

Indigenous Knowledge, Economic Empowerment and Entrepreneurship in Rwanda: The Girinka Approach

by

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Abstract

The Girinka (one-cow-per-poor-family) program was created in response to the extreme malnutrition that plagued more than half of the poorest citizens in the Republic of Rwanda prior to 2006. Rwanda's traditional wealth creation and distribution system of cow-giving served as a platform for the creation of Girinka. The aim was to ensure milk supply for nutrition, and cow manure for increased crop productivity. Without meaning to, however, Girinka has succeeded in making entrepreneurs out of several previously malnourished citizens who have used proceeds from sale of cow milk and increased crop output to set up various businesses. Entrepreneurship can play a crucial role in offering an escape route out of poverty. International aid projects, NGOs and governments are beginning to include rural entrepreneurship as an economic empowerment strategy in poor countries. However, one challenge this approach faces is its propensity to be designed outside of rural areas. The end result is often a form of superimposition of external, ill-fitting, and therefore, unsustainable ideals on the cultural values and socio-economic realities of the rural poor. In the final analysis, the percentage of failure of such programs is high. The successes recorded by Girinka in Rwanda, therefore, demands further analysis. By depending on case studies - generated through observations and in-depth interviews - of successful Girinka generated entrepreneurial ventures, this paper attempts to establish the program as a unique, culturally rooted, poverty alleviation strategy. Girinka resonates, at the basic level, with the poorest of the poor and uneducated in Rwanda. The social-psychological proclivity to identify as wealthy according to community held beliefs can be said to be a major motivating factor in turning the poor in Rwanda into successful entrepreneurs.

Introduction

Entrepreneurship as an economic empowerment strategy is becoming more widely studied in efforts to assist poor people escape the poverty trap. Economic empowerment strategies are increasingly shifting from a centralized top-down approach to a more widely diffused method where poor people participate in analysing and searching for appropriate responses to their economic situation. Local knowledge and local solutions are gaining acceptance as fundamental in the crafting of policies for economic transformation, especially for the rural poor. Several scholars have attempted to understudy and understand participatory development at the grassroots (Zewde, 2010; Sanderson & Kindon, 2004). The United Nations Development Program and other such institutions, NGOs and governments have severally indicated interest in focusing on indigenous knowledge and engaging beneficiaries during decision making on economic empowerment. In this instance, the government of Rwanda, a sovereign landlocked nation literally situated in the heart of Africa (75 miles south of the Tropic of Capricorn) through Girinka (a word when translated means 'may you have a cow' as thus describes a practice wherein a cow is given as a sign of respect, gratitude or as a marriage dowry), a one-cow-per-poor-family program, commonly known as 'Girinka' has succeeded in empowering several previously poor rural farmers by using locally generated systems and processes.

Girinka is founded on the traditional value placed on cow ownership as the highest manifestation of wealth in Rwanda. By giving poor rural farmers cows at no cost, the government of Rwanda has been able to raise the status of this class of citizens in the eye of the community, causing the beneficiaries to imbibe a sense of responsibility and a deep-felt desire to sustain that status. The result is that while any other economic empowerment approach might have succeeded in creating a class of better farmers, or at worse, the squanderers of government aid, the culturally rooted Girinka has produced a selection of beneficiaries who see themselves as truly capable of managing wealth according to the expectations of their community. Lack of capital is an impediment to entrepreneurship among poor rural dwellers (Buera, 2008), access to funds from the sale of cow milk, and proceeds from increased crop output occasioned by use of cow dung manure, have combined to motivate several Girinka beneficiaries - with entrepreneurial drive - to set up businesses.

For topic clarity, this paper is organized into several sections; first it begins by clarifying certain concepts necessary for the understanding of the entire work. Second, is an attempt to establish a correlation between economic empowerment and entrepreneurship, after which the notion of indigenous knowledge as crucial in crafting of rural economic empowerment strategies is examined wherein the role of indigenous knowledge in jump-starting entrepreneurship is explored in detail. Next, an overview of the entrepreneurship situation in Rwanda is explained, followed by a breakdown of the Girinka program, with emphasis on its history, implementation, impacts and challenges. Proceeding further, the paper looks at two case studies drawn from in-depth semi-structured interviews and observations conducted in the Gicumbi district of Rwanda's eastern province.

The first case study examines a cooperative of Girinka beneficiaries which has gone on to establish a manufacturing outfit, food processing industry and other businesses. And the second focuses on an individual Girinka beneficiary who has gone from a poor, malnourished, subsistent farmer to a notable entrepreneur in his community. Then it draws on lessons from Girinka to link indigenous knowledge-based economic empowerment strategies to increased entrepreneurial output on the part of beneficiaries as it also looks at the challenges to indigenous knowledge-based rural economic empowerment strategies, followed by concluding remarks.

Concepts and Definitions

As we begin, to avoid un-necessary confusion about certain concepts such as indigenous knowledge, economic empowerment and entrepreneurship, they are explained in brief, with an introduction to our main topic, the Girinka project.

- **Indigenous Knowledge**

Indigenous knowledge is knowledge generated from the lived experiences of a community as a result of interactions with their environment over millennia. Indigenous knowledge covers virtually every field of human endeavour and usually varies from community to community; one unifying factor being that it is aimed at addressing challenges and solving perceived problems specific to each community (World Bank, 1994). Indigenous knowledge, contrary to widespread dismissal, is not static, but innovative in that it has been adapted over time in response to environmental changes and influences, and as a result of the need for improvement on strategies (Hoppers, 2002). Thus, indigenous knowledge differs from globally accepted knowledge which is often generated from universities and research institutions, acknowledged by the predominant global media establishments and often traces its roots to western knowledge systems (Oguamanam, 2008).

- **Entrepreneurship**

In agreement across various definitions of entrepreneurship is that it is a process that creates goods and services for profit. For entrepreneurship to be in place, there is need for visible proof of the bringing together of “creative and innovative ideas and actions with the management and organizational skills necessary to mobilize the appropriate people, money and operating resources to meet an identifiable need and create wealth in the process” (Pearce & Robinson, 2011, p. 385). Shane and Venkatraman (2000) explain entrepreneurship as the entire process of identifying and exploiting business opportunities toward the creation of goods and services. Entrepreneurship demands innovation and creativity and the setting up of enterprises in order for profit to be generated and for goods and services to be delivered. An entrepreneur is one who is able to utilize diverse resources in the creation of a business venture (Scarborough, 2011, p. 21).

