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**Ndemo, Bitange**

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LINK Centre, University of the Witwatersrand (Wits), Johannesburg

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# BOOK REVIEW: NAGY HANNA AND RENE SUMMER'S INSIGHTS INTO A HOLISTIC ICT DRIVEN TRANSFORMATION

**Bitange Ndemo**
*Associate Professor, School of Business, University of Nairobi, Kenya*

Hanna, N. K. & Summer, R. (2015). *Transforming to a networked society: Guide for policy makers*, Gaithersburg: Sriban Books.

## INTRODUCTION

This contribution presents a review of the book "Transforming to a Networked Society: A Guide For Policymakers" by Nagy Hanna and Rene Summer. The book offers an in-depth analysis of how information and communications technologies (ICT) applications and networks can be leveraged to harness human capital and generate value for business and society. It presents an analysis of what it will take for any emerging economy to leverage the ICT technological revolution and transform itself into a smart economy. From the viewpoint of a policymaker engaged in Kenya's ICT boom, the authors' systematic approach makes the reading pleasurable and informative, even for someone unfamiliar with the growing body of knowledge on the transformative nature of ICTs. It would be particularly helpful to policymakers, especially those in developing countries seeking to transform their economies, to practitioners seeking to understand the process of transformation and to researchers seeking a holistic understanding of the ICT sector and the digital economy.

## KEYWORDS

book review, ICT transformation, digital transformation, networked society

## OVERVIEW OF THE BOOK

Transforming to a Networked Society marks a pioneering account of a holistic ICT-enabled transformation in a single volume. Nagy Hanna and Rene Summer created a policymaker's manual to harnessing the potential of the smart economy and transformative networks. To the reviewer, having always assumed that digital transformation can only be explained in compartments of communications infrastructure, digitisation, skills, mobile technologies and policy frameworks, Hanna and Summer provide a refreshing account of how all these compartments work together to transform economies. For example, in an analysis of the ICT ecosystem, they suggest that policymakers invest in enablers of ICT transformation such as ICT education; ICT services development; policy reforms and institutional changes; ICT-led business process innovation; new business and organisational models; and e-leadership capabilities.

The authors bring a combined wealth of experience into this seminal work for the ICT sector. Hanna, a doctoral graduate of Wharton School, brings to this work more than 40 years of teaching experience, writing, and working with the World Bank as senior advisor to dozens of countries on the implementation of ICT strategies. And Summer's many years at Ericsson Group, with global responsibility for national ICT strategy, particularly media/content regulation, copyright, media convergence and data protection, enrich the specificity of the content.

The book, written in three parts, therefore provides grounded and relevant policy advice for developing countries considering ICT as a transformative set of infrastructures and services.

Part I delves into the big picture of ICTs – why we need ICT-enabled transformation in today's economy and the key strategic components required to get transformation off the ground. Part II reads like a practitioner's guide with its detail on the transformative possibilities of integrating a digital component into business, and key government sectors such as education, health and agriculture. Part III, perhaps the most important section in the book, delves into how to master implementation of ICT, detailing how to develop leadership and institutions, and enable policies and regulations. In addition it looks at communications infrastructure, the industry, and the implementation, monitoring, evaluation, and adaptation needed.

In the following section, I provide a summary description of key chapters and towards the end, a critical analysis of the book.

## SUMMARY OF KEY CHAPTERS

For policymakers in developing countries, Part III of the book, themed "Mastering the implementation of digital transformation", potentially offers the most useful insights and for this reason, is the focus of this review. In Chapter 6, the first chapter of Part III, the authors discuss how to create and harness the transformative leadership required to build the institutions to nurture digital transformation. In order to achieve the desired leadership they suggest that governments clearly define their role in creating a networked society and adopting a governance model and institutional framework that draws on the global knowledge derived from country-level experiences. Providing examples and lessons learnt from stakeholder engagement, this section discusses developing legal and regulatory policy, building high-level and/or "executive" function for ICT, managing an effective division of labour across the relevant departments and agencies, securing funding and buy-in, and creating mechanisms for monitoring and evaluation. The authors emphasise the importance of engaging transformational leaders, as well as developing core leadership competencies.

In Chapter 7, the authors probe into how to develop enabling policies and regulations, suggesting that a convergent technology environment calls for coherent, technology-neutral policy and institutional frameworks, political leadership and commitment to a long-term view to secure effective regulation and sustainable transformation. It also argues for the importance of policy frameworks to enable transformation, with specific emphasis on regulatory objectives such as market efficiency; public interest and rights-based regulatory approaches; and networked governance and transformative policy. It also discusses research and development, innovation, diffusion and use, and finally implementation of ICT initiatives.

Chapter 8 focuses on developing the communications infrastructure and draws from the experience of developed countries. It proposes a series of interventions, including formulating broadband plans, assessing existing supply and demand challenges, addressing the challenges associated with spectrum management to enable mobile broadband, setting measurable objectives to improve supply through infrastructure build out, and promoting demand for services and applications. The authors suggest that a clear sense of direction would encourage investment and provide a blueprint for long-term actions. It makes a strong case for why national plans should promote efficiency and equity, support national social and economic goals, strive to attain universal access to and affordable supply of broadband, while also encouraging enabling technologies such as cloud computing. Plans, in their view, should include definitions of broadband, service goals, transmission capacity, service quality, and demand-side measures such as the required education and skills.

