership with the Ministry of Education and Vocational Training; and promoting entrepreneurship skills to strengthen girls' (and boys') employment capabilities. And, HDIF water, sanitation and hygiene (WASH) innovations seek to improve the health of women and girls by empowering local entrepreneurs with start-up loans to solve community sanitation challenges and by bringing dependable and regulated water supply to communities. For more details on HDIF's portfolio, see <http://www.hdif-tz.org/portfolio>.

In addition to grantees, HDIF works directly and indirectly with key innovation ecosystem partners across sectors, including government institutions, hubs and incubators, academic institutions, experienced social entrepreneurs, and service providers (such as consultants and financial institutions).

## Four drivers of equity through innovation

To explore learning about the relationship between innovation and gender, HDIF's gender approach looks at four drivers of gender equity when testing and scaling innovations. All of the learning in this White Paper is viewed through these drivers.

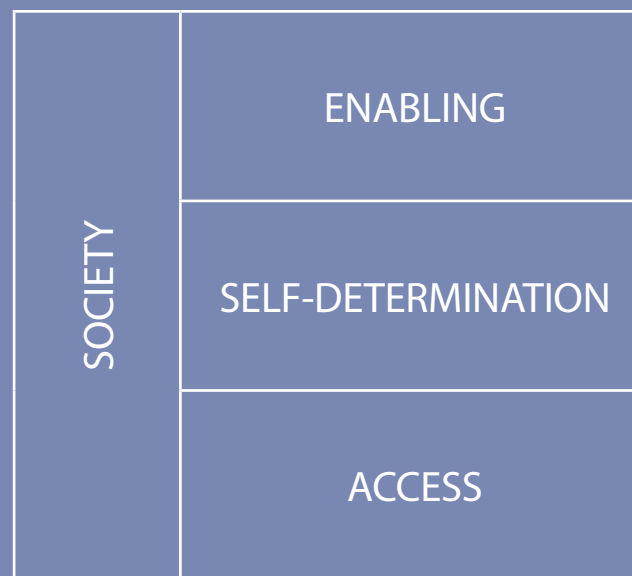
The four drivers represent positive shifts in women's and girls' lives due to the impact of innovations. Each driver describes a women's status from being able to access quality services to having a greater ability to make decisions about her own life, to drive change and to influence others. These elements of change build on one another to achieve compounding difference in the lives of women and girls. Underlying all four are the key societal factors – economic, social and cultural – that shape their lives.

▣ **Access:** This reflects the way that innovations can benefit women and girls through improving their ability to access quality basic services that advance their well-being. Increasingly, digital products are bringing services and information closer to women and girls; new learning platforms are improving educational outcomes; digital innovations are making maternal and child health information systems possible; and better sanitation is improving health outcomes for women, girls and their families.

▣ **Self-determination:** This reflects a more active engagement between the innovation and the individual, resulting in: personal empowerment and increased autonomy; opportunities to advance personal and family well-being; and deepening girls' and women's belief in their own capabilities. Examples

Economic, social, cultural shifts

- Norms
- Practices
- Systems
- Policies
- Investment



Agency and autonomy, enabling others

- Decision-making
- Self-esteem
- Social capital
- Mobility

Self-determination to improve one's life

- Access to resources
- Economic security
- Safety
- Employability

Effective access to quality services

- Knowledge and skills
- Water and sanitation
- Health care
- Medicines and supplies

include female business owners whose economic security and personal standing in the family have been significantly advanced through successful, expanding businesses.

▣ **Enabling:** Women developing their abilities and moving into positions where they can act as leaders and role models, being able to support other women and girls to advance through these levels, and advocating and changing attitudes in their community by example and through their own voices. Examples include female entrepreneurs creating livelihood and job opportunities for themselves and others that are visible, influential and raise the status of these women to act as role models in their community.

▣ **Society:** The laws, cultural norms and attitudes, and economic and social structures that make up any society strongly influence the issues described in

the first three drivers; however, they are difficult to change in the short term. Changes in the first three drivers will slowly contribute to changes in society, but it is probably unrealistic for any one project to have significant influence on society.

HDIF aims to explore the innovations created by grantees in relation to each driver of the approach: if and how innovations might influence access, self-determination, enabling and society; and, in turn, if working towards these aspirations might influence the design, use and scale-up of innovations. For example, can technologies that supplement teaching in schools expand learning opportunities for out-of-school girls as well? Could business loans provide women with livelihood opportunities previously unavailable to them? Can new role models in the media build girls' self-confidence and shift how they perceive themselves in relation to boys, ultimately causing shifts in gender relations in society?



