

PATRICK NGOWI: A SUCCESSFUL TANZANIAN YOUNG ENTREPRENEUR IN SOLAR ENERGY SOLUTIONS

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SYNOPSIS

Access to energy is largely recognized as a prerequisite for the majority of 2030 Sustainable Development Goals but is still one of the major challenges facing African countries. This case study features Patrick Ngowi, a successful young Tanzanian entrepreneur who built a multi-million dollar business from solar energy – one of Africa's most lucrative but unexplored business opportunities.

Key findings: Ngowi's company – Helvetic Solar – has installed more than 6,000 small rooftop solar systems in Tanzania and four other East African countries – Kenya, Uganda, Rwanda, and Burundi making millions of dollars in annual revenue. Patrick Ngowi is also actively involved in philanthropy through Light for Life Foundation which he created with the vision to install 100,000 solar kits for rural electrification throughout Tanzania. Ngowi's inspirational story has been featured and profiled on many international platforms and media such as CNN, BBC and Forbes.

Main lessons: This success story revealed the business and job opportunity in the solar energy sector for poverty alleviation and improving lives of African people. It is also indicative of the capacity of young people to develop successful businesses and create jobs and wealth. Finally, the case study showed that local entrepreneurs and business men and women can become local philanthropists and reduce dependence on external donors.

Main recommendations: The study calls for African countries and institutions to support and promote social entrepreneurs in key sectors like energy by establishing appropriate policies and building capacities of entrepreneurs. Specifically, tax reduction policies are necessary to promote innovative business models that target populations with low purchase power.

Introduction

The use of energy is a critical factor in poverty reduction (Doczi et al., 2013). Access to modern energy has long been recognized as a prerequisite for achieving all the Millennium Development Goals – MDG – (UNDP, 2005a; UNDP, 2005b). Access to energy allows people to cook, heat their homes, use information and communication technologies, and benefit from better health and education services (UNDP, 2005a). Access to energy enables people to earn a living, widens their livelihood options, and strengthens resilience in the face of economic, social, and environmental changes (Doczi et al., 2013).

The challenges in the energy sector include barriers to scaling up access and use of renewables. Watson et al. (2012) characterized the barriers to accessing energy as economic, technical, political/institutional, and socio-cultural, but argued that these barriers need to be viewed in an integrated way as they are inter-related. For the poorest households in developing countries, the affordability of modern energy is a barrier. The costs for new electricity connection or for equipment and the recurring costs of energy services such as monthly charges, prevent them from using modern energy (Doczi et al, 2013). Finance had also been identified as a barrier to investments in energy sector because

the initial costs are high, though such investments often generate good financial returns. Therefore, the achievement of the Sustainable Energy Goal will require overcoming the finance barrier for the full range of different users and providers of energy services, with diverse energy needs in widely varying contexts.

With a population up to 51.9 million and a Gross Domestic Product (GDP) estimated at US\$27.3 billion in 2016, Tanzania is the second largest economy in East Africa¹. Like in other African countries, mobile phone use has rocketed in Tanzania in the past decade. The number of mobile phone subscribers in Tanzania rose by 16 percent in 2014 to 31.86 million making the mobile phone penetration of 67 percent². Like all sub-Saharan African (SSA) countries, the country faces tremendous challenges to ensure access to energy. In Tanzania, the spread of mobile phones has far outstripped the spread of grid electricity, as 85% of the population were still living off-grid in 2011 (Asheden Award, 2014). This included most households in rural areas, but also those on the outskirts of cities like Arusha where the grid is available but the connection cost of around US\$700 is prohibitive for most people. In this country, there are some solar-home systems, which can provide the needed power to run lights, mobile phones and other small appliances but the initial connection cost of US\$700 and after sales service prevent widespread adoption of these systems. As such, most of the citizens do not have access to electricity. As an alternative, they rely on kerosene to light up their houses. If Tanzania is to realize its development objectives, access to clean and affordable energy should be increased by involving private sectors in the energy sector and developing innovative mechanisms.

