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Evidence Uptake among International Nutrition Actors:
A Case Study in Uganda

A thesis submitted in partial fulfillment of the requirement
for the degree of Bachelor of Arts / in Interdisciplinary Studies from
The College of William and Mary

by

Emily Ann Mahoney

Accepted for Honors
(Honors, High Honors, Highest Honors)

Scott B. Jiles

Type in the name, Director

SCOTT JILES, KINETHOLOGIST + HEALTH SCIENTIST

David P. Aday, Jr.

Type in the name

David P. Aday, Jr., Sociology + Community Studies

Amy Quark

Type in the name

Amy Quark, Sociology

Williamsburg, VA
April 24, 2015

**EVIDENCE UPTAKE AMONG INTERNATIONAL NUTRITION ACTORS:
A CASE STUDY IN UGANDA**

“Although many researchers have been driven by the aim to influence policy in the field of international development, research is often ignored, top-down, inaccurate, or neglects the concerns of poor or marginalized people.”¹

*Emma Crewe and John Young
Overseas Development Institute*

Emily Mahoney
Economics and Public Health
College of William & Mary
eamahoney@email.wm.edu

¹ Crewe, Emma, and John Young. *Bridging research and policy: context, evidence and links.*

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ABSTRACT

A push for evidence-based decision making in the field of international development –including maternal and child nutrition— has sparked a “data revolution.”^{2, 3} Researchers in the developed world have generated vast amounts of open source data under the assumption that because of the breadth of Internet access across the globe, anyone and everyone will utilize the data.^{4,5} And yet, in developing countries, policy and practice remains largely uninformed by such evidence.^{6, 7} This gap between data supply and data demand is a market failure that not only reflects systemic power dynamics, but also perpetuates under-informed policy and practice.^{8, 9, 10, 11} Through an in-depth survey with 42 nutrition policymakers and practitioners involved in the Scaling Up Nutrition (SUN) movement in Uganda, this study examines the constraints and incentives that such decision makers face to using evidence in their work. This paper seeks to mitigate the effects of marginalization by increasing critical thought and action between researchers and decision makers, a key prerequisite for social change. We present recommendations for inclusive data dissemination strategies in the hopes of improving evidence uptake across the developing world.

² Okwaroh, Kenneth. "A Data Revolution to End Poverty?"

³ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

⁴ Elgin-Cossart, Molly. "Better Together: A Partnership for the Data Revolution [Part II]."

⁵ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

⁶ Newman *et al.* "What Is the Evidence on Evidence-informed Policy Making?"

⁷ Dhaliwal and Tulloch. "From research to policy.."

⁸ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

⁹ Stone, Diane. "Using knowledge: the dilemmas of bridging research and policy'."

¹⁰ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development.*

¹¹ Brock, Cornwall, and Gaventa. *Power, knowledge and political spaces...*

DEFINITIONS

Capacity includes knowledge, skills, or attitudes that constrain or enable behavior.¹²

Decision maker encompasses policymakers and practitioners. A policymaker or practitioner is a person who “makes the policy or practice decision,” though there is rarely a single person making the decision, nor is there any specific point at which a policy or practice decision is made.¹³ Generally when we use this term, we are referring to decision makers in Uganda, or generalizing about developing country actors.

Dissemination includes publication activities (e.g. production of memos and briefs) and convocation activities (e.g. workshops and conferences, dialogues between researchers and policymakers).¹⁴

Evidence-based decision making has considered a broad range of research evidence, along with information from both citizens and past practices.¹⁵ Evidence-based decision making is not exclusively based on research; in some cases, research may be considered and then rejected.¹⁶ Research can influence decision making in a range of ways: from altering the language or phrasing of a decision, to changing

¹² Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

¹³ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

¹⁴ Díaz Langou, Gala, and Vanesa Weyrauch. "Sound expectations..."

¹⁵ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

¹⁶ Ibid.

behavior.¹⁷ We use the terms evidence uptake, data uptake, and evidence-based decision making interchangeably.

