INNOVATION & INTELLECTUAL PROPERTY
COLLABORATIVE DYNAMICS IN AFRICA
Editors: Jeremy de Beer, Chris Armstrong, Chidi Oguamanam & Tobias Schonwetter

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Collaborative Dynamics in Africa

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JEREMY DE BEER, CHRIS ARMSTRONG,
CHIDI OGUAMANAM AND TOBIAS SCHONWETTER

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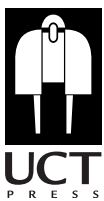

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Contents

Preface v
Acknowledgements ix
About the Editors xiii
About the Contributors xiv
Acronyms and Abbreviations xvii

Chapter 1
Innovation, Intellectual Property and Development Narratives in Africa 1
Jeremy de Beer, Chidi Oguamanam and Tobias Schonwetter

Chapter 2
Frameworks for Analysing African Innovation: Entrepreneurship, the Informal Economy and Intellectual Property 32
Jeremy de Beer, Izabella Sowa and Kristen Holman

Chapter 3
Informal–Formal Sector Interactions in Automotive Engineering, Kampala 59
Dick Kawooya

Chapter 4
Geographical Indication (GI) Options for Ethiopian Coffee and Ghanaian Cocoa 77
Chidi Oguamanam and Teshager Dagne

Chapter 5
A Consideration of Communal Trademarks for Nigerian Leather and Textile Products 109
Adebambo Adewopo, Helen Chuma-Okoro and Adejoke Oyewunmi

Chapter 6
The Policy Context for a Commons-Based Approach to Traditional Knowledge in Kenya 132
Marisella Ouma

Chapter 7
Consideration of a Legal "Trust" Model for the Kukula Healers' TK Commons in South Africa 151
Gino Cocchiaro, Johan Lorenzen, Bernard Maister and Britta Rutert

Chapter 8
From *De Facto* Commons to Digital Commons?
The Case of Egypt's Independent Music Industry 171
Nagla Rizk

Chapter 9
Reflections on Open Scholarship Modalities and the
Copyright Environment in Kenya 203
Ben Sihanya

Chapter 10
African Patent Offices Not Fit for Purpose 234
Ikechi Mgbeoji

Chapter 11
The State of Biofuel Innovation in Mozambique 248
Fernando dos Santos and Simão Pelembe

Chapter 12
Reflections on the Lack of Biofuel Innovation in Egypt 267
Bassem Awad and Perihan Abou Zeid

Chapter 13
Effects of the South African IP Regime on Generating
Value from Publicly Funded Research: An Exploratory
Study of Two Universities 282
Caroline Ncube, Lucienne Abrahams and Titilayo Akinsanmi

Chapter 14
Towards University–Industry Innovation Linkages in Ethiopia 316
Wondwossen Belete

Chapter 15
Perspectives on Intellectual Property from Botswana's
Publicly Funded Researchers 335
Njoku Ola Ama

Chapter 16
Current Realities of Collaborative Intellectual
Property in Africa 373
Jeremy de Beer, Chris Armstrong, Chidi Oguamanam and Tobias Schonwetter

Index 395

Preface

This book is among the key outputs of the Open African Innovation Research and Training (Open A.I.R.) Project. Based on case study research in nine African countries, the book examines the recent history and current on-the-ground realities of innovation and intellectual property (IP) in African settings. In doing so, the book reveals complex collaborative dynamics across a range of different countries, sectors and socio-economic contexts, and generates recommendations for how innovation and IP can be married with social and economic development objectives in African settings. This book's sister report, *Knowledge and Innovation in Africa: Scenarios for the Future,* situates the current realities covered in this book within a much longer historical trajectory and multiple potential futures.

Conceived in 2009, established in 2010 and launched in 2011, Open A.I.R. is a pan-African and globally interconnected research and training network, which was established to:

- raise IP awareness in African settings and facilitate critical policy engagement;
- empower a networked, epistemic IP community in Africa;
- identify IP-related innovation bottlenecks and modes of open collaboration; and
- interrogate IP-related innovation metrics, capital and power structures.

Open A.I.R. is financially supported by Canada's International Development Research Centre (IDRC) and Germany's Federal Ministry for Economic Cooperation and Development (BMZ), and collaborates with numerous other organisations and individuals – all of whom are recognised in the Acknowledgements' pages of this book. In addition to the aforementioned case study and foresight research, the Open A.I.R. network engages in a wide range of training, capacity building, outreach and policy engagement activities – both on the African continent and in settings outside the continent where matters of African innovation and IP are engaged. These engagements target external stakeholders capable of changing policies and practices, including:

- innovators, creators and entrepreneurs – individuals and companies;
- business groups such as chambers of commerce and industry associations;
- national, regional and international law-makers and policy-makers;
- issue leaders, such as politicians, judges, professors and practitioners;
- scientific and cultural research and development funding bodies;

- university researchers, administrators and technology transfer officials;
- rights-holders and collective rights management organisations; and
- representatives of indigenous and local communities.

Open A.I.R. is motivated by a vision in which innovation and creativity in Africa are sustainable, properly valued, collaborative, widely accessible and result in benefits that are distributed throughout society. Based on this vision, the network's mission is to better understand how innovation and IP processes work in African settings, how knowledge and technology currently protected by IP can be mobilised, and how IP systems can be harnessed or adapted in a manner that fosters openness-oriented collaborative innovation resulting in just distribution of new knowledge and technology.

This book and the *Scenarios* volume are two parts of a much broader attempt, by Open A.I.R. and other initiatives, to facilitate, in the medium to long term, the emergence of new, pragmatic means of valuing and facilitating innovation and creativity in Africa. Contextually appropriate metrics sensitive to the monitoring of meaningful changes in behaviour around innovation and creativity could be instrumental for promoting African grassroots entrepreneurship, broad-based business development, and a vibrant private sector built on small and medium-sized enterprises (SMEs) with a sustained ability to innovate. And the opportunities for innovation-driven SMEs could also benefit from policy-maker adoption of appropriate metrics when designing the policy and regulatory frameworks necessary to ensure predictable innovation environments for stakeholders.

Open A.I.R.'s core funders, IDRC and BMZ, have provided a framework for Open A.I.R.'s objectives. Open A.I.R. fits within the IDRC's Science and Innovation programme, which supports research and policy engagement in relation to how science, technology and innovation (STI) can be engines of socio-economic development. Within this programme, the Information and Networks (I&N) initiative, which funds the Open A.I.R. Project, aims to better understand the linkages among innovation, creativity, networked collaborations (often enabled via information and communication technologies [ICTs]), and determinants of openness – including IP rights. The IDRC also supported the precursor network to Open A.I.R., the African Copyright and Access to Knowledge (ACA2K) Project, which ran from 2007 to 2011 and generated the nucleus of the expert network now driving Open A.I.R.

BMZ supports Open A.I.R. via Germany's Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), under the GIZ commons@ip – Harnessing the Knowledge Commons for Open Innovation initiative**.** The commons@ip initiative focuses on how IP rights interact with open innovation, the knowledge commons, open licences and collaborative innovation. It is part of the BMZ-

mandated Train for Trade programme, which aims at strengthening the private sector and its constituent bodies in the Southern African Development Community (SADC) region through training and capacity building in export promotion, quality control and promotion of open innovation – as well as through promotion of local and regional economic development and trade.

Open A.I.R.'s training and capacity building components include:

- building the network's capacity – through online platforms, network-wide workshops, research methodology support, scenario-building meetings and thematic seminars;
- awarding Open A.I.R. Fellowships to emerging IP scholars and potential leaders – from Tanzania, Kenya, Uganda, Ethiopia, Cameroon, Nigeria and Egypt;
- exchanging knowledge through Africa-wide and South–South knowledge networking at seminars, workshops and conferences;
- growing awareness among African creators, innovators, entrepreneurs and policy-makers of openness-oriented approaches to innovation and IP matters in Africa; and
- teaching at African tertiary educational institutions, including development of a replicable, open course curriculum on IP law and development.

Because of the immense geographic size of the African continent, and unique logistical challenges of African intra-continental travel, ICTs have been instrumental in empowering the research network's "community of practice". Open A.I.R. has an offline presence in 14 African countries and in multiple countries outside the continent. Online, the network includes hundreds of individuals and institutions throughout Africa and from all corners of the globe, linked via a suite of online networking and social-media tools. The Open A.I.R. community of practice advances a culture of multidirectional exchange among African innovative and creative communities and external actors – with a view to sustainably empowering local communities and SMEs. Network members promote cross-fertilisation of ideas via original thinking and partnerships with national and international institutions, scholars, funding agencies, civil society organisations and other willing partners. Those wishing to join the community can visit http://www.openair.org.za/join.

Acknowledgements

True to its emphasis on "collaborative dynamics", this book is the product of the collective energy of dozens of people and institutions in many countries, all of whom work within the Open African Innovation Research and Training (Open A.I.R.) network. Open A.I.R. currently has core network members and institutions in 14 African countries, spanning North Africa (Egypt, Tunisia), West Africa (Senegal, Ghana, Nigeria, Cameroon), East Africa (Ethiopia, Uganda, Kenya, Tanzania) and southern Africa (Malawi, Mozambique, Botswana and South Africa). Other network members and institutions are in Canada, the United States, the United Kingdom, Germany and France. These members are, in turn, linked – via online and offline interactions – to a broader Open A.I.R. network of hundreds of individuals and institutions, including people and entities in Brazil, India, Malaysia, Australia, Switzerland and the Netherlands. The network receives generous financial support from Canada's International Development Research Centre (IDRC) and Germany's Federal Ministry for Economic Cooperation and Development (BMZ).

Each of the editors and authors of this volume is part of, and collaboratively exchanges knowledge and expertise with, this large network, and we the editors, and each of the contributors, are profiled in "About the Editors" and "About the Contributors" sections of this book and on the Open A.I.R. website's Team page, http://www.openair.org.za/content/open-air-team. On this Team page, one can also find the names and contact details of Open A.I.R. Fellows and other network members and institutions. The network is also accessible via its social media platforms, featured at http://www.openair.org.za/join

Open A.I.R.'s administrative hub is the IP Unit in the University of Cape Town Faculty of Law, where Project Manager Nan Warner and Administrator Phyllis Webb are the key operational drivers. Warner and Webb receive management support from two of the editors of this book (and the co-Principal Investigators of the Open A.I.R. Project), UCT IP Unit Director Tobias Schonwetter and Jeremy de Beer of the University of Ottawa Faculty of Law. Also supporting project management are Julie Nadler-Visser of UCT's Research Contracts and IP Services (RCIPS) unit, members of the UCT Finance Department and Faculty of Law Finance Department, and another editor of this book: Chris Armstrong of the LINK Centre at the University of the Witwatersrand (Wits) in Johannesburg.

Network strategic guidance is provided by a Steering Committee composed of De Beer, Schonwetter, Warner, Chidi Oguamanam (another of this book's

editors) of the University of Ottawa Faculty of Law, Nagla Rizk of The American University in Cairo (AUC), Sisule Musungu of IQsensato in Nairobi, Khaled Fourati of the IDRC office in Cairo, and Balthas Seibold of Germany's Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in Bonn. Further strategic support from the IDRC is, or has been, provided by Naser Faruqui, Simon Carter, Laurent Elder, Fernando Perini, Matthew Smith, Heloise Emdon and Phet Sayo; Karim Badran and Rose-Marie Ndiaye Pereira on financial matters; and Michelle Hibler and Nola Haddadian on publications. GIZ's involvement is focused on the capacity-building components of the network, which are carried out in collaboration with the GIZ's commons@ip – Harnessing the Knowledge Commons for Open Innovation initiative. At GIZ, in addition to support from the aforementioned Steering Committee member Balthas Seibold, who advises on matters of international knowledge cooperation and networking, support has also come from Petra Hagemann, Christine de Barros Said, Ursula van Look, Marina Neuendorff, Margrit Brockhaus and the Working Group of German Development Organisations on Promoting Innovation Systems. At UCT, as well as those already mentioned, key supporters and collaborators have been the Dean of Law, PJ Schwikkard, Lee-Ann Tong in the Faculty of Law, and, in the IP Unit, the Unit's founder Julian Kinderlerer, its Deputy Director Caroline Ncube and its Senior Research Fellow Bernard Maister. At the University of Ottawa, in addition to those already mentioned, support has been provided by the Dean of the Faculty of Law, Common Law Section, Nathalie Des Rosiers, and Former Dean Bruce Feldthusen.

For this book, key network participants were the team of JD candidates in the University of Ottawa Faculty of Law – Lukas Frey, Will Sapp, Phil Holdsworth, Maya Boorah, Kristen Holman and Saara Punjani – who provided long hours of diligent editorial assistance. In addition, because the research case studies presented in this book all required collection of data from human subjects – via interviews and/or focus group discussions and/or written surveys – this book would not have been possible without the cooperation of dozens of respondents across the countries of study. For reasons of confidentiality, most survey and interview respondents are not named in this book, but we are sincerely grateful for their contributions. Also contributing to the research outlined in this book was Donna Podems of OtherWISE in Cape Town, who advised on research methodologies and supported a methodology workshop for several of the authors featured in this volume, in addition to her support of Open A.I.R.'s monitoring and evaluation (M&E) framework. At this book's publisher, UCT Press, the key drivers have been Publisher Sandy Shepherd and Project Manager Glenda Younge. The cover design for this volume is by Elsabe Gelderblom of Farm Design in Cape Town, who does all of Open A.I.R.'s design work for its website, social media tools, PR materials,

Briefing Notes and the network's other substantial publication output, the Open A.I.R. *Scenarios* compendium – which is available in hard-copy, and on the Open A.I.R. website, as a separate published output and companion to this book.

Network headquarters at the UCT IP Unit serves as Open A.I.R.'s Southern Africa Hub, coordinated by Project Manager Warner. There are also four other Hubs: the North Africa Hub at the Access to Knowledge for Development Center (A2K4D) of the School of Business at The American University in Cairo (AUC), coordinated by Nagham El Houssamy under the direction of Nagla Rizk; the West Africa Hub at the Nigerian Institute of Advanced Legal Studies (NIALS) in Lagos, coordinated by Helen Chuma-Okoro under the direction of Adebambo Adewopo; the East Africa Hub at the Centre for IP and IT Law (CIPIT) of Strathmore University, Nairobi, coordinated by CIPIT Director Isaac Rutenberg; and the Canada Hub at the University of Ottawa Faculty of Law, coordinated by De Beer and Oguamanam. Contact can be made with these Hubs and Hub Coordinators via the aforementioned Open A.I.R. website Team page.

Also integral to the success of the network are its nine Fellows, each of whom has spent time at the UCT IP Unit in Cape Town. The Fellows have contributed to Open A.I.R.'s case study and foresight research, to outreach and training work, and to building the network. The nine Fellows are: Esther Ngom of the Ngo Nyemeck law firm in Yaoundé; Seble Baraki of the Justice and Legal System Research Institute (JLSRI) in Addis Ababa; Moses Mulumba of the Centre for Health, Human Rights and Development (CEHURD) in Kampala; Douglas Gichuki of CIPIT in Nairobi; Milton Lore of Bridgeworks Africa in Nairobi; Eliamani Laltaika of the Tanzania Intellectual Property Rights Network (TIP-Net) in Dar es Salaam; Alexandra Mogyoros, a student in the Faculty of Law at the University of Ottawa; West Africa Hub Coordinator Helen Chuma-Okoro of NIALS in Lagos; and North Africa Hub Coordinator Nagham El Houssamy of A2K4D in Cairo.