The entrepreneur operates oftentimes in the face of uncertainties and at his/her own risks, but is able to persevere and establish a business activity with the intention of profit generation and growth. Beyond business creation, entrepreneurs have also been identified as societal change agents, by the way and manner they introduce new concepts and add to economic activity and national growth (Audretsch, Keilbach, & Lehman, 2006).

- **Economic Empowerment**

Economic empowerment implies the act of instituting environmental structures to facilitate individuals in bringing change in their social and economic status. Individuals are said to have become economically empowered when they are provided the tools they need in order to work towards self reliance. According to the Organization for Economic Cooperation and Development (OECD), “economic empowerment is the capacity of women and men to participate in, contribute to and benefit from growth processes in ways that recognise the value of their contributions, respect their dignity and make it possible to negotiate a fairer distribution of the benefits of growth” (OECD, 2014). Thus, economic empowerment if widespread within a society invariably translates to economic growth as strategies that emphasize entrepreneurship has been increasingly accepted and proven to be a veritable channel for the generation of economic growth and innovation across economies, both developing and developed (Acs, Desai, & Klapper, 2008). And in the words of Audretsch et al. ‘entrepreneurship makes an important contribution to economic growth by providing a conduit for the spill over of knowledge that might otherwise have remained uncommercialized’ (Audretsch, Keilbach, & Lehman, 2006, p. 5).

- **Girinka**

Girinka (pronounced Ghee –ring- ha) is an agricultural indigenous knowledge based approach to malnutrition and poverty reduction in Rwanda that place the highest economic value on cows and cow ownership and the giving of a cow to the less privileged as the highest level of economic assistance that can be rendered. After its approval by a cabinet decision in 2006, the government of Rwanda gave free pregnant dairy cows to several poor and malnourished Rwandan families who meet a particular criterion wherein they were mandated to pass on the first female offspring of the cows to another poor and malnourished person in the community. Now in its eighth years of operation, Girinka program has given tens of thousands of cows and cut the record of malnutrition by half, making entrepreneurs out of several previously poor and malnourished Rwandans.

The word Girinka, loosely translated from Kinyarwanda (also known as Rwanda or Rwandan, is the official language of Rwanda and a division of the Rwanda-Rundi language spoken by 12 million people in Burundi and adjacent parts of southern Uganda) means “may you get a cow” as mentioned above, and thus the program is founded on the ancient and enduring traditional status of a cow as a symbol of prosperity and wealth in Rwanda. Hence, the high socio-economic status accorded to cows in Rwandan tradition is traceable to ancient Rwandan history which has it that in Rwanda circa 1091-1124, a cousin of Gihanga, the nation’s ruling monarch fell in love with the king’s daughter. Both engaged in pre-marital sex and the princess became pregnant as a result. Traditionally, an unwed mother was destined to be thrown inside the evil forest, but when the king’s cousin learnt of the princesses’ pregnancy, he went to the evil forest, and the princess would later join him and both lived together among cows and leopards, eventually going on to become cattle ranchers. Then at some point, the monarch fell ill and was at the point of death. All known remedies had failed to cure him until his cousin and the princess somehow learnt of his predicament and sent cow milk to him. Gihanga made a dramatic recovery a few days after drinking the milk, and he granted an official pardon to his daughter and cousin and sent for them to be a part of the community again. Upon their return, the couple presented cows as gifts to the king and that was the first time cow rearing became recorded in Rwandan history. And before he died of old age, the monarch called his sons together and distributed his cows to them. The sons went on to become the rulers of various Rwandan groupings and were thus considered wealthy and powerful, according to the number of cows they owned. Since then, cows have been considered as the pillar of Rwanda’s economy (Rwanda Governance Board, 2013).

Hence, the highest form of appreciation, love, respect, sympathy, or any form of goodwill or economic assistance in Rwanda can only be expressed through cow giving. During marriage dowry, for instance, the number of cows presented to the bride’s family show the level of love the groom has for the bride, and his happiness and joy/appreciation at being married to her. Warring families who want to make peace seal the peace agreement by exchanging an agreed number of cows. As a sign of deep friendship and to increase one’s esteem in the eyes of a neighbour or friend, one can give a cow. Tradition demands that respect be perpetually granted the giver by the recipient. Traditional Rwandan society also encourages the giving of cows as a sign of immense gratitude for service rendered or for a job well done. In essence, the entire socio-economic structure of traditional Rwandan society is founded on cow rearing and its exchange. But, despite this cultural significance cow rearing as a socio-economic tool for poverty alleviation, it was not recognized by Rwandan government and policy makers in development strategies, discourses, and conversations until 2006 (Rwanda Agricultural Board, 2013).

However, in August 2006, a cabinet decision approved Girinka as a national pro-poor growth program under Vision 2020 Umurenge Program, the Economic Development and Poverty Reduction Strategy (EDPRS), the Integrated Development Program (IDP) and the National Economic and Agricultural Development Agenda, economic growth and development strategies created by the government of Rwanda (Rwanda Governance Board, 2013, p. 84).

With clarity on the above concepts and a short history of Girinka, we can now turn to the nexus between economic empowerment, entrepreneurship and indigenous knowledge with an understanding that economic empowerment is necessary for entrepreneurship, and for it to thrive in rural areas, the paramount strategy should be based on indigenous knowledge.

Economic Empowerment and Entrepreneurship

Policy makers and researchers agree that one effective method of breaking through the poverty trap is entrepreneurship (Mead & Liedholm, 1998). However, in most cases, economic empowerment precedes entrepreneurship as several studies have shown that there are direct links between poverty and the ability of individuals to create new businesses or become entrepreneurs (Banerjee & Newman, 1993; Banerjee & Duflo, 2005). For example, Francisco Buera's study established that financial shortcomings among a larger number of people in a society can have a huge impact on the number of businesses established at any given point in time, and that even individuals with the highest ability to become entrepreneurs, in terms of skills, talents, personality and other yardsticks, can be restrained from starting even the smallest of businesses because they may lack access to sufficient capital (Buera, 2008). Thus, access to sufficient capital to solve basic needs and accrue savings, or access to credit facilities can retard entrepreneurial aspirations (Galor & Zeira, 1993). Thus, for poor people to jump-start economic growth in any society or for them to become economically empowered, the barriers related to access to cash and credit accumulation should be removed, especially considering that an estimated 1.4 billion people are extremely poor and are living on less than \$1.25 per day (Chen & Ravallion, 2008).

