Overview: The Role of Information Policy in Resolving Global Challenges

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Overview: The Role of Information Policy in Resolving Global Challenges

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Executive Summary

Governments in many countries recognize the importance of knowledge-based societies whose citizens are adaptable and have the means to engage in continuous learning. Information societies can address global challenges far more readily than those that do not adopt its characteristics of ICTs (information and communication technologies) and connectivity; usable content; infrastructure and deliverability; and human intellectual capability.

Information policy emerged as a result of the unprecedented access to information that the Internet afforded. It encompasses the laws, regulations, doctrinal positions, and other societal decisions related to the creation, processing, flows, access, and use of information. It can include many issues, such as ICTs; information access, retrieval, and use; data protection; privacy; secrecy, security, veracity, and transparency of government records; freedom of information legislation; information management; copyright; intellectual property; and e-government. Because it evolved from issues encountered by many different sectors, it is complex and multi-dimensional, involving the fields of technology, communications, law, government, medicine, education, business, and economics. Information policies can facilitate access to and use of information or they can restrict it.

Access to information is not ubiquitous and access alone does not ensure that people can effectively find and use information. The concepts of “digital divide” and “information poverty” persist. Policies, laws, and regulation related to information vary considerably from one nation to other, and even within nations. Policies may be inconsistent; over-regulated; or completely lacking. Policies generally develop as needed, or as problems arise, rather than in a coordinated, cohesive manner with all major stakeholders participating in the decision-making.

The development of effective and sustainable solutions to global problems optimally occurs in collaboration with stakeholder communities and societies. All involved need to have the ability to access and know how to find and use the best information available. Inequity in access to information and inadequate training in how to use information both in the United States and worldwide hampers the collective problem-solving that could lead to dynamic, innovative
results. Is information policy an effective means to ensure that communities have the knowledge to engage in solutions to global problems? Would a focus on the development of information policy result in the ability to solve persistent problems such as poverty and hunger, universal education, gender equality, health, environmental sustainability, and economic growth and development, and society and leadership? Viable alternatives include a focus on a specific aspect of information policy (infrastructure, information resources, or information literacy); targeting the global challenge to be addressed with supportive information policy; and a consideration of both the country’s economy and type of government.

This brief is a broad overview and is the first in a series. Future briefs will address the role of specific aspects of information policy in addressing individual global challenges.

Overview: The Role of Information Policy in Resolving Global Challenges

“How well an individual, an organization, and an entire society can harness, access, share, and make use of available information will ultimately decide their ability to generate economic growth and to enhance the quality of life for all.”

Gwang-Jo Kim
Director of UNESCO Bangkok [1]

This policy brief provides an overview of the role of information policy in resolving global challenges. Information policy encompasses the laws, regulations, doctrinal positions, and other societal decision-making related to the creation, processing, flows, access, and use of information [2]. It covers a variety of issues that can include information and communication technologies (ICT); information access, retrieval, management, and use; information resources; data protection and privacy; transparency of government information; copyright; and intellectual property [3]. These issues can be grouped into three categories:

1. Information Infrastructure (the technologies that allow for access to information).
2. Information Resources (the knowledge content; its accessibility through open access; and its legal and ethical use).
3. Information Literacy (the skills and competencies of individuals to effectively and efficiently find, use, manage, and communicate information for specific purposes).

The question is whether policy setting in these areas can facilitate the development of solutions to global challenges.