Other collaborating institutions are the Program on Information Justice and Intellectual Property (PIJIP) at the Washington College of Law at American University in Washington, DC; the Centre for Technology and Society (CTS) in Brazil; the Centre for Internet and Society (CIS) in India; and the Open Society Foundations, where Open A.I.R.'s key partner is Vera Franz. The Open A.I.R. network has also benefited from interaction with staff at the World Intellectual Property Organisation (WIPO) headquarters in Geneva. In London, Shirin Elahi of Scenarios Architecture is the driver of Open A.I.R. foresight research work, as featured in the aforementioned *Scenarios* compendium that provides an important forward-looking complement to the current picture offered by this volume. Jo Higgs of Go Trolley Films in Cape Town did post-production on the videos available on the Open A.I.R. YouTube channel – videos which show how the network came into being and how the research was conceptualised.

All the people and institutions mentioned here have in one way or another played a role, by collaborating within the Open A.I.R. network, in the conceptualisation, planning, data collection, data analysis, writing, editing, design and production processes that resulted in successful research and the completion of this book. It is hoped that this volume's free availability online, under a Creative Commons (CC) licence, will ensure that the book's collaborative dynamics do not end here at the moment of publication, and continue long into the future in the work of the still-growing Open A.I.R. community.

Jeremy de Beer, Chris Armstrong, Chidi Oguamanam, Tobias Schonwetter
September 2013

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Acronyms and Abbreviations

A2K	access to knowledge
A2K4D	Access to Knowledge for Development Center (The American University in Cairo, Egypt)
AAU	Addis Ababa University
ABS	access and benefit-sharing
ACA2K	African Copyright and Access to Knowledge Project
ACP	African, Caribbean and Pacific Group of States
ACTS	African Centre for Technology Studies (Kenya)
ADPP	Ajuda de Desenvolvimento de Povo para Povo (Mozambique)
AERC	African Economic Research Consortium
AFTE	Association for the Freedom of Thought and Expression (Egypt)
AGOA	African Growth and Opportunity Act
AIM	Agência de Informação de Moçambique
AmCham	American Chamber of Commerce (Egypt)
ARC	Aquaculture Research Centre (Egypt)
ARIPO	African Regional Intellectual Property Organisation
ASSAf	Academy of Sciences of South Africa
ASTII	African Science, Technology and Innovation Indicators
ATO	alternative trading organisation
ATPC	African Trade Policy Centre
ATPS	African Technology Policy Studies Network
AU	African Union
AUC	The American University in Cairo
B-BBEE Act	Broad-Based Black Economic Empowerment Act 53 of 2003 (South Africa)
BCP	bio-cultural community protocol
BIH	Botswana Innovation Hub
BMZ	Federal Ministry for Economic Cooperation and Development (Germany)
BoI	Bank of Industry (Nigeria)
BOTEC	Botswana Technology Centre
BPR	business process re-engineering
CAA	Cocoa Abrabopa Association (Ghana)
CARICOM	Caribbean Community
CBD	Convention on Biological Diversity
CBN	Central Bank of Nigeria

CC	Creative Commons
CCIA	Computer and Communications Industry Association
CEDAT	College of Engineering, Design, Art and Technology (Makerere University, Uganda)
CEHURD	Centre for Health, Human Rights and Development (Uganda)
CEPIL	Centre for Public Interest Law (Ghana)
CIGI	Centre for International Governance Innovation
CIPC	Companies and Intellectual Property Commission (South Africa)
CIPIT	Centre for IP and IT Law (Strathmore University, Kenya)
CIPO	Canadian Intellectual Property Office
CIPR	Commission on Intellectual Property Rights (UK)
CMO	collective management organisation
COCOBOD	Ghana Cocoa Board
CPD	Centre for Policy Dialogue (Nigeria)
CRTT	Centre for Research in Transportation Technologies (Makerere University, Uganda)
CSIR	Council of Scientific and Industrial Research (India)
CTEA	Copyright Term Extension Act (US)
CVCP	Committee of Vice-Chancellors and Principals (UK)
DACST	Department of Arts, Culture, Science and Technology (South Africa)
DEST	Department of Education, Science and Training (Australia)
DFID	Department for International Development (UK)
DHET	Department of Higher Education and Training (South Africa)
DNS	domain name system
DRC	Democratic Republic of Congo
DRM	digital rights management
DRST	Department of Research, Science and Technology (Botswana)
DST	Department of Science and Technology (South Africa)
DTI	Department of Trade and Industry (South Africa)
EAEP	East African Educational Publishers (Kenya)
EC	European Commission
ECBP	Engineering Capacity Building Program (Ethiopia)
ECOWAS	Economic Community of West African States
ECX	Ethiopia Commodity Exchange
EEAA	Egyptian Environmental Affairs Agency
EIPO	Ethiopian Intellectual Property Office
EIPRL	Egyptian Intellectual Property Rights Law
EPA	Environmental Protection Authority (Ethiopia)
EPO	European Patent Office
EST	environmentally sound technology

EU	European Union
EUEI	EU Energy Initiative
Eurostat	Statistical Office of the European Communities
FAO	UN Food and Agriculture Organisation
FCN	Friendship, Commerce and Navigation (Kenya)
FDI	foreign direct investment
FDRE	Federal Democratic Republic of Ethiopia
FDSE	Free Day Secondary Education (Kenya)
FES	Friedrich Ebert Stiftung (Germany)
FLO	Fairtrade Labelling Organisations International
FOSS	free and open source software
FPE	Free Primary Education (Kenya)
FTA	free trade agreement
GDP	gross domestic product
GEM	Global Entrepreneurship Monitor
GERD	gross expenditure on research and development
GI	geographical indication
GIPC	Global Intellectual Property Center
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (Germany)
GM	genetically modified
GOAN	Ghana Organic Agriculture Network
GOK	Government of Kenya
GR	genetic resources
GTZ	German Technical Cooperation
HSRC	Human Sciences Research Council (South Africa)
ICANN	Internet Corporation for Assigned Names and Numbers
ICIDSS	International Creativity and Innovation Development Support Services (Ethiopia)
ICJ	International Commission of Jurists
ICLS	International Conference of Labour Statisticians
ICPSK	Institute of Chartered Public Secretaries of Kenya
ICT	information and communication technology
ICT4D	ICT for development
ICTSD	International Centre for Trade and Sustainable Development
IDC	Industrial Development Corporation (South Africa)
IDLO	International Development Law Organisation
IDRC	International Development Research Centre (Canada)
IDS	Institute of Development Studies (Kenya)
IE	informal economy

IFC	International Finance Corporation
IICA	Inter-American Institute for Cooperation on Agriculture
IIDMM	Institute of Infectious Disease and Molecular Medicine (South Africa)
IIED	International Institute for Environment and Development
IIPA	International Intellectual Property Alliance
IISD	International Institute for Sustainable Development
ILC	indigenous and local community
ILO	International Labour Organisation
INAO	Institut national des appellations d'origine (France)
IP	intellectual property
IPA	Industrial Property Act (Botswana)
IPC	International Patent Classification
IPI	Industrial Property Institute (Mozambique)
IPR-PFRD Act	Intellectual Property Rights from Publicly Financed Research and Development Act (South Africa)
IRB	Institutional Review Board (Botswana)
IRENA	International Renewable Energy Agency
ISAS	integrated seawater agriculture system
ISCTEM	Instituto Superior de Ciências e Tecnologia de Moçambique
ISI	Institute for Scientific Information
ISO	International Organisation for Standardisation
ISP	Information Society Project (Yale University, US)
ITC	International Trade Centre
JBEDC	Japan Bio-Energy Development Corporation
JITAP	Joint Integrated Technical Assistance Programme
JLSRI	Justice and Legal System Research Institute (Ethiopia)
K2C Biosphere	Kruger to Canyons Biosphere (South Africa)
KE	knowledge economy
KECOBO	Kenya Copyright Board
KENFAA	Kenya Nonfiction and Academic Authors' Association
KES	Kenyan Shilling
KHA	Kenya Historical Association
KICD	Kenya Institute of Curriculum Development
KIPI	Kenya Industrial Property Institute
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNAS	Kenya National Academy of Sciences
KOLA	Kenya Oral Literature Association
KTO	knowledge transfer office
LBC	Licensed Buying Company (Ghana)
LDC	least developed country

LE	Egyptian Pound
LINK Centre	Learning Information Networking Knowledge Centre (Wits University, South Africa)
LSK	Law Society of Kenya
MAN	Manufacturers Association of Nigeria
MANCAP	Mandatory Conformity Assessment Programme (Nigeria)
MCH	Maasai Cultural Heritage Organisation (Kenya)
MCST	Ministry of Communications, Science and Technology (Botswana)
MCT	Ministério da Ciência e Tecnologia (Mozambique)
MDCA	Malindi District Cultural Association (Kenya)
MDG	Millennium Development Goal
MEA	Multilateral Environmental Agreement
MIST	Ministry of Infrastructure, Science and Technology (Botswana)
MIT	Massachusetts Institute of Technology
MOA	Ministry of Agriculture (Ethiopia)
MOE	Ministry of Education (Ethiopia)
MOFA	Ministry of Food and Agriculture (Ghana)
MoFED	Ministry of Finance and Economic Development (Ethiopia)
MOST	Ministry of Science and Technology (Ethiopia)
MoU	memorandum of understanding
MRC	Medical Research Council (South Africa)
Natoil	Natural Oil Company (Egypt)
NACI	National Advisory Council on Innovation (South Africa)
NCC	Nigerian Copyright Commission
NDA	non-disclosure agreement
NEP	National Enquiry Point (Botswana)
NEPAD	New Partnership for Africa's Development
NESC	National Economic and Social Council (Kenya)
NESTI	National Experts on Science and Technology Indicators
NIALS	Nigerian Institute of Advanced Legal Studies
NRF	National Research Foundation (South Africa)
NGO	non-governmental organisation
NIALS	Nigerian Institute of Advanced Legal Studies
NIPMO	National Intellectual Property Management Office (South Africa)
NIS	national innovation system
NMIMS	Narsee Monjee Institute of Management Studies (India)
NPR	National Public Radio (US)
NPSB	National Policy and Strategy on Biofuels (Mozambique)
NRC	National Research Centre (Egypt)

NREA	New and Renewable Energy Authority (Egypt)
NWLR	Nigerian Weekly Law Report
OA	open access
OAPI	Organisation africaine de la propriété intellectuelle
OCEES	Oxford Centre for the Environment, Ethics and Society
OCFCU	Oromia Coffee Farmers Cooperative Union (Ethiopia)
ODEL	open, distance and electronic learning
ODI	Overseas Development Institute (UK)
OECD	Organisation for Economic Co-operation and Development
OER	open educational resource
Open A.I.R.	Open African Innovation Research and Training Project
ORD	Office of Research and Development (Botswana)
PBIP	place-based intellectual property
PCT	Patent Cooperation Treaty
Petromoc	Petróleos de Mozambique
PIIPA	Public Interest Intellectual Property Advisors (US)
PIJIP	Program on Information Justice and Intellectual Property (American University, US)
PPS	probability proportional to size
PRO	public research organisation
ProBEC	Programme for Basic Energy and Conservation in Southern Africa
R&D	research and development
RCIPS	Research Contracts and IP Services unit (UCT, South Africa)
RIPCO (B)	Rural Industrial Promotion Company (Botswana)
RMI	rights management information
SADC	Southern African Development Community
SARUA	Southern African Regional Universities Association
SCE	Society for Critical Exchange (Kenya)
SID	Society for International Development (Kenya)
SINER-GI	Strengthening International Research on Geographical Indications
SME	small and medium enterprise
SMIEIS	Small and Medium Industries Equity Investments Scheme (Nigeria)
SMME	small, micro and medium enterprise
SNA	social network analysis
SON	Standards Organisation of Nigeria
SPS	sanitary and phytosanitary measures
STCI	Science and Technology Capacity Index
STEP	Science Technology and Economic Policy (US)
STI	science, technology and innovation
STS	Society for Technology Studies (Ethiopia)

SVKM	Shri Vile Parle Kalamani Mandal (India)
TBT	technical barriers to trade
TCE	traditional cultural expression
TGE	Transitional Government of Ethiopia
THE	Times Higher Education (UK)
THRIP	Technology and Human Resources Programme (South Africa)
TIA	Technology Innovation Agency (South Africa)
TIP-Net	Tanzania Intellectual Property Rights Network
TISC	Technology and Innovation Support Center
TK	traditional knowledge
TKDL	Traditional Knowledge Digital Library (India)
TPMs	technological protection measures
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
TTO	technology transfer office
TVET	Technical and Vocational Education and Training (Ethiopia)
UB	University of Botswana
UCC	Universal Copyright Convention
UCITA	Uniform Computer Information Transactions Act (US)
UCT	University of Cape Town (South Africa)
UEM	Eduardo Mondlane University (Mozambique)
UGT	Uganda Gatsby Trust
UK	United Kingdom
UM	utility model
UNCST	Uganda National Council for Science and Technology
UNCTAD	UN Commission on Trade and Development
UNDESA	UN Department of Economic and Social Affairs
UNDP	UN Development Programme
UNECA	UN Economic Commission for Africa
UNEP	UN Environment Programme
UNESCAP	UN Economic and Social Commission for Asia and the Pacific
UNESCO	UN Educational, Scientific and Cultural Organisation
UNFCCC	UN Framework Convention on Climate Change
UNICAMP	University of Campinas (Brazil)
UNIDO	UN Industrial Development Organisation
Unilag	University of Lagos
US	United States
USAID	US Agency for International Development
USPTO	US Patent and Trademark Office
WAK	Writers Association of Kenya
WATH	West Africa Trade Hub

WBCSD	World Business Council for Sustainable Development
WCT	WIPO Copyright Treaty
WEF	World Economic Forum
WEP	World Employment Programme
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation
Wits	University of the Witwatersrand (South Africa)
WPIS	WIPO Patent Information Service
WPPT	WIPO Performances and Phonograms Treaty
WTO	World Trade Organisation
ZAR	South African Rand

Chapter 5

A Consideration of Communal Trademarks for Nigerian Leather and Textile Products

Adebambo Adewopo, Helen Chuma-Okoro and Adejoke Oyewunmi

Abstract

This chapter describes and interprets the findings of a case study into the possible applicability of communal trademark systems for certain Nigerian leather and textile products. Consideration is given to the national legal and regulatory environment, to the level of standardisation currently practised by small-scale leather and textile producers, and to the views of producers regarding the viability of communal trademarking. The study found producer interest in communal trademarking, but also several potential undermining factors of a legal and practical nature.

1. Introduction

Small-scale enterprises constitute an integral part of the formal and informal sectors of the Nigerian economy (Osotimehin *et al.*, 2012). Such enterprises are also increasingly vulnerable to the adverse impacts of globalisation and trade liberalisation. They appear ill-equipped to compete favourably with other manufacturers in terms of the standards, quality and marketing strategies necessary to comply with regulatory policies and consumer demand on the local and global stage (UNESCAP, 2009, p. 34). The key challenges that have been identified for these small-scale enterprises are: meeting standards and quality requirements; marketing their products and building brands; identifying and exploiting the unique characteristics of their products; and protecting their brands in the global environment (UNIDO, 2010).

The status of Nigeria's textile and leather manufacturing sectors is strongly impacted by the general character of the Nigerian economy, which has been dominated by the oil sector since the late 1970s. A significant proportion of current exports is constituted by crude oil and associated products (CBN, 2012, p. 179;

ECOWAS, 2008; UNCTAD, 2008, p. 167). The supremacy of the oil sector has led to the neglect of other sectors, generating negative consequences for employment generation, self-reliance and sustainability (Azinge, 2011). The Nigerian government has recently recognised the need to diversify the economy by promoting growth in other sectors, including textiles and leather (Azinge, 2011; Briggs, 2007; Obasanjo, 2000).