# CRITICAL LEARNING

## Lesson 1

**Key players in the innovation ecosystem are aware of gender inequities, but often do not adequately consider the complex lives of girls and women, or their unequal access to resources and influence, when designing and implementing activities focused on testing and scaling innovation.**

In Tanzania, observations and experience point to women and girls being a minority (or in some areas a rarity) in science, technology, engineering and mathematics (STEM)-related sectors of society. This is the case not only in Tanzania, but is also a global reality and a persistent inequity. For example, in the United States, only 35% of undergraduate degrees in STEM are awarded to women – a number that has remained unchanged for the past decade, even though women account for almost 60% of university graduates.<sup>15</sup> The Brookings Institute points to numerous reasons for this trend: social norms and parental expectations that discourage girls from studying science; beliefs around boys being better in math and science than girls; institutional factors that constrain women's ability to enter a STEM job; and, the lack of female role models or mentors that can help young women navigate STEM studies and careers.<sup>16</sup> In all countries, women perform most of the unpaid care work including care for children, the elderly and the sick, in addition to running the household. These responsibilities typically undermine their chances of going to school and securing incomes.<sup>17</sup>

In Tanzania it is unusual for women to be in leadership positions on research teams, often due to social expectations and the roles they fulfil. Female researchers and academics who are also mothers and who care for their children must balance many competing responsibilities in the workplace and home. The Tanzania Commission for Science and Technology (COSTECH), HDIF's principal partner in Tanzania, has recently introduced measures to address the competing demands on women's time, for example by raising the age ceiling for researchers applying for grants, in recognition of the time women take out from professional careers to have and raise children.

A number of HDIF grantees are trying to increase girls' and women's **access** to innovation spaces by facilitating more supportive environments for them to learn and work, building their **self-determination** to start their own businesses, and potentially **enabling** young women to become innovators, entrepreneurs and other drivers of innovation in the future.

HDIF is currently carrying out research on Tanzanian innovation hubs, 'maker-spaces', living labs and business incubators.<sup>18</sup> Research is ongoing, and this learning is based on early results and on the continuous engagement HDIF has with these actors. Most of the people leading these innovation spaces say they have few female clients and they would like more women to participate. They do not know how to attract women to these ventures, however, and some answers suggest they perhaps do not fully understand the challenges women face in joining them. One of the hub managers remarked that "girls and women are expected to refrain from being outgoing". Such expectations can cause



**Iku Lazaro, Co-Founder of Shule Direct.**

awkwardness and possibly friction for women who seek to assert themselves in the hub. Another hub manager said they do not feel it is necessary for "special reassurances to be provided for girls participating in their events". Early results seem to indicate that organisations most successful in attracting women to actively participate in innovation-related activities are those which consider attitudes that have often excluded women, and therefore they actively work to create a culture and environment that supports and nurtures women. Examples of these are Niwezeshe Lab (NLab) in Dar es Salaam and RLabs Iringa.

## Case study NLab and RLabs

Niwezeshe Lab (NLab) offers coding and entrepreneurship training to girls and boys in schools in Dar es Salaam and helps them develop their own projects. NLab seeks to create a culture that is supportive of girls. Boys are taught to respect girls, and girls are provided the opportunity to strengthen their confidence in dealings with boys. NLab specifically assigns girls to teach complex subjects such as computing to the newly joined boys. NLab also runs training aimed at teaching boys to respect girls. It makes efforts to build rapport with the parents of girls at the hub, keeping them informed of their daughter's progress and contacting them with regards to attendance.



Girls learning digital literacy skills at Buni Hub in Dar es Salaam.

RLabs Iringa organises training in innovation, entrepreneurship and technology to community

members, focusing on out-of-school young adults aged 18–25, although the training is open to anyone. RLabs works to create an empowering culture for

One of the young men recently shared how he helps his mum with housework and everybody at home is wondering what happened.

everyone, but gives special attention to supporting women. About 60% of their participants are women; the staff are equally male and female.

Yusuf Ssessanga, team leader at RLabs Iringa, explains: “We deliberately talk about this from the start, that we are all equal. We ask the men to treat female colleagues as sisters or mothers. We also try deliberately to model what we say. When it comes to work, we are all servants, especially those in leadership positions. We have lost a few people who thought having a leadership position is about commanding others to do what you can’t do. Every now and then we have separate meetings for men and women, where we talk ‘women’ and ‘men’ stuff in confidence.

**NLab gives girls access to learning resources in coding and entrepreneurship.**

**RLabs Iringa supports young adults in self-determination to get started in their own businesses.**

**Potential future impact:** Both of the case studies illustrate the potential of hubs and labs to play an **enabling** role through providing opportunities for women to have equal access to hubs, labs and the incubation programmes they offer, and through enhancing opportunities for women and girls to become innovators, entrepreneurs and other drivers of innovation.

**Recommendation 1:** HDIF and other ecosystem players should further investigate the effect of cultural factors on female innovators and the most effective strategies to support better participation of women and girls in innovation spaces, hubs and labs. This would need to be supported by tools, resources and examples of best practice. For example, the activities of NLab and RLabs could provide inspiration and learning for other hubs, and HDIF and others could support the strengthening of networks and peer learning between hubs.