The Global Challenges

The United Nations identified the following as the most pressing global challenges that need to be resolved in its Millennium Development Goals [4]:

- End poverty and hunger
- Universal education
- Gender equality
- Child and maternal health
- Combat HIV/AIDS
- Environmental sustainability
- Global partnership

The strategies identified to reduce poverty to achieve the Millennium Development Goals were: rural and urban productivity; health; education; gender equality; water and sanitation; environmental sustainability; science, technology, and innovation; and transparent, decentralized governance [5]. These are similar to the challenges identified by the Global Policy Research Institute (GPRI) at Purdue University:

- Agriculture: crop development, food security, safety
- Environment: climate change, sustainability, water, air, and arable land
- Energy Systems: alternative sources, delivery, efficiencies
- Economy: global commerce, development
- Health: health care engineering, disease, drug research
- Security Defense: space, cybertechnology (http://www.purdue.edu/globalpolicy)

The development, implementation, and long-term success of effective and sustainable solutions to global problems optimally occur in collaboration with stakeholder communities and societies [5,6,7,8,46]. Local needs and local problems may differ greatly from one community to another. Communities can participate in developing...
solutions to issues by helping to determine what information needs to be gathered, helping to gather and assess the needed information, providing the community’s perspectives, and collaborating on formulating recommendations and decisions. All involved need to have the ability to access and use the best information available.

**Information Policy**

Information can be viewed as a national resource that substantially benefits a country in its social and economic growth [1,9]. It is necessary for science and industry; for education and leisure; and for democracy and an open society. The concept of the information, or knowledge, society is replacing the long-standing paradigm of the industrial society as essential for the social, cultural, and economic development of nations and communities, institutions and individuals [2,9,10]. Information societies can address global challenges far more readily than those that do not adopt the characteristics of ICTs and connectivity; relevant information resources; infrastructure and deliverability; and human intellectual capability. Many world leaders believe that the formulation of national information policy has strategic importance [2]. Citizens in an information- or knowledge-based society have the means to engage in continuous learning which contributes to global competitiveness.

There are advantages and disadvantages to information policy as a means to address global challenges. These are some of the positive aspects of information policy:

- Information policy can provide a consistent, coordinated, long-term strategic approach to issues of technological access by all; creation and support for freely available information resources; and training in how to effectively find, use, and communicate information.
- Information policy can be developed through a consensus process by involving all stakeholders, which will increase the likelihood of implementation and sustainability.
- Established goals for information policy can include realistic financial strategies.
- Information policy can include processes for accountability to ensure that goals are met.

These are some of the negative aspects of information policy:

- Information policy is not usually an end in itself but supports other initiatives.
- Government assistance can motivate success, but can hamper private investment or healthy competitiveness. Lending and subsidies can create dependencies on government funding and expectations of continued funding.
- There is the potential for corruption. Official corruption is more difficult when there is little or no engagement between the government and industry. There are conflicts of interest when governments are closely connected with IT companies.
- Some governments do not favor unrestricted global information access and dissemination.
- Governments can use information policy for political ends, such as hindering communication and discussion of administrative actions, protecting private interests, and increasing public fear.
- Partisanship can influence public opinion and acceptance of information policy.
- Changes in high-ranking government personnel can dramatically change information policies [1,8,9,11,50].

Policies, laws, standards, and regulations related to information vary considerably from one nation to another, and within nations. Inconsistency in policies, over-regulation, and lack of policy exist because they develop independently from one another and as needed or as problems arise, rather than in a coordinated, cohesive manner with all major stakeholders participating in the decision-making [12,13].

**Infrastructure**

Investments in ICT have a favorable impact on economies and human development [7,12,15,16,17,48]. In fact, the growth effect of broadband is significant and stronger in developing countries than in those that are developed [14]. Nations that have networked information capabilities have a foundation for new economic development opportunities; the sharing of scientific, technical, and business knowledge; and collaborations. The World Bank found that every 10 percentage point increase in broadband penetration in low- and
middle-income countries accelerated economic growth by 1.38 percentage points [18]. There are demonstrated relationships between information creation, processing, flows, access, and use and social and economic development. These include correlations between progress in development and progress in ICTs; and estimations of the causal effect of ICTs on economic and social performance. However, there are disparities in developed and developing countries. The International Telecommunication Union reported that 70% of the population in developed countries had access to the Internet in 2011, compared with 24% of the population in developing countries [19]. Thirty-four percent of people over age 15 from remote areas in Australia did not use the Internet in 2008–09, compared with 23% of people in Australia’s major cities [18]. Experts in the use of ICTs in development consider progress to have been generally slow, insufficient, and without planning.