There is evidence to suggest that Nigeria's textile and leather industries have strong existing and potential markets at both the local and international levels (see Mark, 2012). Indeed, the textile industry once ranked high as a major contributor to Nigeria's revenue generation and gross domestic product (GDP) (Njoku, 2004). It is widely held that agro-based products and textiles offer strong export potential if these sectors are given an enabling environment (ECOWAS, 2008; Quartey, 2006). Beyond the economic context, textiles hold special social and cultural value for West African countries. The art of handmade fabrics is part of a cultural endeavour and tradition that cuts across communities in Nigeria. Nigeria's leather sector exports processed hides and skins into a market dominated by Italy and China (Amakon, 2006). Nigeria has been identified as a potential leading contender in the export of leather (UNCTAD, 2009, p. 104), and various studies have indicated a vibrant local market and a market in neighbouring countries for Nigerian leather as a raw material for the manufacture of leather-based products and accessories including shoes, bags and furniture (UNIDO, 2002, 2003).

Nigeria's leather and textile sectors, however, face serious challenges from other players in international markets, from high international standards requirements and from technical barriers. Textiles and leather are products that attract high World Trade Organisation (WTO) and environmental standards requirements and strict technical regulations falling under the discipline of the WTO and Multilateral Environmental Agreements (MEAs) in respect of production processes, labelling, packaging and product standards as prescribed by individual countries (see Cordero *et al.,* 2008; UNCTAD, 2004). Amakon (2006) reports that Nigerian leather is often rejected in developed countries as raw material because of its low quality. These factors have severely constrained the capitalisation of market potential that exists locally and internationally.

One of the factors blamed for low quality is a lack of local grades and standards for branding (USAID, 2002). For small-scale enterprises, the challenges in the international market are even more daunting since these enterprises generally lack the individual wherewithal to meet product requirements (UNIDO, 2010). A recent statement credited to the Director of International Standards and SMEs at the Standards Organisation of Nigeria (SON), Robert Okiyie, noted that in Nigeria only 10 SMEs have the international quality certification mark from the International Organisation for Standardisation (ISO) (Ayankunle, 2011).

The local and regional West African market for textiles is also threatened by the proliferation and influx of cheap, low-quality imitations by foreign manufacturers, chiefly Chinese, of the designs of the local industries (see Abdullah, 2010).

At the same time, there is increasing evidence internationally that entrepreneurs from both developed and developing countries can find ways to overcome limitations of scale and survive the onslaught of globalisation and trade liberalisation. Among the methods being used by small-scale entrepreneurs to secure global market bases for their products is the use of the intellectual property (IP) tool of establishing legally enforceable communal trademarks: certification marks, collective marks and geographical indications (GIs) (UNESCAP, 2009). In India, for example, communal trademarks are instrumental in the branding of products of the small-scale producers of Darjeeling tea made in West Bengal, pashmina textiles made in Kashmir, and leather products, toys and wall decorations made in Andhra Pradesh (see UNIDO, 2010).

An example of communal use of trademarks in Africa is the Ethiopian initiative (see Chapter 4 of this volume) that saw the registration of three brands of Ethiopia's fine coffee produced by local farmers (Yirgacheffe, Sidama and Harrar). The utility of communal trademarks hinges on the fact that they provide a platform to achieve market growth and competitiveness through "partnership collaboration between the producers concerned, joint standardisation of product quality, monitoring of compliance with agreed production procedures and collective marketing" (UNIDO, 2010, p. 2).

The research study outlined in this chapter investigated the potential feasibility of communal trademark strategies in the leather and textile sectors of Nigeria. The study sought to investigate the potential of communal trademarks as strategic vehicles for branding and market access. The assumption underlying the study was that such collective strategies carry the potential to offer – in ways that might not be feasible through the use of individual trademarks – qualitative and quantitative synergies (based to some extent on collaboration and openness dynamics) that can help small entities distinguish their products and build a positive reputation in competitive environments. Section 2 of this chapter delineates the relevant concepts and the contours of the two sectors studied. Section 3 outlines the research, Section 4 provides the findings and Section 5 offers conclusions.

2. Definition of concepts, profiling of the sectors

Communal trademarks

Communal trademarks differ from the classical trademark paradigm. Classical trademarks conceive of the marks as owned and used by an individual entity to

distinguish its product from others. In its most conventional context, a trademark has been defined as "a badge of origin" indicating the source or the trade origin of the item on which it is used (Kitchin *et al.,* 2005, p. 9). In most jurisdictions, a trademark can apply to goods and services alike. However, in Nigeria the Trade Marks Act does not protect services, though such protection has been imputed through a circuitous registration in class 16 and more recently with the Trade Mark Regulation allowing service mark registration. It thus remains debatable whether this action is valid (Trade Marks Act of 1965 [Cap. T13 LFN 2004]).[1]

It is frequently argued that one of the basic utilities of trademarks is to boost competitiveness (Landes and Posner, 1987, pp. 268–70), i.e. a mark with a positive reputation can enhance the competitiveness in the global economy of the goods on which it is affixed (UNESCAP, 2009; UNIDO, 2010). In the context of modern commerce, trademarks can indeed serve several valuable functions, not only in communicating the origin and quality of goods, but also in providing the incentive and security for investment in quality assurance and marketing (Landes and Posner, 1987; Leaffer, 1998). Communal trademarks potentially offer additional merits over traditional trademarks – additional merits germane to the marketing efforts of small entities. The potential underlying incentives for communalism in this context are the qualitative and quantitative synergies envisaged from collectiveness. Such potential synergies can be generated through the use of certification marks, collective marks or GIs. The World Intellectual Property Organisation (WIPO) defines a "collective mark" as "a sign capable of distinguishing the geographical origin, quality or common characteristics of goods or services of different enterprises that simultaneously use the collective mark under the control of its owner" (WIPO, 2004). As noted by Kitchin *et al.* (2005, p.120), the major purpose of a collective mark is to distinguish, for promotional purposes, the product produced by members of an associated group.

The first kind of communal trademark, a collective mark, is uniquely defined by its ownership structure. Collective marks are owned by an association (public or private), and intended for use exclusively by the individual members of the association. It is the responsibility of the organisation that registers the mark to ensure standard compliance by its members (Kitchin *et al.*, 2005, p. 69). A well-known example of a collective mark is the "CA" mark used by the Institute of Chartered Accountants.

The second type of communal trademark, the certification mark, is similar to a collective mark because it too is registered by a single entity and used by the collective. However, unlike with collective marks, the owner of a certification

1 See also *Hanover Star Milling Co. v Metcalf,* 240 US 403, 412 (1916); *Ferodo Ltd v Ibeto Ind. Ltd* (2004) 5 *Nigerian Weekly Law Report* (*NWLR*) Pt. 866 at 317–47.

mark may be a certifying authority rather than the association using the mark. "Woolmark" is an example of a certification mark. Use of the mark is open to anyone who complies with the necessary standards (WIPO, 2004, p. 69). This makes certification marks valuable to small entities that lack the wherewithal to develop their reputation independently. Certification marks are frequently used to guarantee compliance with specific standards. They also provide a platform to regulate standards in a sector where standards are demanded (Belson, 2002).

The third type of communal trademark, a GI, can be protected as either a collective mark or as a stand-alone IP right. A GI signifies a product possessing unique qualities, or reflecting the reputation attributable to its origin. The GI's value therefore lies in giving the product an association with its place of origin – a place of origin that holds particular qualitative advantages. Such advantages could include traditional skills, methods or modes of manufacturing, or unique elements determined by the particular characteristics of the geographical location (WIPO, 2004, p. 120).

Nigeria's leather and textile producing sectors

The textile sector in Nigeria is marked by a mix of large and small enterprises. The small enterprises primarily produce man-made textiles using traditional methods (Quartey, 2006). The small enterprises in this context could be more narrowly classified as micro or cottage enterprises, which are defined as employing fewer than 10 individuals (Abor and Quartey, 2010; EC, n.d., p. 14; IFC, 2012, p. 1; Kozak, 2007; Udechukwu, 2003). The Nigerian leather industry consists predominantly of small enterprises, with only a handful of large enterprises in this market (UNIDO, 2002). Nigeria's small-scale leather and textile production locations are generally formed in clusters around the country. While the nature and location of the leather and textile clusters differ, there are some systemic conditions and challenges common to both sectors, regarding mainly the legal and policy environment under which they operate. Beyond these lie distinct circumstances and attributes that may influence the feasibility of communal trademarks differently in the different locations.

Textile production is indigenous to the western part of Nigeria, which hosts the largest cluster of small-scale textile production in the country. This area is home to the Yoruba people, for whom textile production has historical, cultural and economic significance (Akinbogun and Ogunduyile, 2009; Maiwada *et al*., 2012). The indigenous textile products of Nigeria are exported as raw material or sold and used locally to produce other items such as dresses, handbags and bedspreads for export. The textile industries in Nigeria are facing stiff competition from foreign markets (Ogunnaike, 2010, p. 32), and the survival in the global market of indigenous modes of textile production is under threat.

The Nigerian leather industry has two dimensions: leather tanneries and leather accessories. The tanneries are clustered in the northern regions of Nigeria, where livestock rearing is prevalent. Odularu (2008) notes that "Nigeria is internationally efficient in goat and sheep skin leather exports", with the red skin goat of unique quality highly coveted by foreign markets (USAID, 2002). Odularu further observed that exports in these products accounted for less than 1% of total exports in 2003. This suggests "that further development of the sector could result in [increased market access] for these products" (Odularu, p. 88). Makers of leather-based accessories and finished products are also located in the Northern region and in the cities of Lagos, Onitsha and Aba.

3. The research

The study aimed to investigate the feasibility of using communal trademarks to promote quality, competitiveness and market access of leather and textile products produced by small entities in Nigeria. The investigation focused on:

- analysis of the framework for the protection of communal trademarks;
- identification of specific challenges faced by the producers that could be addressed through use of communal trademarks; and
- identification of potential challenges to the use of communal trademarks.

The study consisted of desktop research combined with a field work component that used a survey questionnaire and interviews. Leather and textile producers were chosen for study because of the socio-economic relevance of these sectors in relation to employment generation and poverty alleviation. In the case of textiles, their economic importance is inherent in the fact that Nigeria hosts whole sectors devoted to textile production, which are unique to the country. Second, the unique African fabrics and materials have distinctive local and international appeal. Third, the manual, family-based and other operators in the sector who apply traditional knowledge (TK) in the production processes have to contend with stiff competition and strong standards in the international market. This creates barriers to market access that would seem to make intervention necessary. A 2006 technical report on textile certification under the African Growth and Opportunity Act (AGOA) noted that although AGOA's Category 9 scheme for qualifying folkloric textile products represented an attempt to encourage exports of small-scale, handmade folklore articles and ethnic printed fabrics, it often proved difficult to provide the historical and cultural documentation required to place a garment under Category 9 (WATH, 2006).

Interviews were conducted in person and via telephone. The interviewees were key personnel of stakeholder institutions in government and industry working on matters related to the textile and leather sectors. Questionnaires were then distributed to textile and leather enterprises using cluster sampling of small enterprises – mostly micro and cottage enterprises. The selection of the clusters for the study was narrowed by the existence of previous studies that provided basic background on the two sectors (UNIDO, 2002, 2003; USAID, 2002). Three cluster groups in three localities were surveyed via the questionnaires: leather shoemakers in Aba; local textile producers in Itoku-Abeokuta; and leather tanners in Kano.

In Aba, the shoe manufacturers are located in delineated zones hosting manufacturers specialising in respective leather-based accessories, mainly shoes, bags, boxes and belts. The shoemakers are located in four contiguous zones, and the study focused on three of these zones hosting over 100 shoe lines: Shoe Plaza with 41 lines, Bakassi Zone with 80 lines (with approximately 50% specialising in leather shoes) and Imo Avenue, which also specialises in leather shoes. Figure 5.1 shows the structure of the Aba shoe cluster in relation to two of the three zones studied (Bakassi Zone and Imo Avenue), in which stakeholders include: a national association, a state association (at Abia State level), the two zonal associations, product lines under each zone (coordinated by union structures), and then the individual shops.

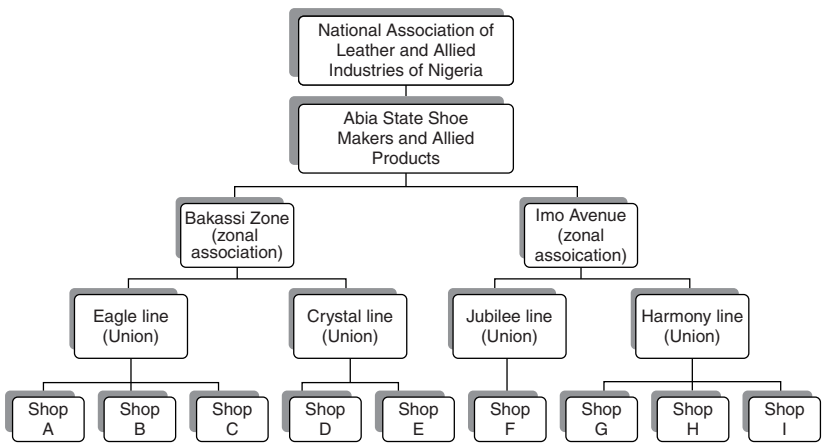

Figure 5.1: Typical structure of organisation in the Aba cluster (Bakassi and Imo Avenue zones)

Sources: As described to the authors by the interviewed executives of the zonal associations and unions of the Aba cluster; additional information from UNIDO (2003).

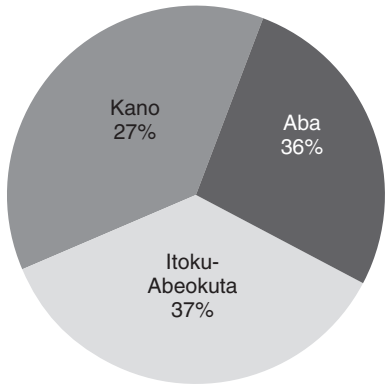

Figure 5.2: Percentage breakdown of the 120 responses across three clusters

Source: Authors' data analysis.

The three Aba zonal associations – Bakassi Zone, Imo Avenue and Shoe Plaza – were selected because they are adjoining groups forming a larger cluster; their leadership was cooperative and receptive to the investigation; and they all specialise in leather shoes.

A total of 170 questionnaires were distributed to individuals selected randomly in the three clusters studied: 60 questionnaires in Aba, 60 in Itoku-Abeokuta and 50 in Kano. The ultimate criterion for selecting the respondents was their position as line leaders and consequently leaders of the respective unions organised horizontally across each cluster at the lowest level (Figure 5.1). Of the 170 questionnaires distributed, 120 were completed and returned. Of the 120 completed questionnaires 36% came from Aba, 37% from Itoku-Abeokuta and 27% from Kano (see Figure 5.2).

The study's field-work findings were based on data drawn from the 120 questionnaires and from interviews with representatives of key stakeholders, including the Standards Organisation of Nigeria (SON), the Manufacturers Association of Nigeria (MAN), the Bank of Industry (BoI), the Nigerian Export Promotion Council, the Trademarks Registry, the country office of the UN Industrial Development Organisation (UNIDO Nigeria) and the US Agency for International Development (USAID).