## Lesson 2

**When women and girls are central to the design of innovation, those innovations have the potential to empower girls, deepen girls' agency, promote girls' voices, and support them to be a part of change at individual, family and community levels.**

When women and girls are at the heart of innovations, those innovations have the potential to deepen girls' agency (the ability to decide and control what happens to them, to be safe and to pursue what they want in life), to promote girls' voices (the confidence to speak their mind and have their ideas count), and to be a part of change (at individual, family and community levels). Education innovations are not only building children's literacy and numeracy skills, but are also changing the ways that girls and boys are typically portrayed in the media. For example, girl characters are curious, smart and not subservient to men; boy characters treat girls equally, engage in domestic and household work, and are not afraid to show their emotions. Such initiatives support children's **access** to new learning materials and to positive models of gender roles. In future, this exposure could drive transformational shifts in **society**, where people change their views about the 'proper' roles and behaviour of girls in comparison to boys.

Several HDIF grantees, largely in the education portfolio, have the potential to energise this kind of change. Ubongo, described below, is a non-profit social enterprise, led by strong women, and in its media work creates female characters who are leaders.



**Natasha Said Ali, Secretary General of Tanzania Medical Students' Association.**

Many HDIF grantees have sought to design their innovations with greater involvement from women and girls in order to integrate their needs and realities into the core of an innovation programme. Ubongo addresses the complex dynamics for learning and personal growth

that many girls (and boys) contend with daily by creating positive role models and portrayals of strong girls and women. The leaders of Ubongo are, themselves, strong women and their workplace is a vibrant space for young Tanzanian women working in innovation.

## Case study Ubongo

Nisha Ligon, Ubongo chief executive officer, explains: “We carefully design and test our content to ensure that it promotes positive norms for gender, and we continually check to ensure that we are not reinforcing any negative gender stereotypes or norms. We have high representation of female characters, showing young girls (and female animals) who are intelligent, curious, active, friendly and not subservient to men. We show boy characters (and male animals) who treat girls equally, engage in domestic and household work, and aren't afraid to cry or show their emotions. In our research, we collect sex disaggregated data and perform analyses to ensure that girls are being reached and receiving the full benefit of our programmes.”

Ubongo’s groundbreaking edutainment shows for children harness the multi-media platforms of this non-profit social enterprise to create positive role models and gender norms for girls and women all over Tanzania. The HDIF-funded pre-primary programme, ‘Akili and Me’, reaches over two million households every week in Tanzania through TV, radio and a mobile phone app. An evaluation of the programme, conducted in partnership with the University of Maryland, has shown that it is highly effective in increasing children’s readiness for



Beatrice (4), watches an episode of Akili and Me, Dar es Salaam.

school, and that it has a significant effect on school readiness for both girls and boys aged 3–6. Both girls and boys who watch the show score 16% better in overall school readiness than those who do not watch Akili and Me.

In the second series of the show, the makers are turning their attention to teaching socio-emotional skills and early

mindset building, particularly around gender equality. The show has strong female characters and representation of characters of both genders. An analysis of ten randomly selected episodes found that female characters receive 66% of screen time compared to male characters at 34%; the global average in children’s content is virtually the reverse, with male characters receiving 65% of screen time and female characters 35%. Research by the Geena Davis Institute for Gender in Media has found that children’s media significantly under-represents female characters, especially among ‘hero’ characters and those who work to earn a living or support their families.

This has a strong effect on girls’ sense of self and both genders’ sense of gender roles and cultural norms.



Ubongo is currently conducting focus group discussions with adolescent girls in Tanzania and Kenya in partnership with the SPRING Accelerator, to gauge the impact of the programme on children’s socio-emotional skills. They are also planning

to conduct a research study to test the effects on girls’ empowerment next year.

### Ubongo innovation supports children’s access to new learning materials and to positive gender models.

**Potential future impact:** Ubongo has already proven that their educational cartoons lead to significant gains in learning outcomes for girls and boys but they have potential to create a more transformational **societal driver** impact in the future. The creators have developed strong and positive female role models that aim to shift norms and people’s attitudes about the ‘proper’ roles and behaviour of girls in comparison to boys.

**Recommendation 2:** Strengthen positive gender messages in the communications and interactions of every innovation. HDIF, innovators and other partners should examine the messages and images related to their innovations to understand the type of gender messages being conveyed. Ecosystem actors should be supported to use opportunities to create and promote positive content, messages and images that enhance perceptions of, opportunities for, and engagement with girls and women as well as with boys and men.

### Lesson 3

**In education, peer and group learning activities that integrate entrepreneurship and problem-solving skills improve confidence and provide a good basis for girls to become active innovators and future entrepreneurs.**

Initiatives that integrate entrepreneurship and problem-solving skills into the school curriculum are particularly successful not only in improving educational outcomes for girls but also in building their self-confidence. These are crucial life skills, particularly in settings where girls have limited access to finances and livelihood opportunities. These innovations show that when students gain **access** to enriched learning environments that teach skills and information geared towards their needs and aspirations, their self-confidence rises. In turn, girls (and boys) may garner the **self-determination** to start businesses that provide economic security for themselves and their families, and can become strong role models for other girls (and boys) as they transition into adulthood.