The World Summit on the Information Society, UNESCO’s Information for All program, and other prominent organizations have raised awareness about the digital divide within and between nations. There are differences in countries that have high-, middle-, and low-income economies; rural and urban communities; and within all countries between affluent people and those in relative poverty. In many countries, women have less access to ICT and less skill in using technologies than men [1,21,22,48]. Inequity in access to information and insufficient training in how to use information hampers the collective problem solving that could lead to dynamic, innovative results.

Many education systems do not have policies relating to using information that ensure that educators are well prepared for teaching to the needs and challenges of the 21st century. There are insufficient monitoring systems in place to give decision-makers evidence of the positive or negative impacts of ICT in education [10].

**Information Resources**

UNESCO developed strategies for countries on developing open access policy. Jānis Kārklīns, Assistant Director-General for UNESCO’s Communication and Information, stated that open access “leads to opportunities for equitable economic and social development, intercultural dialogue, and has the potential to spark innovation” [23]. Openly accessible information and formal training throughout the educational system in finding and using information provides the maximum potential for effective community-based solutions to global issues.

There is a need for many additional online resources and accurate data. Population data are not collected systematically or consistently in every country [24]. During the recent global financial crisis, the need for financial data resources that are timely, internally consistent, and comparable across countries for monitoring financial stability became apparent [25]. The International Monetary Fund and the Financial Stability Board developed recommendations for strengthening existing data. There are restrictions on who can access information in some locations and sectors [50]. Those who speak English have access to more information in most fields of knowledge [12]. People who have greater access to education, including languages, and more economic resources to access information can use English language resources and also have access to regional resources available in their first language. Access to global information is restricted if English is not a common language in a community, and this limits a country’s international competitiveness [21,26].

Other communities have disadvantages in access to information resources. Societies that rely greatly or exclusively on oral communication, have high levels of illiteracy, or do not have the financial means to pay for online access to resources do not have the advantage of that source of knowledge [1,9,26].

**Information Literacy**

The cost to distribute information is relatively low once an ICT infrastructure is in place. But access to information alone does not ensure that people can effectively find and use information [8,21,22,27,51]. There is mounting evidence from employers that people entering and in the workforce lack information literacy (IL) competencies, while employers emphasize that it is required for workplace effectiveness and continuous learning [28].
Opinions on who should be responsible for information literacy vary. These differences may prevent the formation of policies related to information literacy or result in contradictions in a national or international context.

UNESCO funded a project to compile overviews of the state of IL around the world in 2007 [29] and a framework for international IL indicators in 2008 [21]. Understanding and acceptance of IL at the policy level varies greatly. In Australia, there is an understanding and support for IL and its role in lifelong learning across a wide range of organizations and sectors, but predominantly in postsecondary education through core student learning outcomes. The Bologna process included IL and Belgian student teachers are required to take a course in information retrieval. There is financial, institutional, and state support in France where a 1996 law helped in integrating IL in curricula. The Nordic countries collaborate through the NordINFOLIT network established in 2001 to encourage development, find common solutions, and document projects in IL. Denmark and Norway are beginning to introduce IL in educational institutions. Finland integrated IL in its Finnish Virtual University. A Swedish law required that higher education develop IL capabilities. In Francophone Africa, ICT and digitization is not well developed, so IL training covers the use of print resources. Most of the IL activity in Latin America occurs in postsecondary institutions, though it is not usually part of the curriculum. There is little IL activity in schools and none in public libraries or the private sector [29].

Existing Approaches to Information Policy

There have been numerous approaches to information policy since the concept originated in the 1970s. The examples that follow illustrate approaches to policies from governments and NGOs (non-governmental organizations), from democratic and non-democratic countries, and from countries that vary in gross national income. The current approaches represent a range of government involvement and participation from the private sector. There has been a stronger focus on ICT, but the examples also describe policy related to information resources and information literacy, which tend to be more recent than ICT.