4. Findings

Legal and regulatory framework

Trademarks are protected in Nigeria under the Trade Marks Act of 1965 (Cap.T13 LFN 2004). Of the three models of communal trademarks under consideration

in this study, only certification marks are specifically covered in the Act, under Sections 43 and 67. The procedure for the registration of certification marks is contained in the First Schedule to the Act. Collective marks and GIs cannot be registered in Nigeria in terms of the Act. It can be argued, however, that Section 43 of the Act allows the registration of GIs as a kind of certification mark that distinguishes the product by origin.The Act's Section 43(1) discusses certification marks as follows:

> A mark adapted in relation to any goods to distinguish in the course of trade goods certified by any person in respect of region, material, method of manufacture, quality, accuracy or other characteristic, from goods not so certified, shall be registrable as a certification trade mark in Part A of the register in respect of those goods in the name, as proprietor thereof, of that person: provided that a mark shall not be so registrable in the name of a person who carries on a trade in goods of the kind certified. (Sect. 43(1))

This issue of GI registration has not been tested in court, and thus the lack of specific provisions for GIs constitutes a present limitation to the options available to producers and businesses contemplating use of communal trademarks in Nigeria.

Regarding international protection, Nigeria is a signatory to the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the Paris Convention for the Protection of Industrial Property (Paris Convention). Nigeria has not, however, ratified the Madrid Agreement Concerning the International Registration of Marks and the Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks. Unlike the TRIPS Agreement, which can potentially be enforced in Nigeria, the Paris Convention remains unenforceable in Nigeria in the absence of domestication by the National Assembly. Nigeria ratified the Paris Convention in 1963 but is yet to domesticate it as required by Section 12 of the 1999 Constitution. Article 2 of TRIPS imposes an obligation on State Parties to apply the standards and obligations of the Paris Convention relating to trademarks. Thus, it can be said that the provisions of the Paris Convention regarding trademarks also apply *mutatis mutandis* to the TRIPS Agreement and so should be read together. Apart from GIs, no express provision is made for the protection of communal marks as such in TRIPS. However, this can be implied from the tone of Article 2 – which consequentially incorporates Article 7*bis* of the Paris Convention protecting collective marks – and Article 15(1). Article 15(1) of TRIPS defines the subject matter of protection broadly and accommodates collective marks to the extent that they are "signs or a combination of signs, capable of distinguishing the goods or services of one undertaking from those of other undertakings" (TRIPS, Art. 15(1); Pires de Carvalho, 2011, p. 293). However, with regard to certification marks, neither TRIPS nor the Paris

Convention appears to offer them any protection (Pires de Carvalho, 2011). Both TRIPS (Part II, Sect. 3) and the Paris Convention protect GIs as *sui generis* IP rights and appellations of origin distinct from trademarks. Article 1(2) of the Paris Convention includes "indications of source" and "appellations of origins" as protectable subjects. The treaties define GIs as indications which identify goods as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin. Indication of source means any expression or sign used to indicate that a product or service originates in a country, a region or a specific place, while an appellation of origin is the geographical name of a country, region or locality, which serves to designate a product originating therein, the quality and characteristics of which are due exclusively or essentially to the geographic environment, including natural and human factors. Thus, both geographical indications and appellations of origin require that there must be a link between the product and the place designated. However, while appellations of origin require that such link be attributable to the quality or characteristics derivable from the environment, geographical indications extend the basis for the link to reputation, i.e. public perceptions, impressions and expectations about a good and its geographical origin (Oyewunmi, 2012). (See Chapter 4 in this volume for discussion of GIs in relation to the Ethiopian coffee and Ghanaian cocoa sectors.)

With the exception of certification marks, Nigeria has a substandard national legal framework for the protection of communal trademarks. Failure to ratify the Madrid Protocol also undermines protection of a successful Nigerian trademark against international infringement outside the borders of Nigeria. The Madrid Protocol facilitates multiple registrations of trademarks in different countries by providing an international procedural mechanism whereby a single application filed and registered with a national or regional trademark office has effect in each of the countries designated by the applicant. Non-ratification of the Madrid Protocol therefore deprives Nigerian citizens of the benefits of a system intended to eliminate the inconvenience of having to file trademark applications in other countries where protection is desired. Meanwhile, in other countries, there is evidence of increasing recognition of communal trademarks as instruments for facilitation of trade and economic development from grassroots level upward. Since the 1990s, India, South Africa and the UK have all recognised the benefits of communal trademarks by amending their laws accordingly.

The success of a communal trademark would also depend to a great extent on assurance of quality. The Standards Organisation of Nigeria Act of 1970 regulates standards of locally produced textiles and leather, with the Standards Organisation of Nigeria (SON) administering the Act. SON's major responsibility is to prepare and enforce standards related to products in the formal and informal sectors, and

its work is mainly targeted at protecting consumers from "locally manufactured sub-standard and/or unsafe products, which do not meet the minimum requirements of the relevant" standards, and by so doing, generating "confidence in Made-in-Nigeria products" (SON, n.d.). SON requirements for textile and leather products are, however, not standardised. On the contrary, standards are fixed on a case-by-case basis. It was also found in the course of the research that SON was not enforcing standards requirements on small-scale manufacturers of leather and textile products – apparently (according to the interviewed SON officials themselves) on the grounds that SON did not want to discourage enterprises that would be unable to satisfy such standards. At the same time, only 7% of the survey respondents were aware of the existence of government regulatory standards.

Existing cluster dynamics

Standard-setting initiatives were found to be lacking at the industry level in all three clusters surveyed. In a few cases, local unions and associations were attempting some measure of self-regulation by requiring the registration of individual products and mandating the use of specified materials in production. However, nearly a third of the respondents stated that they did not work within the specifications of any externally set standard requirement (see Figure 5.3).

Industry operatives at associations and unions did, however, express a willingness to implement standards requirements to enhance the businesses under their associations or any other competent body. In fact, where they exist, standards imposed by unions are strongly adhered to and enforced. This suggests that

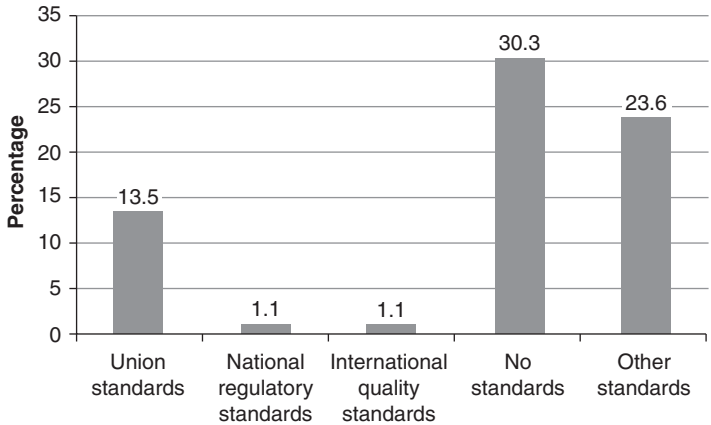

Figure 5.3: Respondent adherence to standards

Source: Authors' data analysis.

if standards were introduced at a higher level and in an appropriate manner, they would be respected. Without high-level standardisation, the goods in question cannot exhibit an assurance of quality, creating potential challenges to establishing and nurturing a successful certification or collective marks system. However, at the same time, implementation of standardisation could potentially create strong incentives for the use of certification marks by manufacturers, and could trigger government interest and support.

The success of a communal trademark system also requires the existence of an institution embodying ownership of the mark (UNIDO, 2010, p. 2). For the Aba cluster (see Figure 5.1), organisational infrastructure was found to exist, while the Itoku-Abeokuta and Kano clusters were found to have less (but still some) organisational structure. The Itoku-Abeokuta cluster, for instance, had an association of textile producers consisting mainly of the traders in the Itoku-Abeokuta market. The existing organisational bodies in all three clusters were providing administrative support, dispute settlement and disciplinary functions to their members – therefore signifying an existing system and a ready-made platform that could be harnessed to build a communal trademarks system at the market level. The Aba cluster was noteworthy here. It was found that in the Aba cluster, it was standard practice for there to be registration of labels and designs with the Aba unions (as protection from copying by other members of the union). The Aba unions were also providing support services and assistance in the form of finance and logistics to their members. The unions were formulating rules to protect the individual and collective interests of their members and were enforcing these rules.

One of the major potential challenges to adoption of a communal trademark by the Aba cluster was found to be the apparent lack of unity in the management structure. It was found that market leaders were prone to fragmentation and rivalry, due to competing interests. However, in the Itoku-Abeokuta cluster (unlike the Aba cluster), management fragmentation was not apparent. The traders' association in Itoku-Abeokuta was found to have a well-respected executive, headed by its Iya Oloja (executive head), which met regularly as a team. The Iya Oloja also held periodic meetings with the traders to discuss issues of common interest, to disseminate information, and to try to foster communal wellbeing in the market. The Itoku-Abeokuta cluster was therefore found to present an environment potentially more suited than the Aba cluster to successful implementation of communal trademarks. Unlike among the Aba respondents (where some misgivings were registered), the Itoku-Abeokuta respondents expressed confidence in their executive team to liaise with authorities to explore possible processes for establishing and using communal trademarks.

Existing knowledge of IP

It was clear from the data gathered that knowledge of trademarks was poor at all levels in the three clusters surveyed. But for a few ordinary (non-communal) trademarks officially registered in accordance with the Nigerian Trade Marks Act in the Kano leather tannery sector, and the printing of business names on packaging bags for textiles at Itoku-Abeokuta, there was a total absence of IP protection for the designs of the clusters surveyed. There were no instances found of registration of a communal trademark.[2] Design theft was found to be endemic in the clusters and a cause of concern for many. While entrepreneurs in Aba were seeking to protect their designs or labels by registering them with their local unions, this provided only limited protection – as it only extended to those operating within the jurisdiction of the unions. It was found that non-union members often copied such registered designs without incurring repercussions or liability from the registered owner.

Most of the respondents across the three clusters struggled to conceive of a suitable communal trademark. Meanwhile, only 12.2% had their businesses registered with the relevant government agencies. Despite the lack of existing knowledge of communal trademark modalities, the majority of respondents expressed willingness to participate in any collaborative trademarking strategy targeted towards standardising quality and price and improving market access. Roughly 80% of respondents favoured a model that would permit the use of common marks in addition to their personal packaging designs and labels.

Market challenges

It was found that the Kano leather tanners and Aba shoemakers produced for both local markets and markets in neighbouring countries. The Aba shoemakers sampled claimed to have clients both domestically and in neighbouring countries, with more than half of the leather products from Aba designated for export. But the Kano and Aba products were generally not performing well in these markets, in spite of the distinctiveness of some of the products, e.g. products made from red goat skin. The Itoku-Abeokuta textile enterprises surveyed said they had a diversified clientele, both within and beyond the African continent. Across the three clusters, 95.5% of respondents identified competition from foreign products –

2 At the same time, it must be noted that the study was not sufficiently in-depth as to be able to make a categorical conclusion that there is no single instance of registration of a communal trademark in Nigeria under the Trade Marks Act, with the greatest challenge in confirming this position being the lack of a proper and organised database for registered trademarks in Nigeria. This study was also not able to draw conclusions regarding the volume of use of unregistered trademarks.

particularly those from China – as being harmful to their business. They stated that, while local products were usually of higher quality than Chinese imports in terms of the materials used and the craftsmanship, Chinese-made products were cheaper and more aesthetically appealing in design and finishing, thus making them more attractive to customers. Most respondents felt that to remain competitive in this environment, local products would have to compete more favourably in terms of both price and design.

More than 75% of respondents indicated that they faced challenges in producing their goods to their desired specifications. The challenges identified in the Aba and Kano clusters included the high cost of quality raw materials, lack of expertise and equipment, lack of capital and lack of basic infrastructure. The problem of raw materials was particularly significant to the study. The field results indicated that local producers of leather and textiles used mostly (60%) high-cost international raw materials, and only 40% locally sourced materials. This revealed the potentially strategic position for Aba shoemakers of the leather tanning sector in Nigeria (e.g. in Kano) should it in the future be able to provide higher-quality materials to local manufacturers of leather products.

The research found that there were no dynamic marketing strategies in place in any of the three clusters. Manufacturers relied on marketing strategies with limited impact, such as simple displays of their products and offering customers business cards. The majority of respondents of the Aba cluster argued that one reason they did not want to advertise was because it would encourage further copying of their designs. As outlined above, even in cases where designs were registered with a union, protection was still lacking when an infringer was not a member of the union. It seemed clear that this area – design protection – was one in which the synergies provided by communal trademarks could be potentially useful.

Less than 50% of respondents shared their labels or designs with others. Nevertheless, many respondents expressed a willingness to be more open with their creative works if these were better protected. Respondents feared the absence of an efficacious framework that would protect their uniquely developed designs and labels from unfair competition. There was a strong impression that the absence of protection against infringement discourages serious investment in design and quality improvement. In the Itoku-Abeokuta textile cluster, members expressed strong interest in promoting their communal interests by association with high-quality, unique, handmade tie-and-dye products. They also expressed a willingness to share designs with fellow operators in their cluster – as the copying they opposed was the unacknowledged copying of their designs by clusters in other parts of the country and by international manufacturers.

Leather and shoe manufacturers in Aba reported that they distinguished their products from competitors mainly by using higher-quality materials and implementing unique designs. Unfortunately, the Aba respondents said, their consumers (middlemen traders) generally preferred foreign labels. As a result, the manufacturers said they often marked their products with false foreign labels, thus compounding the existing problem – because consumers then attributed whatever satisfaction they derived from the use of the product to a misleading origin.

5. Conclusions

Small-scale operators engaged in the production and manufacture of leather and textile goods in Nigeria hold great potential for improved economic performance, but they face myriad challenges. Key among these challenges is market access, both locally and internationally. Based on the findings of this research study, we are of the view that one of the tools with potential to ameliorate the market position of the three producer clusters studied is the use of communal trademarks (i.e. certification marks, collective marks and/or GIs).

The findings indicate that the use of communal trademarks could be feasible in the clusters investigated. One respondent aptly described the potential direct benefits of group identification as follows: "We will look out for each other's interests, and [at the same time] the competition will lead to high quality standards even within the group" (interviewee, 2012).With a communal trademark arrangement in place, areas of collaboration could include marketing and branding, enforcement of rights, and accessing credit facilities. For example, a properly conceptualised communal trademark with positive, far-reaching reputation could gain acceptance as security for loans to its adherents, thus opening up a new vista in Nigeria in the area of securitisation of intangibles. More generally, the successful implementation of a communal trademark could have many economic and social benefits, including increased income levels and livelihood opportunities for the large and growing percentage of the population made up of young Nigerians.

Of particular potential for implementation of a communal trademark among the three clusters studied was, in our view, the Itoku-Abeokuta textiles cluster. We saw above that this cluster had an orderly and respected management structure, and in this cluster there appeared to be clear incentives towards adoption of a communal trademark in order to, *inter alia,* distinguish the handmade original tie-and-dye brands from the imitation machine-made brands; to safeguard the indigenous art and TK of local people; to protect consumers from confusion and

deception; and to ensure that the industry is protected against unfair competition.[3] The Itoku-Abeokuta cluster could deploy a GI or other kind of communal trademark to foster a collective identity and image and to promote Itoku-Abeokuta as the home of genuine handmade tie-and-dye. A communal trademark would also safeguard the integrity of their products – against counterfeiters who sell cheap, non-durable products – as original Itoku-Abeokuta tie-and-dye.