HDIF supports several education grantees that have different innovative approaches to education and entrepreneurship. Dageno Girls Center (Dageno) works in a single school exploring student-centred learning, with a focus on creative thinking, problem solving and self-reliance. Their approach is project based, with learning activities embedded in the curriculum. Fundación Paraguaya works in 30 secondary schools to introduce entrepreneurship skills as a theory subject, complemented by hands-on field practice where students form business clubs that interact with the wider community outside the school.



Students from Dageno Girls Center in Karatu.

## Case study Dageno

Dageno Girls Center, based in Karatu in northwestern Tanzania, is an experiential, 'design thinking and doing', entrepreneurial education centre for girls who are at high risk of early marriage, teenage pregnancy, HIV infection and exploitative work. Dageno provides over 100 girls and young women aged 14–21 the opportunity to obtain a secondary school education despite previous interruptions in their education and difficult, sometimes desperate, conditions in their households.

The Dageno approach integrates local traditions and follows the standard Tanzanian academic curriculum but is vastly enriched by student-centred learning, design-thinking, female empowerment and leadership development. Dageno is creating the possibility for new life trajectories in a context in which girls and women have little social or economic power, and limited access to education, with only 24% of girls attending secondary school in Tanzania overall.

At Dageno, as described below, students – all girls – are challenged to learn through practical application and problem solving, including issues relevant to the school itself. For example, students learned biology and geometry while landscaping and planning the irrigation system for the school's *shamba* (garden). They also designed the school desks and the bunk beds for the dormitories. In each case, they analysed various options to select the best one for their school.

The Dageno approach is yielding results: of the 12 Dageno students who took the Form 4 (secondary school) exam

in 2015, all passed. This stands in sharp contrast to the neighbouring government school where no students passed, and where only 67% of students nationwide passed the Form 4 exam.

Six qualities make Dageno different:

- ▣ *Flexible entry* – girls go through a three-month 'bootcamp' to make up for interruptions in their education prior to joining Dageno.
- ▣ *Leadership and life skills*, drawing on local traditions and enriched with 'the 8 Cs' – curiosity, creativity, critical thinking, collaboration, confidence, courage and communication – so girls can be change-makers. Girls are challenged to be leaders and given opportunities to develop leadership abilities.
- ▣ *Learning by doing*, in which academic subjects are taught in part through practical design challenges such as learning biology and geometry while designing their own toilet and shower block on campus.
- ▣ *Entrepreneurship* that emphasises collaboration, leadership and problem-solving by supporting students to develop small businesses.
- ▣ *Design thinking*, in which students are taught to think of the needs and preferences of users, resulting in a campus that has been shaped by students – from dorm beds to uniforms.
- ▣ *Protection* – girls live at the school full time, reducing the likelihood that they will have to withdraw or interrupt their studies due to pregnancy.

While pleased with the results, Dageno Girls Center is focused on helping girls advance in life, not only in school. The girls know this. When asked what is different at Dageno from other schools, a confident, self-possessed Form III student named Gertrude replied, "We will pass Form IV and pass on to Form V. If you are a Dageno student, you can start your own business because you have knowledge on how to do things. So, you can start to make money yourself. From the skills that I get at Dageno, especially from leadership and entrepreneurship, I can make something different that other students cannot."

Maggie, a Dageno student from a rural village, is one of six sisters and the first to go to school. When she arrived at Dageno at age 14 she did not speak either Swahili or English and she left behind two older sisters who were waiting to be married. Most other village girls of Maggie's age would soon be married off – sometimes against their will – and become mothers. Maggie's own mother did whatever was needed to survive and care for her daughters, eventually raising goats to feed her children.

At Dageno, Maggie learned the skills and lessons that make up the unique curriculum there, and grew in self-confidence and courage. Maggie is now beginning her studies at the Open University of Tanzania in order to become qualified to apply to a university. Ultimately, Maggie wants to return to her village to teach young mothers how to make soap and earn a profit for their families. "People have helped me. When you are helped, you go to help others," she says.

**Dageno allows girls to access skills, information and the self-confidence that comes from living and learning in an environment centred around their own well-being.**

**Potential future impact:** Dageno has the potential to build girls' **self-determination** by supporting the students to take their school experience back to their homes and communities, be strong role models for other girls, and create social change as they transition into adulthood.