NGOs have a long history of involvement in developing recommendations related to information policy. UNESCO has as its primary purpose to maintain, increase, and disseminate knowledge [30]. Some of its objectives related to global challenges are to: attain quality education for all and lifelong learning; mobilize science knowledge and policy for sustainable development; address social and ethical challenges; and build inclusive knowledge societies [31]. In 1974, the General Conference of UNESCO recommended that member states either create or improve national information systems through governmental advisory and coordinating bodies [32]. UNESCO promotes universal access to information through online multilingualism and open access to information [23]. The World Bank suggested objectives for its assistance strategy in 1996 that harnessed information and technology for poverty reduction and economic development. Those included:

- Widespread, equitable access to communication and information services through national information infrastructure and integration into international networks;
- Information policies and systems that improved the function and competitiveness of key economic sectors;
- New ways to use information technology to help solve the problems of education, health, poverty alleviation, rural development, and the environment [33].

More recently, the 2003 Prague Declaration represented 23 countries and stated that IL plays a leading role in reducing inequities through information use in multicultural and multilingual contexts [34]. The Declaration recommended that governments develop programs to promote IL to close the digital divide through an information literate citizenry, an effective civil society, and a competitive workforce. The 2005 Alexandria Proclamation, representing 17 countries, declared IL to be a basic human right and the foundation for achieving the Millennium Declaration and World Summit on the Information Society goals [35]. UNESCO’s Information for All program held regional meetings in 2008-09 for “Training the Trainer in Information Literacy,” sponsoring 11 workshops attended by 761 participants from 99 countries [36]. UNESCO sponsored an international conference on Media and Information
Network on Information Literacy was established in 1994 Bangemann report outlining infrastructure that would promote an information society. It recommended an emphasis on education and training [45]. The European Network on Information Literacy was established in 2001 to determine the extent to which information literacy is a national policy issue in European countries; and to identify policies that relate to the integration of information literacy into university curricula [24].

Finland transformed into a knowledge economy during the 1990s driven by the ICT sector. It has one of the most open economies and is a leading knowledge-based economy. This took place because of a strong educational system and institutions for the formation of national consensus. Programs in economic policy management and national strategy issues for leaders helped to conceptualize and implement change. The Prime Minister chaired an Information Society Council that included key representatives of public administration, private sector enterprises, interest groups, and organizations [51].

The U.K. incorporated information functions into units in its Cabinet Office. The merged National Archives and Office of Public Sector Information provide leadership for information policy for the government and the public sector. Other departments address developing citizens’ skills; promoting media literacy; and libraries, museums, and broadcasting [49].

Australia’s government focused on infrastructure by making major investments and developing strong information policies for its National Broadband Network. The Network will connect all Australian households and businesses to a high-speed broadband network by 2015. It will sell services to private communications providers to fund the investment [20].

Kenya does not have a national information policy, though the government considers it important to have access to information and to expertise for problem-solving and economic development. Factors that hinder a national information policy are: lack of recognition of the relevance of information in development; insufficient financial resources; lack of people trained to apply for donor funds or develop policy; misappropriation of funds; insufficient libraries and databases of industrial, scientific and statistical information; poor understanding of user needs; and changes of personnel in policymaking positions [52].
Information policies are developing in countries in the Asia-Pacific region [1]. The Philippines developed national ICT strategies for improving the quality of life through the creation of a more digitally inclusive society and use of ICT in governance. Laws related to ICTs benefit marginalized groups and promote political reform. These were part of broader development plans but are generally uncoordinated, unsustainable, and short-term. Roles, responsibilities, and programs overlap. Nevertheless, there has been progress in supporting legislation, infrastructure, institutions, human capital, and public–private partnerships to promote the ICT industry [51].