Clearly then, in low income countries, it is especially important that the right kind of environment be created for economic empowerment that will lead to innovative entrepreneurship that moves beyond just economically empowering poor people, but to also place them where they can creatively respond to market needs. And considering that, in much of Africa south of the Sahara, more than half of the population are poor rural dwellers; it is rural entrepreneurship that can best serve as the engine for economic growth of many those countries (Sachs, 2005; Holcombe, 2007). Therefore, governments, NGOs, international organizations and civil society involvement in poverty alleviation should look for entrepreneurship strategies in designing their action plan. Hence, Chang (2007) calls for 'state entrepreneurship,' that is, a situation where a state is at the forefront of providing visionary leadership that can encourage entrepreneurship and mobilizes resources.

Indigenous Knowledge and Economic Empowerment

Not surprisingly, indigenous knowledge informs most decision-making in local communities across the world, and its application in designing growth and development strategies are foundational to ensure sustainable development (UNESCO, 2014). And consequently, aligning with indigenous knowledge based strategies for economic empowerment provides an understanding of local realities and an entrusting of the locals with the responsibility of guiding their own development and thus a necessary part of making sustainable growth among the rural poor, a reality The World Bank asserts in that for long lasting, self sustaining and innovation based economic empowerment to be generated in a community, it must be founded on the indigenous knowledge already in existence within a community. Hence, in a presentation on traditional knowledge made at the United Nations Conference on Trade and Development Conference, the World Bank's chief knowledge officer for Africa Region notes that;

Building on IK [indigenous knowledge] can be particularly effective in helping to reach the poor since IK is often the only asset they control, and certainly one with which they are very familiar. Utilizing IK helps to increase the sustainability of development efforts because the IK integration process provides for mutual learning and adaptation, which in turn contributes to the empowerment of local communities. Since efficiency, effectiveness, and sustainability are key determinants of the quality of development work, harnessing IK has a clear development business case (Gorjestani, 2000).

And in post-war Mozambique, indigenous knowledge and customary laws were relied upon by traditional and local authorities to resolve contradictions and conflicts that arose from claims and counters claims laid on ancestral lands by returnee refugees and settlers. Afterwards, agricultural production was boosted in a very short time and all parties recognized and supported the inexpensive, understood, and respected aspects of the indigenous knowledge systems and structures. And thus, without the intervention of external factors, organizations, community leaders who utilized indigenous knowledge to seamlessly close over 500,000 informal land allocations and re-allocations and assisted a settlement of about 5 million refugees and displaced persons in two years (Gorjestani, 2000). This demonstrates that for economic empowerment to be considered appropriate, it must have the ability to generate growth and economic expansion founded on local, home-grown or otherwise, indigenous knowledge. Hence, Escobar (2011) asserts that development must be remade through the examination of local constructs, which are the life and history of the people, for inherent in them are the right conditions for and of change.

And in Rwanda, a cow is the most valued asset one can own, and thus, the owner is considered an economically empowered and indeed wealthy person. And that status is respect and prestige that would automatically rise in self and in the eyes of other members of the community. In another community, it could be a bicycle or a food grinding machine or a plot of farmland or an agricultural storage facility, but whatever the case may be, indigenous knowledge is foundational for building economically and socially progressive communities.

IK Based Entrepreneurship

Development ought to be defined from inside-out, and the rural poor should be granted a platform for conversations on what they want. The genuine expressions of locals should be seriously and factually woven into development strategies. According to notable development economists such as Chambers, addressing poverty has sadly often taken the form of a “critical top-down national planning” instead of a “participatory planning” founded on “local knowledge and local solutions” (Chambers, 1981). Second, Lipton (2009) is of the view that rural dwellers should be encouraged to be more entrepreneurial through the provision of access to wealth according to their own definition, and that although production from the rural areas might appear small if judging by firm size, they are nevertheless considered efficient when compared to the conditions in which they operate. Lipton’s analysis establishes a link between rural development and entrepreneurial behaviour; the latter is a veritable vehicle for wheeling the rural poor out of poverty as small scale informal entrepreneurs and small scale farmers. The rural poor can form a critical mass whose knowledge, if harnessed, will lend the needed weight for the successes of development strategies.

Over the years and through several empirical studies, it has been established that outside-in or top-down approaches are not effective in generating the visualized economic advancement for communities (Chambers, 1981; Gupta & Van Vliet, 2003). A situation where development outline and agenda are brought from outside of a community by, say, a World Bank, United Nations agency or even the central or national governing authority, has largely been unsuccessful in economically empowering the poorest of the poor. The World Bank would assert that “indigenous institutions, appropriate indigenous technology, and low-cost approaches can increase the efficiency of development programs because IK is a locally owned and managed resource” (Gorjestani, 2000). The result has been calls in certain quarters for participatory development or governance at the grassroots (Zewde, 2010). This essentially means a situation where local communities through local institutions own the development process. However, this participatory development paradigm has not been deeply entrenched in development circles and even in several cases where it is in place, communities are not in reality incorporated in the decision making processes (Gupta A. , 2001a). But this realization of the need for local participation has spurred several indigenous knowledge based empowerment strategies in engaging local communities.

Scholars are beginning to recognize that entrepreneurship is more often founded on innovations that are grassroots based (Ganguli, 2000; Gupta, et al., 2003; Sen, 2005). Indigenous or home-grown economic empowerment approaches to fostering entrepreneurship, and by extension economic growth are rooted in the use of locally available resources, and the incorporation of necessary prevailing social norms, nuances and cultural values. Grassroots innovations, for instance, have been credited with helping to make modern medicine affordable and available to many (Mashelkar, 2001). In India, a World Bank supported Sodic Lands Reclamation project was adjudged successful when indigenous knowledge of farmers was applied causing incomes to rise by 60% (Gorjestani, 2000). Beyond that, enormous economic benefit; technological innovations were, under that project, built and developed as a result of the fusion of the indigenous with the modern. The important factor in indigenous knowledge based entrepreneurship is that it engages participants in the identification, validation and development of easily accessible and sustainable local solutions.