If a communal trademark model is pursued, it must be appropriate to the particular producer or manufacturer group. For the Itoku-Abeokuta textile cluster, a GI would seem to be the most appropriate kind of communal trademark, because of the cluster's deployment of traditional methods of production handed down through (mostly maternal) lineage specific to the locality. This strong localised TK element gives the Itoku-Abeokua products a unique quality that distinguishes them from textile products of different origins or produced by different methods. For this cluster, a GI could solidify the pedigree generated by the longstanding production in this locality – production which has led to positive reputation in both local and foreign markets. In contrast to the Itoku-Abeokuta cluster, the Aba cluster would seem well-suited to the existing legal framework of certification marks in Nigeria (the framework which does not at present appear to protect GI-based communal trademarks). Aba-made shoes lack a common geographical quality, but manufacturers possess individual quality standards and creativity that distinguish their designs – thus potentially making a non-GI certification mark more suitable to these manufacturers (i.e. based on a strong desire to standardise quality and distinguish their products via quality standards).

Crucially, there is a clear need for law reform in Nigeria to expand protection to all three main communal trademark models – certification marks, collective marks, and GIs – and to this end it is in Nigeria's interest to ratify the Madrid Treaty (so as to protect any Nigerian mark in regional and international markets). As one respondent stated,

> [...] when it comes to protection, we really do not have any body or institution looking out for our interests in those foreign lands and as such, anything can happen. The solution will be to register the products in the various international markets for easy identification and protection. (Interviewee, 2012)

This underscores the need for Nigeria to ratify the Madrid Treaty and amend its laws accordingly. As far as the law is concerned, the process of effecting the necessary amendments to the Nigerian Trade Marks Act to bolster protection of

3 These incentives suggest a public interest rationale for a communal trademark, thus satisfying the "public interest" condition specified as required for the registration of a certification mark under the Nigerian Trade Marks Act (First Schedule, Para. 5).

communal trademarks does not appear to raise extra costs or externalities. The law will likely be amended regardless of whether communal trademarks are contemplated. Short-term cost issues have the potential to present a challenge to producers, in the form of fees for registration procedures and professional services. However, there is reason to believe that these costs could be offset by long-term growth and development of the affected sectors. The introduction of a common trademarks system within the existing Economic Community of West African States (ECOWAS) trading bloc (of which Nigeria is a member) would also be helpful, by establishing a common West African system for IP protection of textile and leather products. Such an initiative, as seen in other regions, could offer valuable legal and institutional platforms for the establishment and West African enforcement of communal trademark models.

In addition, a detailed cost-benefit analysis (which was beyond the scope of this exploratory study) is required before any producer group embarks on the process of establishing a communal trademark.

A successful mark depends on public confidence and a positive reputation. SON is not at present enforcing standards in the market, and while this may in the short term seem to benefit the producers, in the long term it will be detrimental to the growth and development of the sectors. Collaborative efforts are needed between SON and cluster leaders to determine the best approach to establish and implement standards. If standards enforcement is implemented in a uniform, fair and transparent manner, cluster operators can be expected to bear the initial financial strain based on the promise of quality standardisation and market growth.

Beyond IP and standardisation matters, there is a need to address factors leading to the high cost of production. Policies are needed to minimise the manufacturing costs of local manufacturers, so that they can compete with imported products in terms of quality and price. For example, the leather tanneries in Kano need to be positioned for greater competitiveness, and promoting local production of cotton would help to lower textile input costs and generate additional employment.

In addition, the product producers and manufacturers need to become better informed, e.g. about existing financial support facilities and schemes, such as those provided by the Bank of Industry (BoI) and SON. SON provides Duty Drawback Schemes in collaboration with other government agencies (namely, the Nigerian Export Promotion Council, the Nigerian Customs Service and the Central Bank) through which importers may claim repayment of import duty paid for material used in the production of local goods that are exported. The scheme is established to provide relief for producers of various export goods (including leather and textile goods).There is a need for the relevant bodies to assist the manufacturers in benefiting from such schemes.

Bibliography

Primary sources

Legal instruments

International:
African Growth and Opportunity Act (AGOA) (2000).
Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) 1867 UNTS 493 (1994).
Agreement on Technical Barriers to Trade (TBT), 1868 UNTS 120(1994).
Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) (1994).
Madrid Agreement Concerning the International Registration of Marks (1891, as amended on 28 September 1979).
Paris Convention for the Protection of Industrial Property (Paris Convention) (1883, as revised at Stockholm on 14 July 1967, and as amended on September 28, 1979).
Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks (1989, and as amended on 12 November 2007).

Nigeria:
Standards Organisation of Nigeria Act of 1970 (Cap. S9 LFN 2004).
Trade Marks Act of 1965 (Cap. T13 LFN 2004).

Cases

Hanover Star Milling Co. v Metcalf, 240 US 403, 412 (1916); *Ferodo Ltd v Ibeto Ind. Ltd* (2004) 5 *Nigerian Weekly Law Report* (*NWLR*) Pt. 866 at 317–347.

Secondary sources

Abdullah, N. (2010), "Inside Ghana's collapsing textile industries", *Sunday Trust Magazine,* 20 June, available at: http://sundaytrust.com.ng/index.php/feature/3209-inside-ghanas-collapsing-textile-industry (accessed 10 April 2013).
Abor, J. and Quartey, P. (2010), "Issues in SME development in Ghana and South Africa", *International Research Journal of Finance and Economics*, No. 39, pp. 218–28.
Adeyemo J. and Bankole, S. (2003), "Standards, technical regulations, and product quality: institutional evidence from Nigeria", in *Standards and Global Trade: A Voice for Africa,* World Bank, Washington, DC.

Adjasi, C. K. and Kinful, E. (2008), "Trade policies and development in Africa: the Doha development agenda, the EU EPAs and ECOWAS", paper presented at "Future of Global Economy", the Eleventh Annual Conference on Global Economic Analysis, 12–14 June, Helsinki.

Akinbogun, T.L. and Ogunduyile, S.R. (2009), "Crafts engagement in the economic survival of South-Western Nigerian rural women", *Journal of Enterprising Communities: People and Places in the Global Economy,* Vol. 3 No. 2, pp. 217–34.

Aldaz-Carroll, E. (2006), *Regional Approaches to Better Standards Systems,* World Bank Policy Research Working Paper No. 3948, available at: http://ssrn.com/abstract=923255 (accessed 10 April 2013).

Amakon, U. (2006), *Export Constraints of the Kano Leather Industry: A Study of Industrial Clusters in Nigeria*, Department of Economics, Nnamdi Azikiwe University, Awka, Nigeria available at: www.csae.ox.ac.uk/conferences/2007-EDiA-LaWBiDC/papers/050-Amakom.pdf (accessed 10 April 2013).

Ayankunle, T. (2011), "Only 10 SMEs, 270 firms have ISO certification", *The Nation,* 1 December, available at: www.thenationonlineng.net/2011/index.php/author/Tunde/(accessed 10 April 2013).

Azinge, E. (Ed.) (2011), *A Book of Communiques: 2011 Roundtables of the Nigerian Institute of Advanced Legal Studies,* NIALS, Lagos.

Belson, J. (2002), *Certification Marks,* Sweet and Maxwell, London.

Briggs, I. N. (2007), *Nigeria: Mainstreaming Trade Policy into National Development Policies,* African Trade Policy Centre (ATPC) Work in Progress No. 52, UN Economic Commission for Africa (UNECA), Addis Ababa.

Central Bank of Nigeria (CBN) (2012), *2011 Annual Report*, available at: www.cenbank.org/Out/2012/publications/reports/rsd/arp-2011/Table%20of%20Contents%20and%20Summary.pdf (accessed 10 April 2013).

Chuma-Okoro, H. (2011), "The trade and environment nexus: issues for Nigeria as a developing economy", *NIALS Journal of Environmental Law*, No. 1, pp. 230–65.

Cordero, P., Sepulveda, S. and Rodriguez, A. (2008), *Trade and Environment Issues: Rural Development Technical Handbook No. 25*, Inter-American Institute for Cooporation on Agriculture (IICA), San Jose, Costa Rica.

Cornish, W.R. and Llewelyn, D. (2003), *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights,* 5th ed., Sweet and Maxwell, London.

Economic Community of West African States (ECOWAS) (2008), *ECOWAS Handbook on International Trade,* Lagos.

European Commission (EC) (n.d.), *The New SME Definition: User Guide and Model Declaration*, EC Enterprise and Industry Publication, available at: http://ec.europa.eu/enterprise/policies/sme/files/sme_definition/sme_user_guide_en.pdf (accessed 10 April 2013).

Ganguli, P. (2009), "Geographical indications … its [sic] evolving contours", SVKM's NMIMS University Institute of Intellectual Property Studies, available at: http://iips.nmims.edu/files/2012/05/main_book.pdf (accessed 10 April 2013).

Graber, C.B. and Lai, J.C. (2011), *Indigenous Cultural Heritage and Fair Trade – Voluntary Certification Standards in the Light of WIPO and WTO Law and Policymaking*, Working Paper No. 1, University of Lucerne, Switzerland.

International Finance Corporation (IFC), (2012), *Interpretation Note on Small and Medium Enterprises and Environmental and Social Risk Management,* available at: www1.ifc.org/wps/wcm/connect/de7d92804a29ffe9ae04af8969adcc27/InterpretationNote_SME_2012.pdf?MOD=AJPERES (accessed 10 April 2013).

Janke, T. (2003), *Studies on Intellectual Property and Traditional Cultural Expressions,* Study No. 1, World Intellectual Property Organisation (WIPO), Geneva.

Khatun, F. (2009), *Environmental Related Trade Barriers and the WTO*, CPD Occasional Paper Series 77, Centre for Policy Dialogue (CPD), Dhaka.

Kitchin, D., Llewelyn, D., Mellor. J., Meade, R., Moody-Stuart, T., Keeling, D. and Jacob, R. (2005), *Kerly's Law of Trademarks and Trade Names*, 4th ed., Sweet and Maxwell, London.

Kowalski, S.P. (2009). "SMEs, open innovation and IP management: advancing global development", presentation to WIPO-Italy International Convention on Intellectual Property and Competitiveness of Micro, Small and Medium-Sized Enterprises (MSMEs), 10-11 December, Rome, available at: www.wipo.int/edocs/mdocs/sme/en/wipo_smes_rom_09/wipo_smes_rom_09_b_theme02_2.pdf (accessed 10 April 2013).

Kozak, M. (2007), *Micro, Small and Medium Enterprises: A Collection of Published Data*, International Finance Corporation (IFC), Washington, DC.

Landes, W. M. and Posner, R. A. (1987), "Trademark law: an economic perspective", *Journal of Law and Economics*, Vol. 30, pp. 265–309.

Leaffer, M.A. (1998), "The new world of international trademark law*", Marquette Intellectual Property Law Review,* Vol. 2 No.1, pp. 1–31.

Maiwada, S., Dutsenwai, S. and Waziri, M. (2012), "Cultural industries and wealth creation: the case of traditional textile industry in Nigeria", *American International Journal of Contemporary Research,* Vol. 2 No. 5, pp. 159–65.

Mark, M. (2012), "African fashion week: Lagos event set to become fixture of global style calendar", *The Guardian*, 12 March, available at: www.guardian.co.uk/world/2012/mar/12/africa-arise-fashion-week-lagos (accessed 10 April 2013).

Njoku, U.A.A. (2004), *Marketability of Made in Nigeria Textile Materials*, available at: http://stclements.edu/grad/gradnjok.pdf (accessed 10 April 2013).

Obasanjo, O. (2000), *Obasanjo's Economic Direction 1999–2003*, Office of the Honourable Minister of Economic Matters, Nigeria.

Odularu, G.O. (2008), *Nigeria-US Trade Relations in the Non-Oil Sector*, Dissertation. com, Florida.

Ogunnaike, O. (2010), "Nigerians' perception of locally made products: a study on textile fabrics consumers in Kaduna State", *Petroleum-gas University of Ploiesti Bulletin*, Vol. 62 No.1, pp. 30–6.

Olajide, D.M., Ajiboye, O.J. and Ajayi, B.J. (2009), "Áso-Oke production and use among the Yoruba of South Western Nigeria", *The Journal of Pan African Studies,* Vol. 3 No 3, p 55.

Olaoye, R.A. (2005), "Cloth talks: study of cloth among the Yoruba in Nigeria", *Africa Update Newsletter,* Vol. 12 No. 3, http://web.ccsu.edu/afstudy/upd12-3.html (accessed 10 April 2013).

Osotimehin, K.O., Jegede, C., Akinlabi, B.H. and Olajide, O.T. (2012), "An evaluation of the challenges and prospects of micro and small scale enterprises development in Nigeria", *American International Journal of Contemporary Research,* Vol. 2 No. 4, pp. 174–85.

Oyewunmi A.O. (2012), "Environmental sustainability, intellectual property and socio-economic development in Africa: what role for geographical indications?" *NIALS Journal of Environmental Law*, Vol. 2, pp. 32–66.

Pires de Carvalho, N. (2011), *The TRIPS Regime of Trademarks and Designs,* Kluwer Law International, Alphen aan den Rijn, Netherlands.

Quartey, P. (2006), "The textile and clothing industry in Ghana, 2006", in Jauch, H. and Traub-Merz, R. (Eds), *The Future of the Textile and Clothing Industry in Sub-Saharan Africa,* Friedrich Ebert Stiftung (FES), available at: http://library.fes.de/pdf-files/iez/03796/10ghana.pdf (accessed 10 April 2013).

Reynolds, B.J. (2007), *Branding for Success: Trademark Law, Product Certifications Important to Many Cooperatives*, available at: www.rurdev.usda.gov/rbs/pub/mar07/content.htm (accessed 10 April 2013).

Standards Organisation of Nigeria (SON) (n.d.), "About Us" and "MANCAP", available at: www.son.gov.ng (accessed 15 September 2013).

Udechukwu F.N. (2003), "Survey of small and medium scale industries and their potentials in Nigeria", in *Central Bank of Nigeria Seminar on Small and Medium Industries Equity Investments Scheme (SMIEIS),* Central Bank of Nigeria (CBN) Training Center, Lagos, pp. 1–14.

UN Conference on Trade and Development (UNCTAD) (1997a), *Elements of the Positive Agenda on the SPS Agreement*, Geneva.

UN Conference on Trade and Development (UNCTAD) (1997b), *Opportunities for Vertical Diversification in the Food Processing Sector in Developing Countries*, available at: www.unctad.org/en/docs/c1em2d3.en.pdf (accessed 10 April 2013).

UN Conference on Trade and Development (UNCTAD) (2004), "Environmental requirements and market access for developing countries", Note by the

UNCTAD Secretariat, TD (XI) BP/1, available at: www.unctad.org/en/docs/tdxibpd1_en.pdf (accessed 10 April 2013).

UN Conference on Trade and Development (UNCTAD) (2008), *Handbook of Statistics*, Geneva.

UN Conference on Trade and Development (UNCTAD) (2009), *Investment Policy Review Nigeria*, available at: www.unctad.org/en/docs/diaepcb20081_en.pdf (accessed 10 April 2013).

UN Economic and Social Commission for Asia and the Pacific (UNESCAP) (2009), *Globalisation of Production and the Competitiveness of Small and Medium-Sized Enterprises in Asia and the Pacific: Trends and Prospects*, available at: www.unescap.org/tid/publication.tipub2540.pdf (accessed 10 April 2013).

UN Environment Programme (UNEP) (2005), *Environment and Trade: A UNEP Handbook*, 2nd ed., International Institute for Sustainable Development (IISD), Geneva.

UN Industrial Development Organisation (UNIDO) (2002), *Hides and Skins Improvement in Northern Nigeria,* Technical Report prepared for the Government of Nigeria, UNIDO SF/NIR/01/E01, Vienna.