Notwithstanding the above-mentioned challenges, opportunities exist both in conventional power sources and the solar power. Face to this situation, Patrick Ngowi at just age 15, and still a student in secondary school, developed a successful company for increasing access of population to solar energy.

This case study aims to publish the story of this successful young multi-million entrepreneur Patrick Ngowi who started from a simple business idea to become one of Africa's Best Young Entrepreneurs. It is also worth sharing with young African people to inspire and engage them in entrepreneurship for the structural transformation of Africa.

The mobile phone opportunity to solar lamp business

At age of only 15, and still a student in secondary school, Patrick Ngowi ventured into the mobile phone business selling call cards (recharge vouchers) which he noticed were scarce in the area. By the time he turned 18, he was fully into the mobile phone trade selling cheap handsets which he bought from Hong Kong. This business, which he started with a \$1,800 loan from his mother and a free air travel ticket from a close friend, turned out to be very profitable.

By targeting the mass market of poor rural people who could only afford basic and cheap phones, Patrick sold more than 5,000 handsets (at an average price of \$20) in one year alone. In this business he was able to make a lot of money. During his interview with Forbes in August 2013 he said *"I was only 18 and a half years old at the time but I was doing an annual turnover of \$150,000."*

During his short stint in the mobile phone business, Patrick noticed that many of his

¹ (<http://countrymeters.info/en/Tanzania/economy>)

²<http://www.reuters.com/article/tanzania-telecommunications-idUSL5N0XD37P20150416> (accessed 6 April 2016)

customers did not have access to electricity and getting their phone batteries charged was a serious problem. It was during his frequent trips to Hong Kong and China that he discovered solar panels and learned about renewable energy for the first time. By then, Tanzania had critical energy infrastructural challenges. At the time of Ngowi's frequent Asian trips, the national power grid coverage in Tanzania was only about 10%. Most companies, government agencies, and wealthy families depended heavily on generators.

There was opportunity, and Ngowi wanted to delve right in, but his parents insisted that he completed his education. Ngowi comes from a family of academics. Both his parents are lecturers, and their orders were crystal clear. This problem provided the inspiration into the potentials of solar power and the lucrative opportunities it holds in Tanzania and Africa's future. To prepare himself for this future, after high school Patrick went ahead to learn about the subject of solar energy in order to build the solid technical knowledge he needed to succeed in the solar power business.

At age 19, Patrick Ngowi enrolled in Dezhou University in China, where he studied renewable and alternative energy (with particular emphasis on solar power). While at Denzhou, Ngowi started an informal exporting business. He had previously built relationships with a few friends in the construction industry so he had a lot of orders from them.

During his interview with Forbes in 2013, Patrick said:

"It was a fairly interesting experience. Everyone knew you could get things at more affordable prices. Builders here in Tanzania wanted everything from tiles to building materials - and they wanted it for cheap."

At that time, there were not as many people making frequent trips to China as there are today, and as the word spread, many builders, and traders in Arusha would send Ngowi money to purchase materials and other goods for them. He would purchase the equipment, load it in containers and send it down to them and made his margin.

By the time he had finished with his studies, Ngowi had built up enough capital and was able to load his own consignment of solar and thermal equipment, and armed with his bachelor's degree in renewable energy, he headed back to Arusha Tanzania to set up his own business. It was in 2007 when he started Helvetic Solar Contractors³.

From a small trader to an entrepreneur - doing business in the real world

The first store opened was very small but it was in a good location. Solar power was a relatively new energy source to the vast majority of Tanzanians and so business was not moving as rapidly as he had hoped. "For the first few months, sales were very slow. Ngowi kept marketing his business, sending proposals to everyone he could think of. With time, and as the media championed the cause for alternative energy sources, his business began to pick up. His company, Helvetic Solar was the only company based in Arusha offering solar products. Whoever needed solar power in Arusha had to go to his shop. His other competitors were in Dar es Salaam, but it's a distance away. He had the market.