Entrepreneurship in Rwanda

The Republic of Rwanda is more widely known for the last genocide of the 20th century, which occurred in 1994. An estimated 1 million Tutsi and moderate Hutu citizens were killed by Hutu militia with the backing and full authorization of an extremist Hutu led government. Since the end of the genocide, Rwanda has embarked on several post-conflict reconstruction efforts that places economic empowerment at the fore. In recent times, and as much as possible the government of Rwanda depends on home-grown rather than externally imported or imposed approaches and strategies to economic empowerment. Between 2007 and 2012 it is estimated that through several of these home-grown/indigenous approaches to economic empowerment, over 1 million Rwandan citizens have been lifted out of poverty (Rwanda Focus, 2012).

Rwanda is majorly an agrarian society with 90% of its citizens living in rural areas and engaged in one form of agricultural activity or the other as a means of livelihood. This last point is very important because for any economic empowerment strategy to resonate with the majority of the citizens, it must take into account the rural and largely traditional setting of the country. Since the genocide ended in 1994, successive governments have tried to improve the entrepreneurial drive among Rwanda's largely rural population. However, government prior to Girinka had not officially explored indigenous knowledge or home-grown approaches to poverty alleviation or entrepreneurship on a large scale, as it followed the path of consultations with international organizations and other external bodies. In 2001, the World Bank, on behalf of the government of Rwanda established the Competitiveness and Enterprise Development Project (CEDP). CEDP was designed to create an enabling environment for the private sector to flourish, and for the emergence of a favourable investment climate. The project emphasized the development of commercial law and the support of the government's privatization efforts through provisions technical assistance and capacity building.

The Girinka Program

The Girinka program was established in Rwanda in 2006 in response to chronic cases of malnutrition that plagued half of Rwanda's population. Food insecurity was a constant feature in Rwanda's economic climate and the plan was to create a system that can reduce malnutrition and lead Rwanda on the path to food security. Food security is said to be in existence when "all people, at all times, have physical and economic access to sufficient, safe and nutritious food for a healthy and active life" (FAO, 1996). When Girinka was established 2006, child malnutrition stood at an average of 43% (the average was drawn from across the country, where the level of childhood malnutrition ranged from 23% to 50%). And when children are malnourished, they experience stunted growth, looking much thinner than other children their age and they are susceptible to various illnesses and usually perform very poorly in their academics (Rwanda Governance Board, 2013).

According to the government document establishing Girinka, livestock contributes to food production by providing high end protein, and by supporting crop production through draught power and manure provision (RARDA, 2006). Livestock also provide a significant income source and store of wealth for small holders. At the time of the establishment Girinka Rwanda's population stood at 9 million, but the country was only able to produce 133,000 tons of milk. When broken down to basic consumption levels, it translated to 13 litres of milk per person per year or 1 litre of milk per person per month or one glass of milk per person per week (RARDA, 2006). This by far, fell short of FAO recommended 200 litres of milk per person per year and with imported milk, it proved to be too costly for Rwanda, although between 1990 and 2003, imported milk and milk products assisted to somewhat help in providing the protein requirement of diets of those who could afford it in the country (RARDA, 2006). And according to the Comprehensive Food Security and Vulnerability Analysis, 52% of Rwanda's households were food insecure or vulnerable in 2006 (NISR, N.I & WFP, 2006). This food insecurity and vulnerability was most pronounced in households with agricultural wage labour as their main source of income, and in 2005/2006, The Integrated Household Living Condition EICV survey noted that 92% of such households were living below the poverty line (Rwanda Governance Board, 2013) and by Rwanda's poverty indicators, 67% of rural dwellers were living below the poverty line in 2006 (NISR, 2012).

In Rwanda's rural areas, poverty and standard of living are measured by land and livestock holdings with six levels of economic classification of rural dwellers: (1) landless beggars with no animals to rear nor any other means of sustenance (*Umutindi nyakujya*); (2) poor owners of small piece of land, but with animals to rear (*Umutindi*); (3) poor land owner, able to produce food for sustenance but with no excess for sale or savings (*Umukene*); (4) poor land owners and small time animal ranchers, able to sell farm proceeds for some savings (*Umukene wifashije*); (5) rich, food secure land owners with animals to rear and perhaps gainfully employed (*Umukungu*), and (6) the rich land owners with several reared animals, including being employed in some sort of full time capacity (*Umukire*) (MINALOC, 2007).

The overall aim of Girinka is to address the problem of chronic and reoccurring malnutrition among rural dwellers. Hence, the specific objectives of the Girinka program listed on the founding document are to: (1) improve household nutrition through increase in milk consumption and income generation from milk and related products; (2) improve agricultural output through an increase in the use of organic manure from cattle waste; (3) improve soil quality and reduction in erosions through the planting of fodder and trees; (4) to reduce poverty through dairy cattle rearing, and (5) to promote unity and reconciliation among Rwandans through the exchange of cows among different groups (Rwanda Agricultural Board, 2013).