## Case study Fundación Paraguaya

The Fundación Paraguaya business clubs (BCs) teach an innovative 'learning by doing, earning and saving model' that provide students with skills not typically covered in the national curriculum. The BCs give students practical knowledge, skills and competencies necessary for employment, covering financial literacy, business management skills, creativity, critical thinking and problem solving. With the support of the clubs, students become entrepreneurs, developing and managing businesses that sell liquid soap, batik, various snacks, shampoo and handmade bracelets, among other products. Through funding from HDIF, Fundación Paraguaya has set up 45 business clubs in 30 government secondary schools in the Iringa region of Tanzania, reaching 1,800 students: 1,125 girls and 675 boys. The results for students are significant: in one school, members of the club realised a net profit of Tsh 1,846,000/= at year end.

The business clubs have particular benefits for low-income girls who are likely to have less employment opportunities or, if they do not advance through secondary school, need skills to set up income-generating activities. Christina, a student at Isimila secondary school, joined her school club in 2016. With the Tsh 200/= week she received from her guardians, Christina used the skills she learned to make and sell roasted peanuts near her home, generating enough profit to buy three piglets, which her parents and sister cared for while Christina was in school. When the pigs grew and gave birth to a new litter, Christina made enough money selling the piglets to rent a small room and open a cosmetics shop. She also

began a batik-making business, transporting the batiks to Dodoma for her sister to sell.

***Christina says, "In the future I don't want to be employed by the government. I'd like to run my own businesses."***

Frank Mahengi, the headteacher of Isimila secondary school, says that before the business club was formed, students – particularly girls – lacked motivation, and had poor attendance and school completion rates. Students questioned the relevance of school, given the very few opportunities for employment in the community. The club stimulated interest in school and in the case of one club, members decided to focus their business on a problem facing their school community: girls needed sanitary pads to continue with their studies while menstruating. The club



Girls from a Fundación Paraguaya business club in Morogoro.

began producing reusable sanitary pads, which became both a business opportunity as well as an excellent way to open up conversation and understanding on gender issues. The pads made it possible for female students to stay in school, and the involvement of boys in making and selling pads made them aware of the importance of girls' access to quality and affordable pads so they can continue with their studies while menstruating.

A 2016 study of the project undertaken by the University of Minnesota and site visits to the clubs showed that both students' and teachers' business knowledge increased significantly over the course of the programme, although on average boys were much more likely to start an enterprise than girls and to reach their savings goals.

This may reflect socio-cultural factors beyond the control of any grantee, such as the barriers girls face to earning cash and working independently, and boys' greater access to pocket money.

The education officer in Iringa, Alexander Mtavangu, points to several impacts of the clubs including, notably, that girls and boys are treated equally. In addition, the schools are seeing positive changes in students' attitudes and motivation, the club activities are generating income for the families of participating students, and teachers are becoming more creative in their teaching and are networking with teachers in other project schools.

Lastly, it appears that the students who excelled in clubs enabled other students to grow as well. The strong teamwork in the clubs facilitated this peer learning and upward trajectory of all students.

**Fundación Paraguaya Business Clubs provide access to learning resources on entrepreneurship, as well as support access to formal education through increased motivation and improved attendance.**

**Potential future impact:** In addition to enhancing the business skills of young people, the Fundación Paraguaya business clubs have the potential to improve their self-confidence, leading to greater **self-determination** to start businesses that provide economic security for themselves and their families.

**Recommendation 3:** Challenge innovators and partners to put girls and women at the centre of innovation design, for example, by using peer and group learning activities that integrate entrepreneurship and problem-solving skills. Look at extending these school-based business experiences to girls who are not in school to provide opportunities for them to secure livelihoods, recognising that girls who are out of school are typically the most vulnerable. Explore the extent to which girls who are in school could serve as positive role models for other girls in the community and lend support to create a 'ripple effect'.

## Lesson 4

**Innovations that promote access to business financing and skills can empower women to expand and sustain their enterprises, leading to women's greater economic security.**

Non-traditional mechanisms that provide financing and skills to women entrepreneurs can counter the barriers to starting a business that many women face, including lack of collateral, minimal savings and limited self-confidence. Young women in particular often face obstacles accessing financing and may also have low educational attainment. Innovations that expand opportunities for women to start a business can improve their **access** to resources and build their **self-determination** to succeed and take on new roles in the community, ultimately **enabling** them to act as positive role models for girls and women in the community.

Women and girls in Tanzania, as in many countries, have minimal (if any) information, skills and financing to innovate and bring their ideas to market. Lack of collateral (eg, land, buildings, equipment) makes it difficult if not impossible to get loans; additional hurdles include minimal savings to self-finance business exploration, refusal by husbands and family to get loans, and limited self-confidence. Grantees in the HDIF portfolio show how increased competency and access to financing through non-traditional means can transform the lives of girls and women and their families.

## Case study AFPHTA

Owners of private health facilities are often unable to access loans from banks due to a misconception that they are too risky; credit to the private health sector is estimated to be less than 1% of the total loan portfolio given by regulated banks and financial institutions. Loans are particularly hard to access in remote locations and for people starting and managing lower-end facilities (eg, dispensaries and small clinics) and accredited drug-dispensing outlets (ADDOs).