Viable Alternatives for Solving/Mitigating/Or Adapting to the Issue

The success of the various approaches to information policy in resolving global challenges has been mixed. Most countries do not have a coordinated, well-planned strategy involving multiple stakeholders, prioritization, and sufficient funding to address ICT, creation of relevant information resources, or training in the use of technologies and resources (i.e., information literacy). As a result, local communities cannot fully participate in developing and implementing solutions to their societal problems. The following are viable alternatives for the role of information policy in resolving global challenges:

- **The aspect of information policy considered.** Policymakers would focus on a specific aspect of information policy: infrastructure, information resources, or information literacy.
- **The global challenge to be addressed.** Policymakers would focus on the global challenges and plan information policies to best address the challenges.
- **Economy and type of government.** Aspects of information policy to be developed and implemented would differ based on their classification in a matrix of economy and type of government. The World Bank ranks economies as low, middle, or high income determined by the gross national income per capita (see Appendix 1). The “Democracy Index” of the Economist Intelligence Unit (see Appendix 2) organizes countries by type of government. In 2011, almost half of the world’s population lived in a type of democracy (11% in a full democracy) and 1/3 lived in an authoritarian state. **High-income economies tend to have full democracies and low-income economies tend to have authoritarian or hybrid regimes (see Appendix 3).** None of the low-income economies have full democracies and only 2.5% of the authoritarian regimes have high-income economies. Therefore, the type of government is an important factor to consider in determining if countries will have the economic means to support information policies with appropriate infrastructure, information resources, and training.

Positive and Negative Consequences of Each Alternative

**Specific Aspect of Information Policy**

The positive consequences of a focus on a **specific aspect of information policy** are that the policy that is most needed, easiest to develop and implement, best aligned with priorities, or not adequately addressed by the private sector would be emphasized and implemented. Resources would be targeted to discreet, achievable goals. There would be less likelihood of redundancy and gaps in policy would be addressed. The particular information policy may influence improvement in multiple global challenges [7,26]. One group in the World Bank is focusing solely on ICT for development in its plan for 2012-15 [46]. Information resources and IL are at an earlier stage in the policy development process than ICT, requiring further data gathering [27]. This customization based on characteristics of individual countries is preferable to a common policy applied to all situations [48].

The negative consequences of a focus on **specific aspects of information policy** are that differing, and possibly irreconcilable, perspectives would make it difficult to coordinate policy across multiple sectors [47]. Policy that is easiest to implement, ICT, would be favored over the creation of needed information resources and education in how to find and use information [21,22,27]. Policies might be reactive rather than proactive [13]. Those who have greater power could impose an emphasis on aspects of policy that are politically advantageous to them [51]. Policy
The Global Challenge

The positive consequences of an information policy focus on the global challenge to be addressed are that information policy would holistically address infrastructure as well as information resources and training specifically to resolve a global challenge [50]. Limited resources would be targeted realistically to that primary goal. Global challenges would be addressed with customized local solutions and linked to solutions from other sectors [8].

The negative consequences of an information policy focus on the global challenge to be addressed are that the effectiveness of the policies would be dependent on the financial and educational resources available to implement the policies. The implementation of ICT policy without consideration of the information resources needed or IL in the community would decrease the likelihood of successful implementation and use [8].

Economy and Type of Government

The positive consequences of an information policy focus based on economy and type of government is that policies would take into consideration the monetary resources of a country and be financially realistic [12]. Governments that favor widespread and open access to information could address societal problems with more widely available and consistently accessible information [1]. Better coordination would reduce or prevent duplication of effort among the many stakeholders.

The negative consequences of an information policy focus based on economy and type of government are that policies for low-income economies would be very limited based on financial resources available. These countries are the ones that have the greatest need for the resolution of global challenges [17]. In countries with authoritarian governments, control of policymaking may be held by people who are motivated by self-interest, rather than the good of the citizenry. Policies may restrict access to and use of information, and thus be counterproductive to the tenets of a knowledge society [11]. Lastly, information may be used for criminal ends.