In its basic operation, Girinka involves the purchase of pregnant female cows by the government and the giving of same to several identified vulnerable persons in a community. In the first instance, a community identifies an individual in need and notifies the government agency in charge of Girinka, which is the Rwanda Agricultural Board. The person identified is given a pregnant dairy cow, and s/he goes on to benefit from the milk and manure production of the cow. The beneficiaries are mandated to pass on the first born female calf to another malnourished and vulnerable member of the community. This pass-on principle is known as '*Kuziturirana/Kwitura*'. The selection of beneficiaries for the Girinka program is a strictly grassroots affair. First and foremost, it is a necessary criterion that the beneficiary be an *Inyangamugayo*, a person of integrity in the community who is malnourished and in need of economic assistance. Local community members meet at the *umudugudu* (village) and draw a list of all individuals the community thinks should receive a cow. The list is forwarded to the cell and sector level leaders who work closely with the Rwanda Agricultural Board, the agency in charge of the purchase and distribution of cows. Beneficiaries are trained by the Ministry of Agriculture on animal husbandry with emphasis on nutrition, health, housing, breeding, management and record keeping (RARDA, 2006). Some farmers who are not really poor and do not qualify for the major Girinka package, can also under some sort of arrangement, be backed by the Ministry of Agriculture to obtain loans from commercial banks to purchase cows at reduced interest rates. And according to the document establishing the Girinka program, cows would be distributed to individuals who do not own a cow and who have been established to be poor by their community. However, those individuals should be able to demonstrate a level of preparedness in caring for the cow through the planting of a minimum of 20 acres of animal fodder and the construction of a cow shed according to given specifications (RARDA, 2006). And also, the Girinka program operates on a zero grazing system in order to utilize cow dung for agricultural fertilizer and to bring about a reduction in the possibility of disease contamination and tropical diseases transmissions, often possible in open grazing systems (Ministry of Agriculture, 2009).

Initial funding for Girinka was provided by the Government of Rwanda, but several non-governmental organisations and private citizens were quick to make contributions owing to the successes of the program. For example, under the Dairy Cattle Development Support Project (PADEBL), the African Development Fund has so far provided 8,200 local breed cattle and 3,000 crossbred cattle. Other donors include World Vision, Heifer Project International, Send a Cow Rwanda, World Food Program, Food and Agricultural Organization, The Global Fund, International Fund for Agriculture Development, Rwanda Police, Rwanda Private Sector Federation, Rwanda Military, Rwanda Ministry of Local Government and numerous others. All donations must be processed by Rwanda Agricultural Board and must meet criteria for the cow breed, pass through the necessary health checks and meet all stipulations according the Ministerial Guidelines. And according to Rwanda Agricultural Board, the total number of cows distributed under Girinka since the program's inception in 2006 is 190,191 (as of February 2014). The program projects that it would have distributed approximately 350,000 cows by 2017 (Rwanda Agricultural Board, 2013).

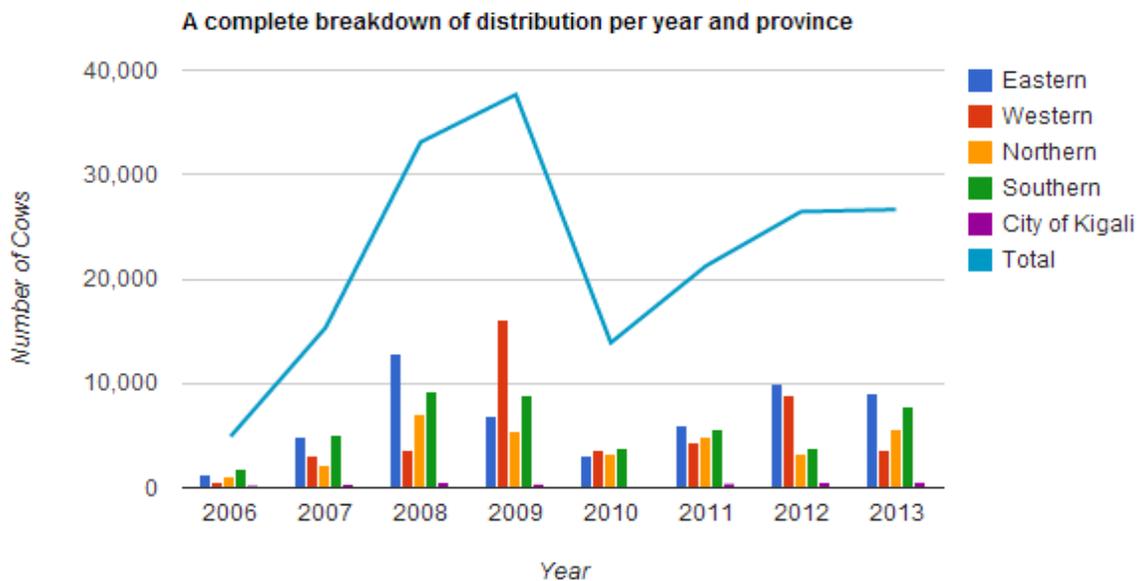


Figure 1: Distribution of Girinka cows across the country. Source: IPAR/IFAD report*

As of 2012, the Eastern, Western and Southern provinces of Rwanda have benefitted most from cow distribution program.

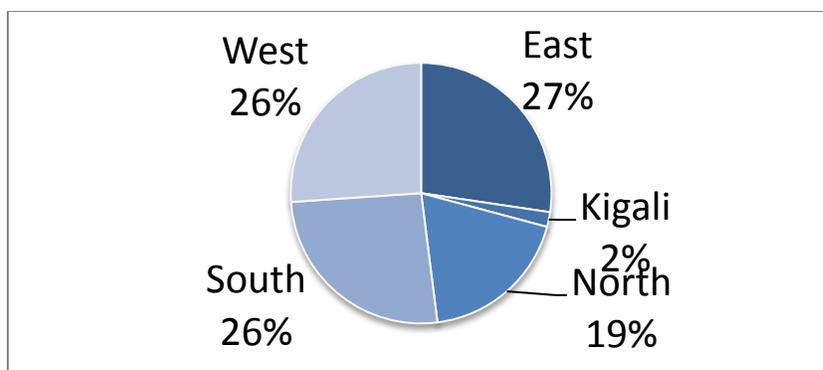


Figure 2: Distribution of Girinka cows across the country by province. Source: IPAR/IFAD report*

Among the benefits recorded since inception of Girinka in 2006 are:

- **Improved Nutrition**

The nutrition of poor and vulnerable households in Rwanda has improved significantly since the inception of the Girinka program. Several beneficiaries who could not previously afford protein can now drink milk on a daily basis. The Girinka program has also spurred a milk school feeding program in several districts where the abundance of cows has led to a decision at the community level to make sure that all children studying in the communities have access to a measure of milk on a consistent basis. A Comprehensive Food Security and Vulnerability Analysis and Nutrition Survey (CFSVA) conducted in March/April 2012, notes that almost four in five (79%) or about 1,717,000 households had acceptable food consumption levels in Rwanda (IFAD, 2012). This contrasts sharply with the rate that was obtainable prior to the commencement of Girinka, and according to the CSVA report, there has been a decrease from 28% down to 21% in the number of households categorized as food insecure in Rwanda between 2006 and 2012 (IFAD, 2012).