Afya Microfinance (AMiF) aims to improve access to affordable financing in the private healthcare sector. A project of the Association of Private Health Facilities in Tanzania (APHFTA), AMiF focuses on providing loans to individuals, especially women in peri-urban and rural areas, who intend to start or scale up ADDO businesses. Sixty-one percent of the owners of these small enterprises are women who would not qualify for standard loans because they lack the collateral and



Students learn ICT, entrepreneurship and leadership skills at a VETA center, Dar es Salaam



business management skills required to access loans from financial intermediaries. AMiF provides loans of Tsh 500,000 to Tsh 20m at lower interest rates, enabling business owners to keep a reliable inventory of pharmaceuticals, to purchase medical equipment, and to reduce the incidence of counterfeit medicine and medical supplies through purchasing arrangements vetted by AFPHTA.

These facilities, now able to provide higher-quality care, are reaping financial benefits for the business owners: 98% of ADDO owners in one region confirmed they have experienced economic benefits at both individual and family level thanks to the AMiF loans. In addition, since an ADDO or primary health facility is the first (or only) point of contact with the healthcare system for women, children, the elderly and the poor in remote areas, these facilities can improve the health of many people alongside improving the economic standing of the business owners.

While the majority of loans in the AMiF scheme were awarded to women, only 27.6% of the total loan portfolio was granted to women; this is because women take much smaller loans due to their lack of collateral and their level of business management literacy. However, in spite of the fact that women have more limited collateral and finances, the figures show that women are less at risk of defaulting, indicated by the lower level of penalties charged to women borrowers for untimely repayment compared to their male counterparts.



**Agnes Nyasebo at the dispensing outlet she set up in her home using a loan from AFPHTA's AMiF scheme.**

The potential for financial access to launch a successful entrepreneur and to change a life is illustrated by the following example. Agnes Nyasebo is a nurse-midwife working in a peri-urban area of Dar es Salaam. Recognising the significant need for an ADDO in her community, Agnes began selling essential medicines from her house. It soon became clear that the small space meant she could stock only a limited inventory but she lacked capital and collateral to open a business.

After hearing about the AMiF programme, Agnes sought financial support for her business. She received a Tsh 1M loan from the programme, sufficient funding for her to renovate part of her house into an ADDO, and to add working capital to her business so she could stock essential medicines. She was also linked through AMiF to a reputable supplier with

whom AMiF had negotiated lower prices for medicines and supplies, and the loan enabled her to register formally with the regulatory bodies in Tanzania. She repaid the loan in six months and took a second loan of Tsh 3m to scale up the business.

Prior to receiving the AMiF loan, Agnes had average daily sales of Tsh 15,000/= each month, with three clients a day. After the first round of improvements to the business, Agnes's daily sales increased to Tsh 80,000/= with 15 clients a day; and following the second loan her business increased to an average of Tsh 150,000/= daily, with over 40 clients. She currently is building a laboratory, employs an assistant, and has plans to expand the business further.

***Agnes says: "My husband was made redundant many years ago so my income (from the pharmacy) is very high compared to his. I pay the children's school fees, the rent, and more. My husband respects my work because he sees the impact of the business on the family."***

Agnes is just one example of the many women benefiting from the AMiF scheme who were previously excluded from accessing loans through financial intermediaries due to lack of collateral. As a result of this scheme both women and men have been able to improve their businesses through increased income, expanding the type of services offered, and being able to serve more clients. In addition, accessible and affordable healthcare services have been brought closer to communities.

**AFPHTA supports the self-determination of ADDO entrepreneurs by allowing them to formalise and expand their businesses with the funding programme.**

**Future potential impact:** By becoming entrepreneurs, these women could have higher status and more decision-making power in their communities, enabling them to act as positive role models for their peers, thus moving towards being fully enabled to lead.

## Case study CAMFED

Central to Camfed's mission is support for marginalised girls and young women to access and progress through school, and to become leaders of change. Vulnerable girls and young women are at the heart of Camfed's projects and are central to both project design and implementation.

*"We focus on the extraordinary potential that is unlocked through the girls' education. Our mission is to multiply educational opportunities for girls and empower young women. We aim to reach the most marginalised girls, as this is where education has transformative potential. We are driven by the principle that the experience of the poorest, most marginalised girl is an important barometer for the education system, and for society at large. Girls' education therefore is the entry point for widespread systemic change."*

Lydia Wilbard, National Director, Camfed Tanzania

In primary schools in Tanzania, children are taught all subjects in Swahili; when they move on to secondary school the language of instruction shifts abruptly to English. While students have learned English as a second language in primary school, they are ill-equipped to learn all their subjects in English. Teachers resort to teaching in Swahili, particularly in deprived rural schools where teacher training is poor and resources limited. Students find it difficult to listen and write in English, and are worried about attending school because they are unable to understand announcements or directions from teachers and prefects. Sometimes students fail to answer questions in class because they are unable to construct sentences in English, although they know the answers in Swahili. They feel unable to ask questions or seek clarification because they cannot ask in English, and students often fail tests



Students taking part in Camfed's technology-supported learning programme, Iringa.

simply because they do not understand the language or make spelling mistakes in their answers. Children already marginalised by poverty face deeper disadvantage as they struggle to complete the critical Form 2 exams, set in English, which determine whether they will progress through school.