UN Industrial Development Organisation (UNIDO) (2003), *Assistance to the Leather Industry Cluster in Aba,* UNIDO SF/NIR/01/D01, available at: www.unido.org/fileadmin/import/32799_BergRep1a.pdf (accessed 10 April 2013).

UN Industrial Development Organisation (UNIDO) (2010), *Adding Value to Traditional Product of Regional Origin: A Guide to Creating a Regional Consortium*, available at: www.unido.org/fileadmin/user_media/Publications/Pub_free/Adding_value_to_traditional_products_of_regional_origin.pdf (accessed 26 August 2012).

US Agency for International Development (USAID) (2002), *Subsector Assessment of the Nigerian Hides and Skins Industry,* available at: http://pdf.usaid.gov/pdf_docs/PNACY673.pdf (accessed 10 April 2013).

West Africa Trade Hub (WATH) (2006), *Export of Handloomed Textiles and Folkloric Articles: A Guide for Obtaining Category 9 Certification as Required by the African Growth and Opportunity Act (AGOA),* WATH Technical Report No. 12, January, available at: http://www.agoatoolkit.com/agoa/English/Export%20Guides/27-Guide%20for%20obtaining%209%20Category%20Certification.pdf (accessed 10 April 2013).

Wong, T. and Dutfield, G. (Eds) (2011), *Intellectual Property and Human Development: Current Trends and Future Scenarios,* Cambridge University Press, Cambridge, UK.

World Intellectual Property Organisation (WIPO) (2004), *WIPO Intellectual Property Handbook: Policy, Law and Use*, WIPO Publication No. 489(E), Geneva.

World Intellectual Property Organisation (WIPO) (2006), *Making a Mark: An Introduction to Trade Marks for Small and Medium Scale Enterprises,* Intellectual Property for Business Series No. 1, Geneva.

World Trade Organisation (WTO) (2005a), *Trade Policy Review: Nigeria Report by the Secretariat,* Document WT/TPR/S/147, Geneva.

World Trade Organisation (WTO) (2005b), *Trade Policy Review: Guinea Report by the Secretariat,* Document WT/PR/S/158, Geneva.

Index

Please note: Page numbers in *italics* refer to figures, tables and appendices.

A
Academy of Sciences of South Africa (ASSAf) 289, 308
access and benefit-sharing (ABS) 15–16, 18, 151
  Nagoya Protocol 153, 161–162
  Regulations, South Africa 162
access to knowledge (A2K) 3, 17, 204, 285–286
Access to Knowledge for Development Center (A2K4D) 178
Adama University Research Policy, Ethiopia 325
Addis Ababa University (AAU) 323
  Research Policy 325
Africa 4–5, 61
  agricultural production 89
  diversity of social constructs 377
  net exporters of knowledge 18
  recommendations to policy-makers 391–393
  unemployment statistics 46
African Economic Research Consortium (AERC) 210
African Growth and Opportunity Act (AGOA) 114
African innovation and creativity
  undermining 5, 7–8
  undervaluing 5–7
African innovation policy priorities 20
African national patent regimes 242
African Regional Intellectual Property Organisation (ARIPO) 139–140, 237, 238, 239, 250–251, 256, 262, 381
African Science, Technology and Innovation Indicators (ASTII) 39
  African Innovation Outlook report 39
African Technology Policy Studies Network (ATPS) 210
African Union (AU) 344
African workforce 46
agricultural biotechnology 88
agricultural industries 133
agricultural producers 79
agricultural products 375
agricultural waste 272, 273
  rice straw 273
Agro Eco-Louis Bolk Institute 88
Ajuda de Desenvolvimento de Povo para Pova (ADPP), People to People Development Aid, Mozambique 257
  community biofuel project 256, 257, 258–259
  NGO project 260
algae 272, 273
alternative art scene, Cairene 178–179
alternative markets for higher-value products 78
alternative music and art industries 179
alternative music-consuming populations 179
alternative publishing models
  online subscription 204–205, 212
  online OA self-archiving 205, 212
alternative trading organisations (ATOs) 86
alternative value chain 90–91
American University in Cairo, The (AUC) 178
Anne Nang'unda Kukali v Mary A Ogola & Another, Kenya, 215–216
anti-commons effect 337
Anti-Counterfeit Act, Kenya 140
Antigue coffee, Guatemala 97
apprenticeship
  as means of learning 66–67
  sector-specific 376
Aquaculture Research Centre (ARC), Egypt 273
Arab Academy for Science, Technology and Maritime Transport 373
Arabic Creative Commons licences 175
architecture for Kenyan scholarship
  copyright communities 210
  libraries and archives 209
  professional research and publishing 210
  publishers 209
  scholarly consortia 210
  universities 209
Argentina 306
artisans 67
  and technology students 69
Association for Promoting Fairtrade in Finland 86
Australian patent office (IP Australia) 275–276
authorship 206–208
  motivation for 219–221
  and open scholarship 220–221
automobile parts 375

B
Bali meeting, UNFCCC 268
Banjul Protocol on Marks within the Framework of ARIPO 340
Bank of Industry (BoI), Nigeria, 116, 125

Bayh-Dole Act, US 21, 288, 290, 337–338, 391
international emulation 320–321
B-BBEE Act, South Africa 293
Berlin Declaration on Open Access 298, 303, 308, 310
Berne Convention for the Protection of Literary and Artistic Works 214, 340
bio-cultural community protocols (BCPs) 153, 378, 388
Biodiversity Act, South Africa 159, 162
biofuels 15, 375
agricultural products 248
ethanol and biodiesel 248–249
exploitation 250
innovations 270, 383, 385
legislation 254
patent landscape, Mozambique 255–256
policy and strategy, Mozambique 249
production methods 273
technology in production 258, 382
technology patenting 20
biopiracy 152–153
bio-prospecting 162
biotechnology 11
Botswana 385
benefits of public research to economy and society 359, *362*
framework for IP at institutions 348–353
importance of IP factors to commercialisation *360*
industrial property rights 341
institutional funding for research 365, *365*
institutional IP environments 364
institutional IP policies *364*
institutional IP policy on commercialisation *352*, 352–353
institutional IP policy on dissemination *350*
institutional IP policy on knowledge utilisation *351*
institutional roles 362–363, *363*
IPA and PRO ownership of results 350
IP and research practices necessary for value *361*
IP and STI environment 340–342
IP and University of Botswana (UB) 342–343
IP expertise and activity 344–345
IP law and policy 338, 353, *354–355*
IP management infrastructure 363
IP methods used *359*
IP for protection of research output 345–346, *347*
knowledge of how to use IP *347*
knowledge of institutional IP policies *349*, 353
levels of research activity 356–357
ministerial powers and parastatal institutions 343–344
Ministry of Trade and Industry 339, 343
publicly funded researchers 22, 335, 359, 384, 387
public policy 22
Registrar of Companies 344–345
research factors and commercialisation 358
"triple helix" of research and development 344
types of research 353, 356
university and PRO roles 366
use of IP procedures *348*, 358
Botswana domestic laws and regulations
Copyright and Neighbouring Rights Act 341
Industrial Property Act (IPA) 341
Industrial Property Regulations, Statutory Instrument 341
Botswana Export Development and Investment Authority 343
Botswana Football Association and Another v. Kgamane 345
Botswana Innovation Hub (BIH) 343, 344
Botswana Technology Centre (BOTEC) 343
Braille, audio or digital texts 225
branding 110
communal strategies 379
BRICS nations (Brazil, Russia, India, China, South Africa) 38
Budapest Open Access Initiative 211
Bushbuckridge, Kruger to Canyons (K2C) area, South Africa 151–168, 380
multi-ethnic nature of TK commons 160
municipality 157
registered as Biosphere Reserve 151
traditional medicinal practitioners 18, 386

C

Canadian Intellectual Property Office (CIPO) 276
capitalist entrepreneurs 36
Centre for Research in Transportation Technologies (CRTT), Makerere University, Uganda 64–65
certification
assessing schemes 88–90
critics of schemes 89
overseen by governmental bodies 88
marks 16–17, 78, 111, 112–113, 120, 123, 124
registration of marks 117
trademarks schemes 379
China 97, 110, 111, 122
clean energy technology 378, 383
Egypt 242, 267
fast-track administrative procedure 275–276
innovations 270, 385
and IP mechanisms 268
Mozambique 242
Climate Change Conference, UN, Copenhagen 268
clothing 375
Codes of Practice for Organic Farming, Ghana 88
collaborative, openness-oriented dynamics 4
collaborative branding, trademarks and geographical indications (GIs) 16–17

collaborative innovation and creativity 9–12, 22, 135, 388
collaborative intellectual property 377–384
collaborative partnerships 144–145
collective entities 81
collective management organisations (CMOs) 210
collective marks 111, 123, 124
  "CA" mark 112
collective rights of a community 80
College of Engineering, Design, Art and Technology (CEDAT), Makerere University 16, 63, 387
  IP dynamics 71–72
  Kiira EV Project 64–65, 67, 72
  Makerere Clusters Programme 73
  MoUs (memoranda of understanding) 72
  networks among study participants and entities *74*
  research centre and informal-sector artisans 59–60
  see also Gatsby Garage automotive workshop
commercialisation 320, 335
  in global R&D markets 305
  of IP 285, 286, 304
  of research output 348
Commission on Intellectual Property Rights (CIPR), UK 319–320
common law
  of copyright 214
  jurisdictions of UK and former British colonies 78
commons 137
  concept 154–155
  knowledge 137
  material 137
  social 137
  traditional agricultural 388–389
communalism 112
communal trademarks 109, 111–113, 120, 123, 379
  Ethiopian initiative 111
  feasibility 114
  models 124
  Nigeria 116–119
communication 37
communities
  closed group of 81
  traditional agricultural 82
Companies and Intellectual Property Commission (CIPC) (formerly CIPRO), South Africa 307
confidential information 379
construction, innovation in 38
consultancies for industry 353
consumer preferences 96
Convention on Biological Diversity (CBD) 138–139, 153, 271
cooking oil 272, 273–274
copyright 1, 3, 10, 132, 138, 346, 378
  American law 214–215
  development in Kenya and Africa 213–214
  economic rights 208
  and empowered creativity 19
  infringement 221
  laws, policies, practices 224
  moral rights 207, 208
  paternity right 207
  policy-makers 205
  protection 175, 205, 389
  in research 14
  right of integrity 207
  term in Kenyan law 207
  violations 175
  see also open scholarship and copyright, Kenya
Copyright Act, Kenya 140, 141
Copyright Tribunal, Kenya 210
cosmetic industries, and traditional knowledge (TK) 133
counterfeiting and falsification 97, 124
Creative Commons 11, 175
Creative Research Systems, *Sample Size Calculator* 339
creativity 1–2, 10, 133, 374, 375
cultural heritage 378
customary laws 157–158, 159

D

De Beers Element Six programme 303
demand-side factors 47
Department for International Development (DFID), UK 94
Department of Chemical Engineering, UCT 296
Department of Education, Science and Training (DEST), Australia 287
Department of Higher Education and Training (DHET), South Africa 289, 308
  Green Paper for Post-School Education and Training 289
Department of Molecular and Cell Biology, UCT 296
Department of Science and Technology (DST), South Africa 288, 308
Department of Trade and Industry (DTI), South Africa 303
design theft 121
diffusion
  geographic versions of theory 37
  process of innovation 41–42
digital commons business model 171, 387
  advertising and/or sponsorships 181
  knowledge of 181
  Meetphool digital platform181–182
  online digital music and streaming 184
digital copyright exchange 286
digital communications 203
digital rights management (DRM) 219, 223
digitisation and copyright, Kenya 210–211
discontinuous economic change 37

Divine Chocolate Inc, UK 86
domain name system (DNS) 210
Draft Bill on Protection of Traditional Knowledge and Traditional Cultural Expressions (Draft TK Bill), Kenya 141–142
dual economy model 48

E
Econergy International Corporation 249, 252–253
ecological and sustainability conditions, of production 87
Economic Community of West African States (ECOWAS) 125
economic development 36
  drive to maturity 36
Economic Development Imports 86
economic growth 33
economic strategies 38
economic systems
  classic and neoclassical 33–34
  development 33, 35
  dynamic development 34
  formal and informal 9
Eco-Patent Commons 276–277
ecosystem, building the new 309–310
"egocentric networks" approach 63
  selection of central node 63–64
Education and Training Policy, Ethiopia 322
Egypt 306, 385
  Al Sawy Cultural Wheel 179
  willingness to pay musicians *183*
  biofuel patenting 20, 271–272, 275–278
  biofuel technology development 382
  copyright law 174–175, 381
  Economic Court *194*
  "Hollywood of the East" 171
  illegally copied CDs and cassettes 183–184
  independent music industry 19, 171–172, 376, 380–381, 387
  IP law in practice 175–177
  alternative art outlets, Cairo *197*
  Patent Gazette 272
  patent law 270
  Patent Office 270–271, 272, 275, 276
  patent system 267–272
  private sector 274–275
  public sector 274
  research incentives 277
  stakeholders 272–275, 277–278
  see also music industry
Egyptian alternative music scene 390
  judicial process and court system 180, 181
  knowledge of copyright law 179–180
  relevance of copyright 180
Egyptian copyright provisions 268–271
  administrative bodies *194*
  conditions of protection *192*
  duration of protection *193*
  economic rights *192–193*
  Executive Regulation 270–271
  moral rights *192–193*
Egyptian Environmental Affairs Agency (EEAA) 274
Egyptian Intellectual Property Rights Law (EIPRL) 174–175, 182–183, 268–269
  Executive Regulation 271
  moral rights 190
electronic patent databases 14
electronic publishing 204
engineering, software and genetic 203
Engineering Capacity Building Program (ECBP), Ethiopia 324
enterprises, parastatal and industrial 336
entrepreneurial education 47
entrepreneurial environment in a developing economy 42–45
entrepreneurs
  "imitating" 41, 42
  "innovating" 41
  risk-taking 39
entrepreneurship 9, 32
  and Africa 45–48
  defined 40
  in developing world 40–42
  imitation 52
  and IP 43–44
environmental certifications 78, 87
  and labelling 84
Environmental Protection Authority (EPA), Ethiopia 91
environmental standards 110
environmentally sound technologies (ESTs) 276
ethanol 249
Ethiopia 21–22, 99, 316, 373, 375, 384, 385
  agriculture and GDP 316
  coffee industry 17, 77, 78, 84–85, 90–91, 376, 379, 386
  Coffee Quality Control and Inspection Centre 83
  Coffee Quality Control and Marketing Proclamation 92
  coffee trademark and licensing initiative 98–99
  Draft GIs Proclamation 91
  empirical value chain 82
  Farmers Cooperative Unions 84, 388
  foreign exchange earnings 83
  Forest Stewardship Council 87
  government policies 321–323
  institutional IP management 324–326
  IP rights and university research 319–321
  Ministry of Trade 91
  national IP system 324–326
  Office of the Vice-President 325
  Organic Agriculture System Proclamation 88

policy-makers, industry managers, academic researchers 326–328
poverty eradication 316–317
public researchers 387
Rainforest Alliance 87
university research and innovation by firms 323–324, 329
UTZ KAPEH 87
Ethiopia Commodity Exchange (ECX) 84
quality inspection centres 92
Ethiopian Intellectual Property Office (EIPO) 83, 91, 324–325, 327
trademark-based protection 98–99
Europe 99
European Patent Office 275
Eurostat (Statistical Office of the European Communities) 9, 32
evolutionary economic theory 37–38
Expert Group on Informal Sector Statistics (Delhi Group) 49