- **Improved Agricultural Output**

Agricultural output has increased tremendously since the introduction of Girinka. There has been a remarkable increase in rural food production as a result of the availability of cow dung as manure. The use of synthetic fertilizers has helped in improving crop output, however, it comes with several challenges, which includes seeping into ground water and affecting long term soil productivity. In terms of livestock agriculture, according to the International Fund for Agricultural Development's Country Evaluation Report, national milk production increased by 11.3%, between 2009 and 2011, alone. During the same period of study, production of beef increased by approximately 10% according to the Government of Rwanda's Annual Report 2010-2011 (IFAD, 2012). Increased agricultural output has led to improvement in the agribusiness climate of Rwanda. From a few milk collection centres across the country, Rwanda now has several collection centres nationwide.

- **Entrepreneurship and New Business Creation**

Girinka has led to the establishment of several businesses by entrepreneurs who were previously poor and malnourished. With proceeds from the sale of milk, improved crop from cow dung, savings from the use of cow waste biogas, and with the physical and mental strength gained from eating a balanced diet, several Girinka beneficiaries have become involved in small and medium scale enterprises. According to Rwanda's Ministry of Commerce, Girinka has contributed in boosting economic growth in Rwanda. This is through the creation of numerous self-employed people out of previously unemployed, poor and vulnerable population (MINICOM, 2014). Businesses that have been established as a result of Girinka include food processing plants, cheese factory, poultry farming and processing, real estate entrepreneurs, veterinary pharmaceuticals, to mention few.

- **Improved Health Standards**

Several families who were too poor to afford health insurance in Rwanda were able to do so months after they benefitted from the Girinka program. These families could now afford to go for health check-ups and treatments at government certified and approved health centres, rather than resort to traditional doctors or uncertified medical practitioners. Further, the Girinka program is credited with playing a role in the noticeable reduction in the level of adult and childhood malnutrition across the population. A 2010 Demographic Health Survey, records that the percentage of underweight children plummeted from 18% to 11%; the percentage of children with stunted growth decreased from 51% in 2005, to 44% in 2010 and the percentage of malnutrition children from five percent to three percent and the percentage of children classified as underweight by health personnel decreased from 18% to 11% (Rwanda Governance Board, 2013).

- **Peace and Harmony**

The politics of cow ownership has been established as the root cause of the 1994 genocide in Rwanda (Mamdani, 2002). Cow ownership was politicized by the colonialists in that identities and ethnicities were constructed according to the number of cattle an individual possessed. The minority Tutsi who owned more cattle were set over the majority Hutu farmers, thereby breeding a strong sense of resentment among the latter. The economic situation of the subservient Hutu majority under colonialism was not addressed by succeeding post-independent governments (Mamdani, 2002). The 1994 genocide became the result of extreme inequalities in the system of cattle and by extension, land ownership in Rwanda.

By making a cow available to the poorest of the poor of Rwanda, the oppressive symbol it once represented has become demystified by the government, thereby creating a more egalitarian society. Also, the fact that the government is giving cows to poor people has strengthened the bond between it and the governed since tradition mandates that the giver and receiver of cows have formed what is akin to a family relationship, sometimes even stronger. On the side of citizens, social relationships have been built across ethnic divides as the 'pass on' component of Girinka has re-established trust and created family-like relationships between givers and receivers.

Challenges to the Girinka Program

Like any other program, Girinka has had its own share of challenges, which include that some beneficiaries are in desperate need of cash to address urgent health, tuition or accommodation challenges resulting in the sale of cows received under the Girinka program, a challenge that is being mitigated by a community watch and the adequate training of beneficiaries on building a savings culture and in investing savings in profitable ventures that can accrue benefits over the long term. Yet, certain cattle diseases have broken out and spread across districts, killing cows and reversing benefits for benefactors, and to check this challenge, distribution of cows became combined with the distribution of common medications for common infections and illnesses, in addition to the provision of an extension veterinarian to serve various districts. And ironically, under Girinka, genetically inferior and unsuitable cattle breeds have been procured from various countries or received as donations from NGOs and aid agencies which hinder milk production, in addition to their inability to adapt to tropical climate or various other malfunctions. Indeed, the Rwanda Agriculture Board has put in place several checks to try and check this challenge; this includes sending an advance team of its own veterinarians to conduct as much tests as applicable on cows prior to purchase. However, the program is currently understaffed, hence, there is a need for more field workers and veterinary specialists to monitor benefactors and offer needed post-recipient support to ensure expected outcomes. Second, Rwanda's rural terrain is rocky and hilly and can pose a challenge in the transportation of cattle especially within rural areas, and thus, the Girinka has been faced with serious challenges in finding the best form of vehicle to transport cattle throughout the difficult terrain, and consequently, accidents have been recorded leading to loss of cows or extreme injury. And third, Rwanda usually lacks adequate forage for cows (especially during dry season) which presents a huge challenge for poor benefactors who are often with inadequate land to cultivate fodder and are lacking in labourers, labour assistance or in the financial resources to travel long distances in search of fodder.

Girinka Entrepreneurs: Case Studies

Since its inception in 2006, the Girinka program has been able to generate initial investment funds for very poor citizens with entrepreneurial aspirations. From proceeds from the sale of milk, increased crop output as a result of manure from cow dung, and savings from charcoal for cooking (using biogas from cow dung, instead) Girinka beneficiaries have come to establish cottage industries, real estate ventures, small scale enterprises and other such businesses. Girinka beneficiaries have also formed cooperatives and engaged in capital intensive entrepreneurial ventures such as commercial cheese making for domestic sale and exports, milk processing plants, animal feed processing and sale, agribusiness, veterinary medicine clinics to mention few. Hence, in the following discussion I will review entrepreneurial ventures established by the Ihuza Aborozi ba Kijyambere Bafatanije Cooperative process, one of the largest Girinka based cooperatives in Rwanda which mirrors similar cooperatives throughout Rwanda, and another based on an individual entrepreneurial approach.