Conclusion

This policy brief focused on the question of the role of information policy in resolving global challenges. Three viable alternatives considered important influential factors: specific aspects of information policy, the individual global challenges to be addressed, and the economy and type of government of countries.

References


34. Thompson S. 2003. Information literacy meeting of experts, Prague, the Czech Republic, September 20–23, 2003: Report of a meeting. https://docs.google.com/fileview?id=0B3SNEP 9j56rIMjM4OGJiNWIltM2E4Ni00Yjc0LWJjYTct ZDMxZTVIYmMyMDAy&hl=en


Appendix 1.  WORLD BANK COUNTRY CLASSIFICATION

Low-income economies (61)
Afghanistan Guinea-Bissau Pakistan
Angola Haiti Papua New Guinea
Bangladesh India Rwanda
Benin Kenya Sao Tome and Principe
Bhutan Korea, Dem Rep. Senegal
Burkina Faso Kyrgyz Republic Sierra Leone
Burundi Lao PDR Solomon Islands
Cambodia Lesotho Somalia
Cameroon Liberia Sudan
Central African Republic Madagascar Tajikistan
Chad Malawi Tanzania
Comoros Mali Timor-Leste
Congo, Dem. Rep Mauritania Togo
Congo, Rep. Moldova Uganda
Cote d'Ivoire Mongolia Uzbekistan
Equatorial Guinea Mozambique Vietnam
Eritrea Myanmar Yemen, Rep.
Ethiopia Nepal Zambia
Gambia, The Nicaragua Zimbabwe
Ghana Niger
Guinea Nigeria

Middle-income economies (93)
Albania Georgia Philippines
Algeria Guatemala Romania
Armenia Guyana Russian Federation
Azerbaijan Honduras Samoa
Belarus Indonesia Serbia and Montenegro
Bolivia Iran, Islamic Rep. South Africa
Bosnia and Herzegovina Iraq Sri Lanka
Brazil Jamaica Suriname
Bulgaria Jordan Swaziland
Cape Verde Kazakhstan Syrian Arab Republic
China Kiribati Thailand
Colombia Macedonia, FYR Tonga
Cuba Maldives Tunisia
Djibouti Marshall Islands Turkey
Dominican Republic Micronesia, Fed. Sts.
Turkmenistan
Ecuador Morocco Ukraine
Egypt, Arab Rep. Namibia Vanuatu
El Salvador Paraguay West Bank and Gaza
Fiji Peru
American Samoa Grenada Panama
Antigua and Barbuda Hungary Poland
Argentina Latvia Saudi Arabia
Barbados Lebanon Seychelles
Belize Libya Slovak Republic
Botswana Lithuania St. Kitts and Nevis
Chile Malaysia St. Lucia
Costa Rica Mauritius St. Vincent and the Grenadines
Croatia Mayotte Trinidad and Tobago
Czech Republic Mexico Uruguay
Dominica Northern Mariana Islands Venezuela, RB
Estonia Oman
Gabon Palau

High-income economies (54)
Andorra Germany Netherlands
Aruba Greece Netherlands Antilles
Australia Greenland New Caledonia
Austria Guam New Zealand
Bahamas, The Hong Kong, China Norway
Bahrain Iceland Portugal
Belgium Ireland Puerto Rico
Bermuda Isle of Man Qatar
Brunei Israel San Marino
Canada Italy Singapore
Cayman Islands Japan Slovenia
Channel Islands Korea, Rep. Spain
Cyprus Kuwait Sweden
Denmark Liechtenstein Switzerland
Faeroe Islands Luxembourg United Arab Emirates
Finland Macao, China United Kingdom
France Malta United States
French Polynesia Monaco Virgin Islands (U.S.)

Appendix 2.  2011 DEMOCRACY INDEX CATEGORIZATION OF COUNTRIES.