Business picked up tremendously for Ngowi from 2007. As his company installed solar panels and related products for smaller clients, the word spread across to contacts everywhere. Soon, government agencies, Non-Governmental

³ www.helvetic-group.com

Organizations, and multinational corporations started asking Helvetic Solar to provide them with solar products.

Outcomes and overall assessment

Lighting the rural communities in East Africa

Through Ngowi's leadership his company has installed more than 6,000 small rooftop solar systems in Tanzania and four other East African countries – Kenya, Uganda, Rwanda, and Burundi – by end of 2013. Many of these systems are installed in the same communities he sold his mobile phones (which had no access to the electric power grid).

Wealth and job creation

Business picked up tremendously for Ngowi from 2007. As his company installed solar panels and related products for smaller clients, the word spread across and attracted more clients and good business. Some of Helvetic's major clients include the United Nations, the Tanzanian Government agencies and ministries, Non-Governmental Organizations, the Churches, among others. Hence steady growth ever since. In 2011, the company made \$2.8 million in revenues, then \$6.8 million in 2012. The success of Ngowi's company proves that Africa's market and demand for solar energy is indeed lucrative. Also, the enterprise creates and sustains decent job especially to young people through its distribution operations and sales centers.

Philanthropy - Investing in others⁴

The Helvetic Group supports the Light for Life Foundation⁵ as part of its Corporate Social Responsibility. Mr Patrick Ngowi, is heavily involved in his philanthropy initiative called Light for Life (L4L) Foundation, an initiative that aims to

offer basic lightning facilities to the rural households, by providing renewable energy sources such as a *Solar Kit* which is a Helvetic Solar Brand. "L4L is a Solar Energy Foundation that partners with other foundations or credible organizations like Rotary, World Vision and the United Nations Foundation on solar related matters such as information dissemination, direct solar power installations or voluntary installations. The foundation identifies needs and offers quality service without waiting to solicit funds. This idea was a product of Patrick having worked with many foundations in the industry in Tanzania, and learned that they wanted to help in East Africa but didn't know where to begin.

L4L is a Helvetic Group structure that is been used to assist most unfortunate communities and families that are unable to afford the solar kits. It is Patrick Ngowi's passion to contribute in making the rural community bright due to the fact that more than seventy percent of the people in Tanzania live in rural areas. And the mission of the foundation is to provide affordable green energy sources to rural communities focusing on women and pupils, through fully funded solar installations. The foundation is so far funded by Patrick's monthly growth salary. During interview with Venture Africa he had this to say:

"After visiting many rural parts of Tanzania and seeing the great power requirements for women and schools, I decided to donate my gross salary to provide solar for those who couldn't afford to buy any solar products. I started donating my salary towards buying solar products for those who couldn't afford it in 2010, and will continue to do so indefinitely".⁶

The foundation's current targeted area is the rural community in Tanzania and the rest of East African countries, with emphasis on women who

⁴ <http://venturesafrica.com/diary-30-l4l-foundation-art-making-another-humans-life-better/> (accessed on 9 April 2016)

⁵ <http://light-for-life-foundation.org/>

⁶ <http://venturesafrica.com/diary-30-l4l-foundation-art-making-another-humans-life-better/> (retrieved on April 9th 2016).

cannot afford to acquire alternative power solutions for at least their basic use which are lightening and charging their phones.

The foundation also targets secondary school and primary school pupils living in rural areas to enable them to overcome the challenge of failing to do their daily revisions at night due to lack of power supply in their homes. By doing this Patrick believes that he is investing in the future of Tanzania and boost the government's efforts in improving education.