Girls are particularly disadvantaged in education: they have lower enrolment and attendance rates than boys at lower secondary school, lower progression rates from primary to secondary school, higher dropout rates, and markedly worse learning outcomes. Form 4 pass rates for boys are almost 10% higher than for girls.<sup>19</sup> The abrupt change of language of instruction adds another barrier to girls' attendance and attainment at secondary school.

Through the e-reader innovation, both female and male students are able to use a much wider variety of English language resources than were previously available in the rural schools. Students in Form 1 and Form 2 have access to tailored learning resources on the e-readers alongside supplementary reading materials that help foster their enjoyment of reading and speaking in English. The e-readers also have a dictionary function that allows students to find translations of English words into Swahili.

The technology was carefully introduced within a well-established community infrastructure, with training and capacity building in its use led by experienced and committed stakeholders. Working within the existing school system strengthens government schools, and

ensures the programme has both input from and exposure to the relevant government departments.

A key feature of the Camfed innovation is the use of Learner Guides, graduates of the Camfed programme who return to their local schools to offer educational and psychosocial support to other vulnerable children. Through the e-reader programme, the Learner Guides gain skills, knowledge and confidence by working as English literacy aides as well as financial independence through small-business loans provided by Camfed's Kiva initiative. The loans are interest free, in recognition of the time Learner Guides spend volunteering as 'social interest'. Of those who were trained as Learner Guides from 2016 as part of the project, 96% were still active in August 2017.

Evidence collected so far suggests the project is having a range of positive effects on the students (girls and boys), the Learner Guides and the teachers. The results of English tests taken by 3,320 students in all 25 partner schools showed an improvement across two-thirds of the schools from Term 1 to Term 2 in 2016.

***"With e-readers, I walk with a big library in my hands and in my bag. I feel proud of using this device because they are attractive, full of knowledge and easy to carry; truly technology has simplified my learning."***

Form 1 student, Isimani Secondary School

Learner Guides have noted improvements in their own English language skills, increased confidence when interacting with a range of other people, not just students, and a greater level of respect from the community because of the vital role they are playing supporting students.

***"In the beginning we were not recognised as important people in the community but after we became Learner Guides both the family and the community gave us recognition and respect. They could see our contribution to school and we were regarded as a teacher like other teachers in this school."***

Learner Guide, Lipuli Secondary School

***"We are viewed as problem solvers and change agents. Our local government recognises our contribution to the community and gives us chances to contribute our views in meetings."***

Learner Guide, Mgama Secondary School

***"We are given respect."***

Learner Guides, Mgama Secondary School

Teachers and administrators in several e-reader schools have noted programme successes: class attendance and performance has improved; dropout rates are reduced; truancy has dropped; and fewer girls are leaving school due to pregnancy. Teachers, too, are benefiting from students' increased participation, understanding and enjoyment.

***"For sure e-readers have changed my perspective towards my profession. I have come to believe that success is not a reward but a consequence. In one year of implementation of the programme so many benefits can be cherished pertaining to my profession and my life in general. It has also simplified my work teaching because, as students read many books, they raise their language competency, hence their easy understanding of the subject."***

Teacher from Isimani Secondary School

The Camfed e-reader programme provides students with **access** to resources that allow them to learn English, which in turn enables them to better access education in secondary school.

For Learner Guides, the programme gives **self-determination** and resources to start businesses and to take on new roles in the community

**Future potential impact:** The psycho-social support students receive has been shown to positively impact their success and their attendance at school. It would be interesting to track their progress in life after school to observe whether the elements of **self-determination** will become visible. The Learner Guides report that they have improved status and greater decision-making power in their communities, **enabling** them to act as positive role models for their peers.

**Recommendation 4:** Create and expand mechanisms to finance the ventures of small-scale entrepreneurs who have been unable to access bank loans, particularly women, who often lack collateral. Link entrepreneurs to markets to expand their business opportunities.

**Recommendation 5:** Where possible, combine educational interventions with initiatives that boost the economic security of current and former students – with emphasis on female students – to meet the holistic needs of women and girls in Tanzania.<sup>20</sup> This is particularly important in rural settings where access to livelihoods and employment opportunities is very limited.

# RECOMMENDATIONS

Based on learning to date, HDIF has arrived at five key practical recommendations for innovators, policymakers and funders that aim to strengthen the intersection of gender and innovation, and to harness innovation to drive gender equity in Tanzania. HDIF invites feedback and discussion on the five points listed below.