Full Democracies.
Australia
Canada
Denmark
Finland
Iceland
Luxembourg
Netherlands
New Zealand
Norway
Sweden
Switzerland
Democracies under Stress.
Austria
Belgium
Costa Rica
Czech Republic
Germany
Ireland
Japan
Malta
Mauritius
South Korea
Spain
United Kingdom
United States
Uruguay

Flawed Democracies.
Argentina
Benin
Botswana
Brazil
Bulgaria
Cape Verde
Chile
Columbia
Croatia
Cyprus
Dominican Republic
El Salvador
Estonia
France
Ghana
Greece
Guyana
Hungary
India
Indonesia
Israel
Italy
Jamaica
Latvia
Lesotho
Lithuania
Macedonia
Malaysia
Mali
Mexico
Moldova
Mongolia
Montenegro
Namibia
Panama
Papua New Guinea
Paraguay
Peru
Philippines
Poland
Portugal
Romania
Serbia
Slovakia
Slovenia
South Africa
Sri Lanka
Suriname
Taiwan
Thailand
Timor-Leste
Trinidad and Tobago
Zambia

Hybrid Regimes.
Albania
Armenia
Bangladesh
Bhutan
Bolivia
Bosnia and Herzegovina
Burundi
Cambodia
Ecuador
Egypt
Georgia
Guatemala
Haiti
Honduras
Hong Kong
Iraq
Kenya
Kyrgyz Republic
Lebanon
Liberia
Malawi
Mauritania
Mozambique
Nepal
Nicaragua
Niger
Pakistan
Palestine
Senegal
Sierra Leone
Singapore
Tanzania
Tunisia
Turkey
Uganda  
Ukraine  
Venezuela

Authoritarian Regimes.
Afghanistan  
Algeria  
Angola  
Azerbaijan  
Bahrain  
Belarus  
Burkina Faso  
Cameroon  
Central African Republic  
Chad  
China  
Comoros  
Congo (Brazzaville)  
Cote d’Ivoire  
Democratic Republic of Congo  
Djibouti  
Equatorial Guinea  
Eritrea  
Ethiopia  
Fiji  
Gabon  
Gambia  
Guinea  
Guinea-Bissau  
Iran  
Jordan  
Kazakhstan  
Kenya  
Kuwait  
Laos  
Libya  
Madagascar  
Morocco  
Myanmar  
Nigeria  
North Korea  
Oman  
Qatar  
Rwanda  
Russia  
Saudi Arabia  
Sudan  
Swaziland  
Syria  
Tajikistan  
Togo  
Turkmenistan  
United Arab Emirates  
Uzbekistan  
Vietnam  
Yemen  
Zimbabwe
Appendix 3. CROSS TABULATION WITH DEMOCRACY INDEX AND WORLD BANK COUNTRY CLASSIFICATION.

<table>
<thead>
<tr>
<th></th>
<th>Full Democracy</th>
<th>Flawed Democracy</th>
<th>Hybrid Regimes</th>
<th>Authoritarian Regimes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low-income economy</strong></td>
<td>0% (n=0)</td>
<td>6.1% (n=10)</td>
<td>11.7% (n=19)</td>
<td>17.2% (n=28)</td>
<td>35% (n=57)</td>
</tr>
<tr>
<td><strong>Middle-income economy</strong></td>
<td>2.5% (n=4)</td>
<td>20.9% (n=34)</td>
<td>9.2% (n=15)</td>
<td>11.7% (n=19)</td>
<td>44.2% (n=72)</td>
</tr>
<tr>
<td><strong>High-income economy</strong></td>
<td>12.9% (n=21)</td>
<td>4.3% (n=7)</td>
<td>1.2% (n=2)</td>
<td>2.5% (n=4)</td>
<td>20.9% (n=34)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15.3% (n=25)</td>
<td>31.3% (n=51)</td>
<td>22.1% (n=36)</td>
<td>31.3% (n=51)</td>
<td>100% (n=163)</td>
</tr>
</tbody>
</table>

p = .000