F

fair trade 84
certification 86–87, 89–90
labelling 78
Fairtrade Federation 86, 90
Fairtrade Foundation, UK 87
Fairtrade Labelling Organizations International (FLO) 86
FAIRTRADE™ mark 86
Fair World Designs 86
financial support facilities and schemes 125
FLO-Cert 86
Kafa Forest Coffee Farmers Cooperative Union 86
Oromia Coffee Farmers Cooperative Union 86
Sidama Coffee Farmers Cooperative Union 86, 89, 93
Yirgacheffe Coffee Farmers Cooperative Union 86, 93
folklore 133, 136, 214
foreign certifiers 88
foreign direct investment (FDI) 344
foreign markets 113
formal and informal sectors
dualistic conceptions 60–61
innovative work 66
networks, linkages between 67–69
sharing of innovations 70–71
formal–informal continuum 61–62, 387
choosing a point on 62
knowledge transfer 61
formal–informal exchanges and linkages 69–70
formal–informal innovation intersections 11
France 99
free and open source software (FOSS) movement 11
Free Day Secondary Education (FDSE), Kenya 209
Free Primary Education (FPE), Kenya 209
Friendship, Commerce and Navigation (FCN) Agreements 214

G

Galp Energia 252
Gatsby Garage automotive workshop, Uganda 16, 387, 388
IP protection issues 65–66
research 62–69
General Administration for the Prevention of Infringement of Intellectual Property Rights, Egypt 194
genetically modified (GM) foods 88
genetic resources (GRs) 79
geographical indications (GIs) 13, 16, 17, 77–78, 80–82, 89, 111, 113, 118, 123, 124, 138, 341, 346, 378
compliance and additional production costs 94
feasibility 90–91
legislation 92–93
operational challenges 95
origin-designated (or place-based) branding 379
potential economic benefits and costs 94
protection for wines and spirits 98
structural challenges 91–95
Ghana 48, 373
adinkra and *kente* cloths 97
certification schemes 85
Cocoa Abrabopa Association 87, 93
cocoa industry 17, 77, 78, 90–91, 376, 379, 386
empirical value chain analysis 82
Geographical Indications Act 91
good agricultural practice guidelines 92
government role in production and marketing 85
Kuapa Kokoo Farmers Union 86–87
Licensed Buying Companies (LBCs) 85, 388
Ministry of Agriculture 92
Ministry of Trade 83
Rainforest Alliance 87
Registrar General's Department 83
Standards Authority 83
Standards Board Codes of Practice for Organic Farming 88
UTZ KAPEH 87
Ghana Cocoa Board (COCOBOD) 85, 94
Quality Control Division 93
global diseases 306
Global Entrepreneurship Monitor (GEM) Model 43
and IP 44–45
globalisation 109, 111
global patenting market 306
greenhouse gas emissions 267
green inventions 275
green technologies 268, 276

gross domestic product (GDP)
Botswana 344
Ethiopia 316
Nigeria 110
gross expenditure on research and development (GERD) 344
Group of 77 developing nations (G77) 268

H

Hagen, Everett 36
Hague Agreement Concerning the International Deposit of Industrial Designs 340
Hague Convention on the Law applicable to Trusts and their Recognition 163
Haramaya University, Ethiopia 323
Harare Protocol on Patents and Industrial Designs within the Framework of ARIPO 255, 340–341
Hargreaves Report, UK 285–286
Harrod-Domar Growth Model 35
healing schools (*imphande*) 157
leaders (*magobela*) 157
Higher Education Proclamation, Ethiopia 322, 325
Hirschman, Albert 35
HIV infection 152
local patent for drug delivery 306
Hoselitz, Bert 36
human development 33

I

IBM 276–277
implementation, meaning of 10
inclusive development 8–9
India 118
Council of Scientific and Industrial Research (CSIR) 134
Darjeeling tea 111
Protection and Utilisation of Publicly Funded Intellectual Property 321
leather products, toys, wall decorations 111
pashmina textiles 111
indigenous and local communities (ILCs) 18, 80, 81, 144, 145, 146, 378–379
control over commercialisation and exploitation 134
control over natural resources and TK 153
Kenya 132, 133, 136–137
Kukula Healers, South Africa 161–162
and TK 17, 80
indigenous art 123
indigenous knowledge and capabilities 38
Indigenous Knowledge Systems Policy, South Africa 159
indigenous people's innovation 3
indigenous scientific capabilities 38
indigenous textile products, Nigeria 113
industrial absorptive capacity for knowledge conversion 375
industrial designs 138, 346
Industrial Development Corporation (IDC), South Africa 305
industrialisation 36
Industrial Property Act (IPA), Botswana 341
Industrial Property Act, Kenya 140, 141
Industrial Property Code, Mozambique 255, 382
Industrial Property Institute (IPI), Mozambique 250–251, 256
industrial property rights 255
informal appropriation, research on 13
informal economy (IE) 16, 32, 47–48, 52, 61, 379
"informal sector" concept 48–50
informal protections 378
international statistical definition 49
Kampala auto mechanics 373
networks, linkages in 69–70
information and communication technology (ICT) 204
efforts to digitally document TK 134, 136
systems 14, 51, 80
use of in Kenya 144–45
"informationalism" 203
innovation 1–2, 10, 33, 67, 133, 283, 288, 304, 339, 374, 375
conceptual frameworks 32
current state of literature 38–39
development and diffusion 37
and entrepreneurship 36, 52
five-step theory (Rogers) 36
in industrial enterprises 328
knowledge transfer approach 38
measurement in the informal sector 50–51
systems approach 33, 38
innovation–development nexus 33
innovation for development 47
innovative knowledge systems 376
Institute of Chartered Public Secretaries of Kenya (ICPSK) 210
Institute of Infectious Disease and Molecular Medicine (IIDMM), UCT 296
Institut national des appellations d'origine (INAO), France 98
instructional broadcasts 216
intangible resources 14
integrated seawater agriculture system (ISAS), Egypt 274
intellectual property (IP) 32, 77, 111, 248, 249, 268, 335, 373
Code, Mozambique 255
commercialisation 384
conventional rights 79
and dissemination 319–320
education and training of lawyers in Africa 238
fear of exploitation and infringement 52
framework for development 51–52
law and traditional healing 158–159

law, policy and practice 7, 10, 384
macro-level public policies 11
management, innovation, creativity 386
micro-level management practices 11
open or closed systems 283
policy instruments 133, 309
protection 319, 327, 346
rights 1–8, 22, 138, 317
rights in Africa's informal sector 59
South African public funding 283
training of legal counsel and judges 241
valorising (adding value to) GRs (genetic resources) 79
Western model of rights 79
Intellectual Property Rights from Publicly Financed Research and Development (IPR-PFRD) Act, South Africa 282–285, 288, 290, 302, 308, 310, 338, 383, 389–391
benefit-sharing 295
conditions that apply only to exclusive licences 294
conditions that apply to all licences 294
conditions that apply to offshore transactions 294
evolution of South African approach *289*
Framework, 288
institutional infrastructure 292
IP ownership and statutory protection 292–293
IP transactions 293–294
key provisions 291–292
primary intent of Act 290–291
Regulations 282–285
state "walk-in" rights 294–295
inter-ethnic traditions and customary laws 160
Inter-Ministerial Committee on Biofuels, Mozambique 254
regulations for biofuel additives to commercialised fuel 254
International Commission of Jurists (ICJ), Kenya Section 210
International Conference of Labour Statisticians (ICLS) 49
International Development Research Centre (IDRC), Canada 50
International Federation of Organic Agriculture Movements 88
International Institute for Environment and Development (IIED) 158
International Intellectual Property Alliance (IIPA) 176
International Labour Organisation (ILO) 45, 48–49, 51, 61
international markets
competition and standards 114
promotional activities in 95
International Patent Classification (IPC) committee of experts 276
Green Inventory 276
International Organisation for Standardisation (ISO) 110
International Trade Centre (ITC) 343
International Treaty on Plant Genetic Resources for Food and Agriculture (International Seed Treaty) 139
inventions 304, 381
evaluation of merits 20
protection and processes 359
inventors 303
investment 35
Italian Embassy, Maputo 252
Italy 110

J

Japan
policy-makers 320
productivity 36
Joint Integrated Technical Assistance Programme (JITAP) 343
jojoba 274–275
medicinal applications 275
plantations 272

K

Kenya 380
alternative publishing 381
Anti-Corruption and Economic Crimes Act 218
civil society organisations 213
collaboration between government and indigenous and local communities (ILCs) 132
collective management organisations (CMOs) 213
conceptualising and contextualising copyright 206–208
Constitution 132, 140, 204, 214
Copyright Act 206, 211, 213, 214–217, 219, 224–226, 381
copyright law 380
Department of Culture 136
Department of Justice 136
Digitising Traditional Culture Initiative 145
Draft TK Bill 132, 146–147
fair dealing 214–215
funding 143
industrial property law 380
international and regional legal instruments 138–140
IP laws 132
IP rights 214
legal instruments for protection of IP 140–141
legal/policy framework and role of government 142–144

local economy 49
McMillan Memorial Library Act 209
National Cultural Agency 142
national and legal policy framework 140–142
National Museums of Kenya 136, 143–144
National TK Policy 18, 132, 142, 144, 146–147, 380
Office of the Attorney-General 136
Official Secrets Act 218
Penal Code 218
Public Officer Ethics Act 218
scholarly authors 376, 387, 388
Science and Technology Act 209
stakeholder perspectives 142–145
State Law Office 213, 225
TK commons 380
TK digital library 380
University of Nairobi 136
Vision 2030, policy blueprint 204
see also open scholarship and copyright, Kenya
Kenya Copyright Board (KECOBO) 136, 143–144, 145, 146, 210, 213, 225
National Competent Authority for traditional knowledge (TK) 142
Kenya Historical Association (KHA) 210
Kenya Industrial Property Institute (KIPI) 136, 142, 143–144, 145, 239
Kenya Institute for Public Policy Research and Analysis (KIPPRA) 209
Kenya Institute of Curriculum Development (KICD) broadcasts 216
Kenya National Academy of Sciences (KNAS) 210
Kenya National Library Service Board Act 209
Kenya Nonfiction and Academic Authors' Association (KENFAA) 210
Kenya Oral Literature Association (KOLA) 210
Keynesian economics and growth theory 33, 34–35
knowledge
African 5
capital 43
commercial application 337
commons 7, 388
dissemination 320, 348
economy 78–79
hoarding 285–186
informal management of 16
"know how" 43
poor people's 3
pre-existing ("prior art") 235
socialisation 21, 310–311, 338
technological 242
utilisation 348
knowledge-based economic development and change 322–323
knowledge–development nexus 38
knowledge economy (KE) 203
knowledge-governance frameworks 7
knowledge-sharing 178
knowledge transfer 375–376
knowledge transfer offices (KTOs), Botswana 349, 353
Kruger to Canyons (K2C) Biosphere Region, South Africa 151
ethnic groupings 151–152
K2C Management Committee 151, 153, 154, 165, 166
Kukula Healers 151–154, 373, 380, 388
Association 156–157, 167
bio-cultural protocol (BCP) 153–154, 160, 161
Code of Ethics 157
collective 380
commons 155–156
cosmetics 164
evolution of TK commons 156–161
Godding and Godding laboratories 164
holistic approach to knowledge-sharing 158
IP-based property rights 156
Nagoya Protocol 161–162
non-disclosure agreement with Godding and Godding 161–162
Traditional Health Practitioners' Association 151
trust as legal model 161–163, 166
Kyoto Protocol 252, 267

L

labelling 93
labour, flow of 48
Latin America 61
Law Society of Kenya (LSK) 210
least developed countries (LDCs) 319
legal profession and universities 304
legal trust components 163–164
licensing
alternative, in Egypt 175
and assignments of scholarly works 217
compulsory 216
learning materials 378
of rights, voluntary 255
and registration of businesses 50
Lipset, Seymour Martin 35–36
Luanda, Angola study 46
Lusaka Agreement on the Creation of ARIPO 340

M

Maasai, Kenya 142
community 135–136, 143, 144
knowledge 18, 132, 133
project on digitisation of culture 145
Maasai Cultural Heritage (MCH) Organisation, Kenya 136
Madrid Agreement Concerning the International Registration of Marks 117, 255, 340

Protocol 117, 118, 255, 341
Treaty 124–125
Malindi District Cultural Association (MDCA), Kenya 136, 144
Manufacturers Association of Nigeria (MAN) 116
manufacturing 35, 38
Margaret Ogola & 3 Others v David Aduda and Another, Kenya 215
marginalisation of African youth 45
marketed services, innovation in 38
Marshall, Alfred 34
mass consumption, age of high 36
Mauritius 306
McClelland, David 36
media coverage 6
medicinal knowledge 378
medicinal plants 152, 157
and animals 158
Mekelle University, Ethiopia 323
memoranda of understanding (MoUs) 72
microelectronics 203
micro-entrepreneurs 50
micro or cottage enterprises 113
Miji Kenda community, Kenya 135–136, 142, 143
Millennium Development Goals (MDGs) 51
Ministry of Agriculture (MOA), Ethiopia 83, 88, 91, 94
Agricultural Extension Directorate 91
Coffee Quality and Marketing Implementation Manual 92
Ministry of Infrastructure, Science and Technology (MIST), Botswana 343, 344, 345
modernisation theory 33, 35–37
Mozambique 379, 382, 385
applications to the Industrial Property Institute (IPI), Maputo 262
biofuels agreement with EU and Brazil 253
biofuel production 248–250
biofuel technology patenting 250, 256
Constitution 254
Inter-Ministerial Committee on Biofuels 259–260, 385–386
IP Code 255
IP Strategy 254–255
national biofuel policy-making and patenting 20
oil-from-jatropha initiative 388
patents granted 261
policy and legal framework 253–255
studies of biofuel sector 251–253
Multilateral Environmental Agreements (MEAs) 110
musicians
anti-commercialisation 187–188
business model 188
ethical consumption 189
non-monetary inclinations 188
remuneration model 188–189
sharing-based public licence 189
music industry 133
access versus incentive tension 172–174
commons-based approach 172, 190
consumers of alternative music, Cairo 178
consumption patterns 182–184
copyright and sharing 177–178
digital 172–173
"freemium" model 19, 171, 381, 387
illegal music copying, Egypt 176–177
independent music digital commons 191
jingles for advertisements 187
legal barriers and IP rules 173
live music scene, Cairo 173–174, 187, 190–191
monetary reward *186*
money spent on concerts *185*
money spent on music *185*
physical versus virtual 189–190
piracy in Egypt 176
as *quasi*-public good 172–174
remuneration, incentives, business models 184–189
websites for illegal music downloads, Egypt *176*
muti (traditional medicine) hunters, South Africa 152