The L4L Foundation has had a huge impact in Tanzania. They have supported over 1,000 women and over 30 schools in rural Tanzania, by donating Helvetic Solar Kit and the impact has been tremendous. Light For Life's goal is to distribute 100,000 Helvetic Solar Kits (which cost \$99 each) for rural electrification throughout Tanzania. However, there is still a lot of work to be done and the Foundation plans to establish strong relationships with donors in order to further their mission. The Vision is to significantly contribute in lighting the rural community in Tanzania and the rest of the East African community with green energy sources by the year 2025.

International recognition

The experience of Patrick Ngowi impressed the international community for the valuable impact his work had on the poor households of rural Africa and on young people's self-employment, job creation as well as wealth creation. Helvetic Group of Companies Founder and Group Chairman Mr. Patrick Ngowi received Highest Award for Achievements from the Tanzanian Private Sector in 2013 (at 28 years then), in recognition to his achievement and contribution to the community. Moreover, Ngowi's

inspirational story has been featured and profiled on Forbes (The Young African Millionaire Lighting Up Tanzania) and listed under Forbes list of 30 under 30 Africa's Best Young Entrepreneurs⁷ and Forbes' list of Young African Millionaires to Watch in 2013⁸. Forbes again listed Patrick in the 2014 list of Africa's Most Promising Young Entrepreneurs through Helvetic Group with net worth in the millions of dollars⁹. Additionally, Patrick was named as East Africa's Young Business Leader of the Year 2014 by Forbes and CNBC¹⁰. Mr. Ngowi on another occasion was listed among Top 100 Most Influential Africans 2013-2014 by New Africa Magazine and Top 100 Young Economic Leaders 2014-2015 by Choiseul Institute of Paris, France. All in all, Ngowi inspires many around the world, especially youth across Africa and continues to be featured and profiled extensively on various global media and news outlets including CNN, BBC, Forbes Magazine, Bloomberg business, KPMG, Ernest & Young, World Bank, IMF, Ventures Africa, among others.

Conclusions, lessons learnt and policy implications

This story of Patrick Ngowi showed how well African people can fix African problems with local resources such as solar power. Though there is still much to do in this area, his work is contributing to solve rural electrification in Tanzania and East Africa at large, opening the road to other people to also invest in the sector. More, with public policies support, his business model could sustain and maintain the social and economic benefits on poor households. Finally, as modern energy encompasses electricity, clean-burning cooking, technologies, etc., this story could be an example for future Africans' interventions in the energy sector.

⁷ "Under 30: Africa's Best Young Entrepreneurs". Forbes. 2013-02-23. Retrieved 2016 April 8.

⁸ "[Ten Young African Millionaires To Watch In 2013](#)". Forbes.com. Retrieved 2016-04-2.

⁹ "[30 Most Promising Young Entrepreneurs In Africa 2014](#)". Forbes. Retrieved 2016-04-2.

¹⁰ CNBC International – World Business News Leader". [Cnbc.com](#). Retrieved 2016-04-2.

The successful venture of Patrick Ngowi provided Africans with key lessons and policy implications as follows:

- Investment in solar energy has huge returns and can be a profitable venture. Solar energy stands a good chance to succeed in African contexts, hence the necessity to support local entrepreneurs through appropriate policies
- Tax reduction policies are necessary to promote innovative business models that target populations with low purchase power
- Local entrepreneurs and business men and women can become local philanthropists and reduce dependence on external donors.
- An integrated business model can have a positive impact in building the capacities of Africans, resulting in the structural transformation of Africa.

By targeting low income households, thousands of children are encouraged to stay in school. Thus, the impact on the transformation of the continent is direct because there will be more African people attending schools, staying longer and attaining higher levels of education and acquiring more diverse capacities to deal with the continent's challenges.

It is estimated that the demand for electricity in Tanzania in terms of population will triple from the current 14 per cent to 42 per cent by 2020. It is therefore suggested that other strategies should be adopted to increase power generation and supply.

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