**Recommendation 1:** HDIF and other ecosystem players should further investigate the effect of cultural factors and the most effective strategies to support better participation of women and girls in innovation spaces, hubs and labs. This would need to be supported by tools, resources and examples of best practice. For example, the activities of NLab and R Labs could provide inspiration and learning for other hubs, and HDIF and others could support the strengthening of networks and peer learning between hubs.



Primary school children benefit from student-centered e-learning at Silverleaf Academy, Moshi.

**Recommendation 2:** Strengthen positive gender messages in the communications and interactions of every innovation. HDIF, innovators and other partners should examine the messages and images related to their innovations to understand the type of gender messages being conveyed. Ecosystem actors should be supported to use opportunities to create and promote positive content, messages and images that enhance perceptions of, opportunities for, and engagement with girls and women as well as boys and men.

**Recommendation 3:** Challenge innovators and partners to put girls and women at the centre of innovation design, and make them central actors in the creation, use and scale-up of innovations. In addition, extend school-based business experiences to girls who are not in school to provide opportunities for them to secure livelihoods, recognising that girls who are out of school are typically the most vulnerable. Explore the extent to which girls who are in school could serve as positive role models for other girls in the community and lend support to create a ripple effect.

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Students from Kambangwa Secondary School in Dar es Salaam using Shule Direct's Makini SMS learning platform.





Dageno Girls Center in Karatu,  
Northern Tanzania.

## NEXT STEPS FOR HDIF

In the remaining months of 2017 and in early 2018, HDIF will be seeking feedback from grantees and partners on the approach, case studies and recommendations, and exploring if and how the approach applies to other grantees in the portfolio including innovations in the health and WASH sector and new grantees. HDIF is also linking up with other programmes working on the relationship between gender and innovation, like the SPRING Accelerator.

Through continued exploration and learning from grantees and partners, HDIF seeks to understand the nuances of how gender impacts innovation, and innovation impacts gender: how to deepen access, self-determination, and enabling for girls and women; how

these drivers relate to one another and what catalyses them; and how to enrich their potential to positively shift gender relations and improve the life chances of girls and women.

HDIF has also identified two priority issues for further exploration which will be incorporated into further HDIF learning agendas. First, global evidence suggests that technology can create risks for women, girls and other groups.<sup>21</sup> Currently, no examples of unintended harm have been identified within the HDIF portfolio, but it remains a priority to gain a better understanding of the potential risks and to mitigate against these. Second, through HDIF engagement with stakeholders

and grantees and the HDIF team, it was reiterated by many that it was critical to engage men and boys in any strategy that aims to realign gender relations and promote gender equity. HDIF will work with grantees and partners to understand and explore how best to engage men and boys in bringing a gender lens to innovation.

HDIF will share this learning with practitioners, policymakers and funders of innovation to increase understanding of the intersection of gender and innovation. The continued partnership across these actors in the innovation ecosystem, and with HDIF, will contribute to deepening the impact of innovation for women and girls, and gender equity in Tanzania.

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Are men more innovative than women (and does it matter)? (Blog)  
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(All links accessed 27 September 2017)

# ENDNOTES

- 1 *A new strategic vision for girls and women: stopping poverty before it starts*, DFID, 2011; *The strategic vision for Girls and Women: three years on*, DFID, 2013
- 2 In contrast to gender equality programmes that aim to bring equal resources to men and women in order to create equal outcomes, gender equity strategies aim to apply *disproportionate* resources and assets in interventions in order to compensate for the disadvantages that girls and women have typically encountered.
- 3 'Gender and extreme poverty – Getting to Zero: A USAID discussion series', USAID, September 2015
- 4 The three elements comprise the ability to decide and control what happens to her, to be safe, and to pursue what she wants in life.
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- 8 [www.innovate.co.tz](http://www.innovate.co.tz) Accessed 25 September 2017
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- 17 *Women's Economic Empowerment*, OECD DAC Network on Gender Equality, 2012
- 18 Hubs and maker-spaces are typically community-operated, often not-for-profit, workspaces where people with common interests, often in entrepreneurship, computers, technology, science, digital art or electronic art, can meet, socialise and collaborate. Maker-spaces often have practical tools for the community to use. A living lab is a user-centred or user-driven open innovation space with a public/private/people partnership. A business incubator is a company or programme that helps new and start-up companies to develop.
- 19 NECTA, 2012
- 20 Adolescent girls' programmes tend to focus on education, or protecting them from early and unwanted childbearing, to the exclusion of developing their economic security. Comprehensive programmes addressing girls' multiple needs – economic security, educational outcomes, life skills and sexual/reproductive health – have the potential to reflect girls' multiple needs and maximise opportunities to strengthen their autonomy and security (*Addressing Comprehensive Needs of Adolescent Girls in India: A Potential for Creating Livelihoods*, ICRW, 2013). Furthermore, HIV and sexuality programmes that address gender and power in intimate relationships are five times more effective than programmes that do not (N Haberland, *International Perspectives on Sexual and Reproductive Health* 41(1):31–42. March 2015).
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