Chapter 9 deals with implementing, evaluating, and adopting policy. The authors sum up the lessons in 10 fundamental steps, including committing to a holistic long-term strategy, integrating ICT into development, attending to soft infrastructure and complementary policies, and engaging stakeholders and pursuing partnerships. It also focuses on political leadership; planning; legal framework; public sector oversight, emphasising diffusion and inclusion; balancing strategic direction with local initiatives; and enabling change and adaptation, innovation, learning, monitoring and evaluation.

## CRITICAL ANALYSIS

In Part I of the book, Hanna and Summer dedicate two chapters to answering the questions: Why do countries pursue digital transformation? Why is a holistic approach to transformation the most effective? In doing so, they conceptualise new ways of thinking about the roles of ICT for development and outline a practical roadmap for a national ICT-enabled transformation strategy. The assertion by Hanna and Summer that "digital transformation encourages evidence-based policymaking, open and accountable institutions, partnerships, collaborations, and inclusive innovation (the means by which new goods and services are developed for and/or by those who have been excluded from the development mainstream (Heeks et al., 2013)" (p. xviii), is particularly salient in developing countries, where governance is too often an impediment to economic development. Most multilateral agencies that support emerging countries have made digital transformation and inclusive innovation a standard prescription and this is perhaps the most financially pragmatic reason why countries may pursue the tenets of digital transformation.

Part Two (Chapters 3 to 5) addresses three questions: How do we integrate ICT-enabled transformation into development? How do we transform government? How do we transform all other sectors of the economy? The steps the authors propose to integrate digital transformation into development policy are more comprehensive when viewed against other notable studies (see for example Heeks, 2008). Their analysis in these chapters blends well with my experience in government in Kenya during the formative stages of integrating ICTs into the national development agenda (Ndemo, 2015). Without the benefit of the knowledge expounded in this book, we started with the development of a shared vision (by seeking political will), aligned strategy with the national vision (Vision 2030), leveraged public private partnership to develop shared infrastructure in order to lower the cost of government's ICT agenda, and encouraged the industry to leverage the government's goodwill to develop inclusive innovations, such as the famed mobile money transfer system MPESA in Kenya.

In Part Three (Chapters 6 to 9), the driving questions include: What role should government play? How do we regulate the ICT sector? How do we develop a national broadband infrastructure and its strategy? What strategies do we need for implementing, monitoring, evaluating and adapting these strategies? Hanna and Summer's exposition in these four chapters is perhaps most illuminating for policymakers. Leadership, for example, is a highly subjective area and the authors have carefully avoided taking the widely held assumption that only Western leadership models work, by noting that "there is no single solution, and those that work well in some countries may fail in others" (p. 85). Indeed, the unique digital transformation in Rwanda has put that country on the global map, but the same cannot be said of Ethiopia, which has a similar government management style to Rwanda.

Regulatory agencies can become a major hindrance to economic progress when they apply rules without creating room for innovation. Perhaps this realisation is what led the authors to focus on the central role played by regulation by suggesting that "key public policy issues be examined for their impact on innovation, diffusion, and adoption of ICT" (p. 90). Kenya became the first country in the world to successfully enable and harness innovation in mobile money transfer under two different regulatory regimes, leading to unprecedented efficiencies. The authors' analysis on how to go about building a regulatory framework conforms to the experiences noted in Kenya, which suggest these may serve as a useful guide for other countries wishing to take a similar path. On the development of communication infrastructure, the authors diligently analyse the strategic policy decisions that would lower the cost of broadband, suggesting for example, that "infrastructure sharing allows telecom operators to develop common networks and share

costs, thus reducing investment and lowering prices" (p. 109). This is a welcomed proposition given that, in many cases, building broadband connectivity, like other costly communication infrastructure, is feasible because of public private partnerships (Ndemo, 2015).

Perhaps the greatest weakness in emerging countries is implementing, monitoring, evaluating, and adapting. As the authors point out, developing countries are increasingly employing methods of monitoring and evaluation in order to attain proper standards of continuous improvement. Although the authors suggest engagement with stakeholders as a strategy to develop a holistic vision and means of evaluation, social media is increasingly becoming a monitoring mechanism that is pushing policy makers to act in areas that, in the past, would have been ignored.

Key rhetorical questions thus remain: How well did Hanna and Summer present a holistic view of digital transformation? How relevant is the book to African policymakers and digital transformation practitioners? I would argue that they have been successful in presenting a fairly relevant and detailed book, but a few key areas were not addressed. As a case in point, due to low barriers to entry into the ICT-based enterprises such as business process outsourcing, many countries, especially in Africa, invested heavily in the sector as a strategy to create employment for the young population, without fully understanding the sector. Policymakers reading the book may be disappointed that the book does not provide the experiences of the IT-related industries, such as business process outsourcing, which are booming in places such as India and the Philippines.

Most other studies on ICT development (see Heeks, 2008) emphasise the role of developing "information literacy" among society as part of the complete digital transformation process, but the book fails to discuss this important factor. The Association of Colleges and Research Libraries (ACRL, 2014) defines information literacy as a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information". Developing this skillset is a challenge faced by many developing countries, in Africa and elsewhere, where it is often assumed that the level of literacy is higher than it is. This explains why a seemingly tech-savvy and information literate person could miss the digital transformation boat.

## CONCLUSION

In conclusion, Transforming to a Networked Society: A Guide For Policymakers will undoubtedly serve as a valuable resource for policymakers seeking to learn the necessary steps to create an enabling policy environment for the smart economy. It will serve as a guide for industry practitioners on how to go about the transformation of the various sectors and should be recommended reading for students in business and ICT courses. For researchers, it provides a refreshing overview of current research on the role of ICTs in development and demonstrates how ICT scholars can benefit from a holistic analysis of digital transformation in a very dynamic sector.

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