N

National Agenda for Research and Innovation in Biofuels, Mozambique 254, 260
National Enquiry Point (NEP), Botswana 343
National Experts on Science and Technology Indicators (NESTI), OECD 37
national innovation system (NIS) approach 317
National IP Management Office (NIPMO), South Africa 288–289, 292, 294–295, 297–298, 302, 304, 307, 308, 309
National Museums and Heritage Act, Kenya 140, 141
National Museums of Kenya 142, 143
National Policy and Strategy on Biofuels (NPSB), Mozambique 248, 249, 250, 253, 258, 259, 382, 385–386
National Policy on Traditional Knowledge, Genetic Resources and Traditional Cultural Expressions (National TK Policy), Kenya 141
National Programme for the Promotion of Mozambican Innovators 258
National Programme on Biofuels Development, Mozambique 254, 260
National Research and Development (R&D) Strategy, South Africa 288
National Research Centre (NRC), Egypt 273
National Scholarly Editors' Forum, South Africa 289
Natural Justice non-governmental organisation (NGO) 153

neoclassical school 34
market equilibrium 34
orderly economic change 34
Natural Oil Company (Natoil), Egypt 274–275
New and Renewable Energy Authority (NREA), Egypt 274
New Nile Company, Egypt 274
Nigeria 379
Aba leather shoemakers *115*, 115–116, 120, 121–123
Central Bank 125
economy 109–111
existing cluster dynamics 119–120
existing knowledge of IP 121
export of leather 110
Itoku-Abeokuta textile producers 115, 120, 121–124
Kano leather tanneries 114, 115, 120, 121–122
leather and textile products 17, 78, 109–111, 113–114, 388
leather and textile unions and associations 386
legal and regulatory framework 116–119
market challenges 121–123
oil sector 109–110
Patent Office, Abuja 236–237
revenue generation 110
small-scale operators 123
textile makers 376
Trade Marks Act 112, 116–117, 121, 124–125
Yoruba people 113
Nigerian Customs Service 125
Nigerian Export Promotion Council 116, 125
Nokia 276–277
non-disclosure agreements (NDAs) 299–300
non-GI certification marks 124
non-trademarked certification schemes 78
North Africa 3
North–South protectionist dynamics 18

O

online Creative Commons-based "digital commons" 19
open, distance and electronic learning (ODEL) 216
open access (OA) 204, 211–212
to knowledge and culture 81
online publishing approach 19
publishing 289, 303, 383, 388
scholarly publishing 282, 287, 306
Open African Innovation Research and Training Project (Open A.I.R.) 12–15, 388
network's interdisciplinary framework 13
research programme 14
open development 8–9, 80, 134, 191, 204, 211, 386
open educational resources (OERs) 289
open innovation 135
open knowledge 288
openness 22, 388–389
open research 288
open scholarship 222–223, 381
challenges to accessing scholarly information 217–218
and alternative publishing, Kenya 225–226
and copyright, Kenya 19, 203–205, 211–212
open science approach 21, 288, 320, 335, 337
open source approach 276
Oromia Coffee Farmers Cooperative Union (OCFCU), Ethiopia 93
organic certification 84, 88, 90
schemes 90
through foreign-based certifiers 89
organic labelling 78
Organisation africaine de la propriété intellectuelle (OAPI) 237, 238, 239, 381
Organisation for Economic Co-operation and Development (OECD) 6, 9, 32, 38, 51, 335, 366
Working Party of NESTI 37–38
work on innovation 47
Oslo Manual: *Proposed Guidelines for Collecting and Interpreting Technological Innovation Data* (OECD and Eurostat) 9–10, 32–33, 37–39
ownership
and control systems 7
of IP rights 327
of outputs from publicly funded research 20–22, 378
Oxfam 86

P

Paris Convention for the Protection of Industrial Property 117–118, 139, 255, 340
Parsons, Talcott 36
patentability 234
patent commons 276–277
Patent Cooperation Treaty (PCT) 139, 237–238, 255, 272, 305, 340
International Bureau, Geneva 256, 261
Office, Geneva 238
patent data 276
patenting
and commercialisation 383
dynamics 20
university 320
patent offices in Africa 234
roles of 235–236
survey data *243–244*
patents 1, 10, 132, 138, 234, 248, 249, 346, 378
access to information 259
applications 236, 238
business method 210
database 276
design 379
"dumping grounds" 381
exclusive rights 270
incentivised payment for examiners 241
regimes in Africa 236–238

protection 381, 389
and renewable energy 15
in research 14
software 210
statistics 11
systems in African states 240–241
performance industry 133
Perroux, François 35
Petrobras, Brazil 386
Petromoc, Mozambique 251, 253, 257
"petty patent" utility models (UMs) 248
pharmaceutical industries 133, 134, 306
pharmaceutical research 306
Pitney Bowes 276–277
place-based intellectual property (PBIP) 17, 378
strategies 77, 78
plagiarism 221
Plant and Health Inspectorate, Kenya 143–144
plants 273
African palm 249
breeder exemption 270, 383
breeders' rights 138
castor seed 249
coconut 248, 249
genetic resources 376
jatropha 248, 249, 250, 251, 252, 256, 272, 274, 376, 386
sugar cane 248, 249
sui generis protection for varieties, Egypt 383
sunflower 249
variety rights systems 270
see also jojoba
Population Action International 45–46
preconditions for take-off 36
Pred, Allan 35
principles of inclusion and collaboration 378
prior informed consent 151
private-sector investment 319–320
probability proportional to size (PPS) measures 339
Proclamation for the Registration and Protection of Designation of Origin, Ethiopia 91
product
innovation 38
quality improvement 96
production cost 125
professionalism in patent offices 239
property ownership, attributes of 90
proprietary value 101
protection of IP 285–286
public good 172, 204
publicly funded research 14, 318, 320, 338, 351, 359, 375, 376, 384, 385
ownership of outputs 383
public–private partnerships 14–15
public research organisations (PROs), Botswana 335, 336–337, 339, 353, 363
publishers' copyright policies 221–222
publishing
digital 204
offline print 204
scholarly 204

Q

qualitative data 13, 373
quantitative data 13, 373
quasi-public good 173

R

reading or recitation of an extract 216
remuneration, direct financial 204
Renewable Energy Strategy, Egypt 268
research
analytical framework 12
applied 353
development-focused 287
emphasis on institutions *357*
epidemiological 353
evaluation 353
investment of public funds 306
literature/desk review 353
methods 12–13
multi-disciplinary network of researchers 12
perception of institution's involvement *357*
publicly funded entities 309
publishing 285
respondents' average yearly output, Botswana *358*
thematic areas 13–16
types *356*
under-utilisation of findings 286
research and development (R&D) 15, 20, 43, 45, 209, 242, 253, 254, 283, 305, 322, 375, 382
university-based 308
Revised National Policy on Research, Science, Technology and Innovation, Botswana 344
rights-holders 100
rights management information (RMI) 219
Rogers, Everett 36
Rostow, Walt Whitman 36
royalties 204
Rural Industrial Promotion Company (Botswana) (RIPCO (B)) 344
rural poverty 152

S

scholarly communication 208
scholarly publishing 203, 205, 287
literary works 207
scholarly works, use of 221
scholarship 208
see also architecture for Kenyan scholarship
school use and copyright 215–216
Scielo OA publishing platform, Brazil 289
Scielo South Africa 289
science and engineering publications 376
Science and Technology Capacity Index (STCI) 344

Science and Technology Policy, Ethiopia 322
"science first" position 337
science, technology and innovation (STI)
  African Science, Technology and Innovation Indicators (ASTII) 39
  Botswana 335, 344
  national goals 22
  Policy, Ethiopia 316–318, 322, 328, 338, 375
  at Uganda National Council for Science and Technology (UNCST) 65
scientific information in African patent applications 242
scientific research, new economics of 337
scientists and academics 272–274
Schumpeter, Joseph 34, 41
Seeds and Plant Varieties Act, Kenya 140
sharing or non-disclosure agreements 379
Sierra Leone, study 48
small, micro- and medium enterprises (SMMEs) 341
small and medium enterprises (SMEs) 253, 255, 324, 327, 391
  access to technology 258
  utilisation and adaptation 256
small-scale enterprises 109
small-scale entrepreneurs 111
Smith, Adam 34
social and cultural value of textiles 110
social (*de facto*) commons 171–174
socialisation of knowledge 286–287, 299
socially conscious consumers 86
social network analysis (SNA) 63, 64
social networks 11
Society for International Development (SID), Kenya 210
socio-economic development 32, 134, 204, 283, 373, 382, 384–385, 387
  grassroots, *ad hoc* visions 387
  high-level, state visions 385–386
  mid-level, associational visions 386
  sociological approach to development 36
solar and wind energy 272
Solow, Robert 35
  growth model 35
Sony 276–277
sorghum 249
South Africa 118, 385
  traditional healers 376
  traditional medical practitioners 386
South African Revenue Service 307
Southern African Development Community (SADC) 344
South Korean patent office (Korean Intellectual Property Office) 275–276
standardisation 109
Standards Organisation of Nigeria (SON) 110–111, 116, 118–119, 390–391
  Director of International Standards and SMEs 110
  Duty Drawback Schemes 125
  respondent adherence to standards *119*
Statistical Office of the European Communities, *see* Eurostat
sub-Saharan Africa
  informal employment 47
  perspectives 3
  "youth bulge" 45
  youth-to-adult ratio 45
sui generis
  ex parte form of GI protection 94
  ex officio form of GI protection 94
  geographical indications (GIs) 77–78, 80
  protection of GIs, TK, plant varieties 389–390
  regimes 80
  systems 18
Sumitomo Chemical Company 256
Sun Biofuels Mozambique 256–257
  Quinvita 257
  Lufthansa 257
supply-side factors 47
Sussex Manifesto: Science and Technology for Developing Countries during the Second Development Decade 38
Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore within the Framework of ARIPO 139–140, 340

T

take-off preconditions 36
Tanzanian small-scale farmers 382
Tea Board of India 97
Technical and Vocational Education and Training (TVET), Ethiopia 323–324
technological development 35, 36
technological innovation 33
technological knowledge 242
technological protection measures (TPMs) 14, 173, 219
Technology and Human Resources Programme (THRIP), South Africa 303
Technology and Innovation Support Centres (TISCs), WIPO 259
Technology Innovation Agency (TIA), South Africa, 288, 304, 308, 309
technology research outputs 328
technology transfer offices (TTOs) 292, 296, 302, 307, 366
  funding functions at Wits Enterprise 305
  informal mode 382
  and legal offices 309
telecommunications 203
Ten-Year Innovation Plan, South Africa 288
Thomson Reuters Web of Science 289
trade
  global 79

liberalisation 109, 111
secrets 1, 10, 138, 346, 379, 389
trademark-based GI protection 101
trademark GIs versus *sui generis* GIs 100–102
ecological, cultural, biodiversity goals 100
trademarks 1, 10, 80, 132, 138, 346, 378
collective 78
conventional 78
ordinary 78
protection 389
registration and licensing 98
in research 13
speciality 78
see also communal trademarks
Trade Marks Act, Kenya 140, 141
Trademarks Registry, Nigeria 116
Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement, WTO 2, 4, 117–118, 132–133, 255, 269, 340
traditional cultural expressions (TCEs) 133, 136, 145
traditional ecological knowledge 133
traditional healers, Bushbuckridge, South Africa 151–152
Traditional Health Practitioners Act, South Africa 159
traditional knowledge (TK) 80, 123, 136, 138, 214, 341, 376, 378
and biodiversity 155
biological resources and cultural goods 133
commercialisation 133
commons 16, 18, 134, 151
commons-based approach 380
commons pool 160
digital library initiative as defensive protection 145
exploitation of 18
legal trust mechanism 18
multi-generational 159, 380
patent applications 271
potential of commons arrangements 18–19
in production processes 114
in research 15
sui generis protection 145
TK-based agricultural products 80
TK-related IP challenges 16
trans-generational territorial 81
Traditional Knowledge Digital Library (TKDL), India 134, 144
traditional medicinal knowledge 133, 375
ancestors Nkomo le Lwandle and Dlamini 157
from healer (*sangoma*) to apprenctice (*thwasa*) 157
transfer and collection systems 158
traditional society 36
trust
administration rules 166
beneficiary 166–167
property 164–165
settlor 165
terms 165–166
trustee 166
Trust Property Control Act, South Africa 162–164, 166

U

Uganda 59, 375
auto mechanics 387
Central Engineering Workshop, Kampala 70
Kampala 59
policy-making 72–73
see also Gatsby Garage automotive workshop
Uganda Gatsby Trust (UGT) 64
Uganda National Council for Science and Technology (UNCST) 65, 72–73
UK 78, 94, 118, 319–320
Copyright Acts, colonial era 213–214
Intellectual Property Office 275
IP framework 285
UN
Commission on Trade and Development (UNCTAD) 94, 343
Declaration of the Rights of Indigenous Peoples 139
Department of Economic and Social Affairs (UNDESA) 251–252, 256
Educational, Scientific and Cultural Organisation (UNESCO) 6, 47, 151
Framework Convention on Climate Change (UNFCCC) 252, 267, 276, 382–383
Industrial Development Organisation (UNIDO) 116
Office for West Africa 46
unemployment 152
unfair competition 101
Universal Copyright Convention (UCC) 214
universities 338
university-generated knowledge 317
university–industry knowledge transfer, Ethiopia 316, 329, 376, 383
university–industry linkages 385
University of Botswana (UB) 339, 342, 345
Institutional Review Board (IRB) 339
Office of Research and Development (ORD) 342
research community 342–343
University of Cape Town (UCT) 21, 282–285, 383
commercialisation and dispute resolution 295
Creative Commons (CC)-licensed learning materials 298
Intellectual Property Advisory Committee 295
ownership of IP 295
research and innovation indicators 295–296, *296*
Research Contracts and IP Services office (RCIPS) 285, 296–297, 298, 299
researcher-inventor perspectives 299–300
UCT OpenContent website 298

University of Nairobi Institute of Development Studies (IDS) 210
University of the Witwatersrand (Wits University), South Africa 21, 282–285, 383
  funding 302
  IP protection strategy 304
  patent filing 301–302
  pharmaceutical research team 305
  research and innovation indicators 300–301
  researcher-inventor perspective 305–307
  research-IP manager perspective 302–305
  Technology Transfer Unit 302
  Wits Enterprise (Wits Commercial Enterprise (Pty) Ltd) 285, 302–304, 305, 307
US
  Agency for International Development (USAID) 116
  Digital Millennium Copyright Act 217–218
  Patent and Trademark Office (USPTO) 275–276, 336
  Sonny Bono Copyright Term Extension Act (CTEA) 218
  Uniform Computer Information Transactions Act (UCITA) 218
utilities, innovation in 38
utility models (UMs) 138, 248, 379

V
value chains 82
  differentiation strategies 85–88
  Ethiopian coffee 83–85
  Ghanaian cocoa 85
  intermediaries in products 95–96
visual art and design 133

W
Web of Science journal index 289
Wennekers and Thurik Model 42–43, 44
West African countries 110
White Paper on Science and Technology, South Africa 288
witchcraft 159
Witchcraft Suppression Act, South Africa 159
work policy, externally funded 309
World Bank 79, 252
World Business Council for Sustainable Development (WBCSD) 276–277
World Economic Forum (WEF) 344
  Global Competitiveness Report 344
World Employment Programme (WEP), ILO 48–49
  mission to Kenya 48–49
World Intellectual Property Organisation (WIPO) 3, 14, 18, 112, 143, 239, 255, 259
  development agenda 3, 14, 259
  Convention Establishing WIPO 340
  Creative Heritage Project 145
  digitisation of culture 145
  digitisation of Maasai culture 135–136, 145
  Diplomatic Conference, Marrakesh 3
  Internet Treaties 211
  Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled 3
  patent databases 276
  PATENTSCOPE database 276
  Technology and Innovation Support Centres (TISCs) 259
  WIPO Copyright Treaty (WCT) 211, 340
  WIPO Patent Information Service (WPIS) 276
  WIPO Performances and Phonograms Treaty (WPPT) 211, 340
World Trade Organisation (WTO) 2–3, 97, 110, 239, 269, 343
  Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement 2, 97, 117, 132–133, 211

Y
youth unemployment in Africa 46–47
  deficiency in skills 46

Z
Zwolle principles, on scholarship and copyright management 218