- **The Ihuza Aborozi ba Kijyambere Bafatanije Cooperative**

When hundreds of previously poor and malnourished people of the rural Gicumbi district in the eastern province of Rwanda received cows from the government under the Girinka program, the greatest challenge for them became how and to whom to sell their milk. The poor farmers, under the Girinka program had received the cows to curb the rate of malnutrition in families; within months however, the recipients of the cows discovered that they had more than enough milk for home consumption, and that some Friesian cows could yield up to 30 litres of milk daily. The challenge became in a search for markets to sell milk. Individual farmers tried to negotiate with milk buyers, but soon discovered that those buyers would rather buy milk in bulk than from individuals. For some time, milk got wasted and spoiled in thousands of litres as a result of a lack access to standard buyers. Hence, the cattle owners decided to come together and form a cooperative for the purpose of selling milk in bulk to established buyers, and by pulling resources together, the farmers could sell their milk at a higher rate as a cooperative.

On the 18th of December 2007, the Ihuza Aborozi ba Kijyambere Bafatanije (IAKIB, (loosely translated: United Group of Modern Farmers) cooperative was formed with the aim of collecting milk from members and selling same in bulk to buyers. The current number of members in the IAKIB cooperative is 684. Members make up the General Assembly, which meets twice a year to deliberate and agree on matters related to the whole cooperative. There is a board of directors, made up of five elected members who meet once a month. The jobs of the board of directors include the implementation of the decisions of the General Assembly and follow-up in the execution of the budget. The board of directors also assists technical staff in taking decisions on certain matters. The board of directors is headed by a president who ensures the smooth running of the cooperative. The account of the IAKIB cooperative is audited by a group of three internal auditors, and as the need arises, different commissions are set up that look into areas where the attention of the General Assembly is needed.

The commissions include the credit commission, social affairs commission, and procurement commission that often report back to the General Assembly. And in this structure there is also a technical staff (veterinary doctors, machine operators) who ensure that the business ventures of the cooperatives run smoothly. On a fulltime basis, the IAKIB cooperative employs thirty-five staff members.

At the beginning, IAKIB restricted itself to the collection of milk in a sanitary manner from various milk pick up points scattered in the hamlets. In the years since its establishment, IAKIB has grown to establish close to 100 milk pick up points in various rural and far flung hamlets within the Gicumbi district. The collected milk is preserved for the maximum number of hours under appropriate temperature at the cooperative's milk collection centre with a modern milk cooling machine until the bulk purchasers are able send their truck to collect the milk. At the beginning farmers were being paid on a daily basis as soon as they supplied their milk. However, over time, farmers decided that the daily payments were not invested in worthwhile ventures, so they devised a strategy whereby they paid themselves monthly and also put a percentage of the profit away for the cooperative to invest in other entrepreneurial ventures.

Over time, members of IAKIB began to produce much more milk than their buyers could absorb, forcing them to go to Kigali, Rwanda's capital city in search of a market. This search yielded much benefits as Inyange Industries, Rwanda foremost producer of packaged milk and milk products signed on to receive milk from IAKIB at a premium price per litre. IAKIB also gained other lesser known but equally important customers in Kigali. Thus, IAKIB has been able to purchase cooling machines with the ability to store 5,200 litres of milk. The cooperative has also been able to purchase refrigerated trucks which are used to transport milk from IAKIB milk collection centre to the market, thereby improving profits. Also, the cooperative could rent out these refrigerated trucks for extra profit.

From the profits earned from sale of milk, IAKIB cooperative began to invest in other ventures. First, the cooperative purchased machines for the production and bagging of livestock feed and employed operators, accountants and other necessary staff to run that facility. From the production of livestock feed, the cooperative went on to purchase more machines for the production and bagging of maize flour for human consumption. These two enterprises generate profit from sale to non-members, as members of the cooperative are sold to at a much discounted price. The cooperative has also ventured into the sale and distribution of veterinary drugs and in the provision of consultancy services to non-members on the handling of livestock. IAKIB cooperative runs as a business; makes social security payments to the Rwanda Social Security Board, and provides health insurance contributions on behalf of its members.

IAKIB Cooperative is working towards opening a bank for its members and for profit generation from the wider community. The cooperative is also working on procuring machines and expanding its market reach in order to build its own milk processing and packaging factory and to start the manufacture of ice cream and butter cream.

In the short term, IAKIB cooperative is working on purchasing a milk separation machine to use during rainy season when milk is in abundance and sells at a much reduced price. The milk separation machine will be able to produce cow ghee which is very well accepted in the market, and also produce low fat milk which is sold at a more expensive rate in all seasons.

- **Individual Girinka Case Study**

Thousands of individuals have been able to turn around their economic situation through the Girinka program. Beyond selling milk and being able to buy health insurance, pay school fees and build decent homes, some have also invested income from their cow business to create new enterprises and employ labour. Some have created milk processing factories, which processes and packages fresh milk and yogurt for nationwide and sometimes international distribution, and some have invested in sewing machines and become clothe designers while others have invested in various forms of agribusiness ventures.

When 40 year old Javier Uzabakiriho's district selected him and his malnourished family of five to receive one cow from Girinka in 2007, it was with mixed feelings that he received the offer. He and his wife were the only people working on their one hectare of farmland, which provided them with meagre food and income. Yes, a cow will provide milk, but it will also require several hours from Javier and his wife to cater for the cow. It was a lot of manual labour to maintain one hectare of farmland and care for the cow; cleaning the cow shed and making sure it had enough fresh fodder during since the Girinka program is a zero grazing system.

Javier received the cow after having constructed a shed according to the specifications mandated by Rwanda Agricultural Board. He and his wife worked longer hours to continue to cultivate their one hectare of farmland, and care for the cow. Soon the cow gave birth to its first female calf and it was given to a neighbour who was in the same economic situation as Javier. From selling milk and using cow dung as manure in his one hectare of farmland, Javier's income began to multiply. He also started to save charcoal money by constructing a biogas plant which was operated using cow urine and cow dung. Javier and his wife moved from being malnourished and unsure of their next meal to being able to move into a bigger, more decent accommodation, purchase health insurance, and they could now send their children to a very good private school in neighbouring Uganda. By January 2014, Javier owned eleven cows and 10 hectares of land and a commercial real estate business. He builds shops and residential houses for rent in select areas within his community, he currently employs 10 permanent staff in addition to other seasonal workers who work on his farm. Javier's real estate entrepreneurship has solved housing problems for many in his community, and through his investment in commercial real estate, more local shops are open for business which improves the entrepreneurial climate of his community. And notwithstanding, Javier is also involved in agribusiness in poultry, he has plans to establish cottage industries for food and milk processing, and plans to expand his real estate business, and moreover, he plan to train other entrepreneurs.

Lessons from Girinka

Now, in our final section we can look at certain lessons that can be drawn from the successes of the Girinka program in making successful entrepreneurs out of previously poor and malnourished people in rural Rwanda via six components: the cultural connection, entrepreneurial behaviour, entrepreneurship as a result of an indigenous knowledge based economic empowerment program, development as an outside-in approach, replicative rather than innovative entrepreneurs, and how previously poor individuals can become entrepreneurs through adequate training and social networking so they can scale up production and production capacity.

- **The Cultural Connection**

One of the impacts of Girinka is when people have a sense of having become rich by simply owning a cow. Since traditional cultural values elevates the owner of a cow high on the social and economic ladder, which proves to more rewarding than the simple extension of cash or credit to start a business. In traditional Rwandan society, culturally, a wealthy person has the responsibility to preserve wealth and is expected to interact with other wealthy members of the community in order to address common business and community challenges. The success of IAKIB cooperative and people like Javier Uzabakiriho can be traced to traditional cultural values. In essence, indigenous culture focused on wealth creation and management mechanism creates a new national pride and sense of capability.

- **Effect on Entrepreneurial Drive**

When individuals feel empowered according to their own cultural beliefs and assumptions, they are able to extend resources at their disposal regardless of how small, toward achieving their dreams and aspirations. With the culturally accepted wealth which Girinka bestows and the social status beneficiaries assume, the sense of accomplishment and achievement increases among recipients, leading to heightened entrepreneurial drive. Entrepreneurship requires passion to take off and to be sustained and via the selling of milk a passionate spirit becomes alive to show that a new entrepreneurial behaviour is established when individuals or groups identify opportunities and put useful ideas into practice.

- **Bottom Up Meets Top-Down**

Girinka entrepreneurs show that with little prodding and only the provision of necessary start-up capital, rural people are able to solve their social and economic challenges/situations not generally considered lucrative or important by the wider market or big investors (Butkeviciene, 2009; Srinivas & Sutz, 2008). In setting up a local livestock feed processing plant, veterinary pharmacy and maize flour processing plant, the IAKIB cooperative has been able to solve problems and are reaping profits from a venture that most major investors would shy away from because of its rural location (Gicumbi) and the absence of amenities in the region. Hence, Girinka has produced locally based entrepreneurs who understand local conditions and challenges and can thus do it better than transplanted mainstream approaches (Gupta, 1995, 2000; Monaghan, 2009). The example of Javier's work/success and others in the past would have been unthinkable for a city resident or entrepreneur, in addition to the reality of them (people in the rural areas) assisting the government in meeting several of its national targets laid out in EDPRS and the Vision 2020 Umurenge Programme of working to end poverty, encourage rural growth and to provide social protection for people.

- **Inside Out Meets Outside In**

Girinka entrepreneurs challenge the prevailing notion of development as an outside-in approach, a situation where rural dwellers will have to be motivated and taken through externally planned strategies in order to jumpstart entrepreneurship among them. There are entrepreneurs everywhere, the challenge lies in the creation of opportunities and identification of strong points. Although the Girinka project set out to tackle malnutrition, entrepreneurship became the final result in some cases because the program removed obstacles for rural people who have entrepreneurial aspirations. This is an important lesson that shows that in strategizing for rural economic empowerment via entrepreneurship, it might not be necessary to begin directly with entrepreneurship programs. What need to be identified, as Girinka did, are indigenous mechanisms that create the enabling environment for poor people to idealize and think through so they can be adequately empowered to bring their ideas to fruition. And indeed, the ventures established as a result of Girinka are sustainable and embedded in the cultural value system and social realities of the community, demonstrating that when needs are locally generated and are addressed using locally procured resources, the innovation and knowledge capital that are the outcome form a firm foundation for growth (Sen, 2005; World Bank, 1994)

Concluding Remarks

The entrepreneurial aspirations of the poor in rural settings has remained unmet because of a lack of capital and the adequate use indigenous knowledge based frameworks for easing them into the entrepreneurial world. Among the poorest of the poor, economic empowerment often precedes entrepreneurship, but the sort of empowerment needed must transcend the mere advancement of cash from of government or simple charity. The concept/interpretation of wealth in traditional societies is often laden with cultural connotations, meanings and social-psychological implications.

The government of Rwanda's Girinka program did not set out to make entrepreneurs of poor rural dwellers, but rather to address the high rates of malnutrition in the country prior to 2006. However, the giving of cow, the highest symbol of wealth in Rwanda to poor people triggered a chain of outcomes, one of which is a sense of responsibility and status and thus people were eager to harness their entrepreneur spirits through the establishment of entrepreneurial ventures via Girinka, a bottom-up approach to poverty alleviation. Hence, in using traditionally valued and a deeply understood symbol of wealth in Rwanda, a new class of individuals who expected more of themselves and in turn, a group the community expected more of them to advance social and economic development based in a sense of social inclusion and achievement, resulting in a successful national ecosystem.

The entrepreneurial successes of IAKIB (a cooperative) and Javier Uzabakiriho demonstrates that when economic empowerment strategies are rooted in indigenous knowledge of wealth and wealth creation, beneficiaries often respond to the social stimuli created and move to become entrepreneurs. Thus, it is necessary that our formerly poor people in the rural turned entrepreneurs receive ongoing training and infrastructure support to further advance their enterprises so they can join the larger and more capitalized circle stakeholders in the Republic of Rwanda and beyond.

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