Incentives encourage or discourage behavior. They are the motivation to take action, or in this case, to use data in decision making.¹⁸

Knowledge: In this paper, we principally focus on research-based knowledge, though knowledge also includes practice-informed knowledge and citizen knowledge.¹⁹ Research-based knowledge is knowledge sourced according to the best protocols of research and the requirements of individual specializations, including scientists, professional groups, and academics.²⁰

Market failure: In economics, a market failure is a situation where the allocation of goods and services is inefficient. In other words, quantity supplied does not match quantity demanded.

Open data is data that can be freely used, shared, and built on by anyone.²¹

Policy / practice are used interchangeably in this paper. They encompass both decisions and processes, including the design, implementation, and evaluation of

¹⁷ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

¹⁸ Ibid.

¹⁹ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

²⁰ Ibid.

²¹ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

interventions.²² Weyrauch and Diaz Langou (2011) define policy and practice as a “purposive course of action followed by an actor or set of actors.”²³

Power: Foucault defines power as discourse, embedded in socially constructed values and ways of seeing the world.²⁴ He argues that power can influence the exercise of material resources in order to secure a desired change or position.²⁵ It can be used to negotiate institutions, norms, conventions (including the formal/semi-structured ‘rules of the game’), and preferences.²⁶

Public good: A public good is defined in economics as “non-excludable” (those who cannot pay are not excluded from the benefits of the product) and “non-rivalrous” (when one person consumes, this does not affect another person’s consumption).

Research produces knowledge.²⁷ Research aims to investigate, learn, and generate knowledge by gathering information, contemplation, trial, and/or synthesis.²⁸ In an international development context, this could mean a laboratory study, consultation exercise, quantitative survey, randomized control trial, literature review, ethnography, or community-based participatory research.²⁹ We maintain that

²² Díaz Langou, Gala, and Vanesa Weyrauch. "Sound expectations..."

²³ Ibid.

²⁴ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Crewe, Emma, and John Young. *Bridging research and policy: context, evidence and links*.

²⁸ Ibid.

²⁹ Ibid.

research knowledge is power.³⁰ It is both determined and set by those in power, and also increases the power of knowledge-bearers.³¹

Researcher is an actor who produces research. Generally when we use this term, we are referring to researchers in developed countries.

³⁰ Crewe, Emma, and John Young. *Bridging research and policy: context, evidence and links*.

³¹ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

INTRODUCTION

The Data Revolution

Due to explosions of technological progress and substantial investments in infrastructure, previously overlooked corners of the world are now connected via electricity access, cable connections, and Internet-capable devices.³² This increased connectivity, combined with rising disposable incomes for a burgeoning African middle class, has caused more than half of African consumers to have access to the Internet through their mobile phones.³³ Communication between the Global North and South is skyrocketing, resulting in new and valuable access to data and information technology.³⁴

In an age of such global connectivity, the possibilities for globalization and international development seem endless. Hyper-connectivity allows for real time monitoring and feedback, transparent information on governance and aid allocation, and empirical evaluations of development theory.³⁵ This easy access to information, a chief prerequisite for the efficient allocation of resources, is spreading like wildfire and expanding both the scope and mission of international development efforts.³⁶ As such, the UN's post-2015 development agenda is gathering momentum for a "data revolution," a tantalizing catch phrase connoting evidence-based and inclusive progress.³⁷ However, early efforts pushing for "big

³² Gonzalez Morales *et al.* "A World That Counts: Mobilizing the Data Revolution..."

³³ Manyika *et al.* "Lions Go Digital: The Internet's Transformative Potential in Africa."

³⁴ *Ibid.*

³⁵ *Ibid.*

³⁶ Gonzalez Morales *et al.* "A World That Counts: Mobilizing the Data Revolution..."

³⁷ *Ibid.*

data” and the “open data movement” are primarily focused on collecting more, not necessarily better, data.³⁸ Researchers in the developed world advocate for the rapid generation of open source data, assuming that because of the breadth of Internet access across the globe, anyone and everyone will utilize the data.^{39,40} As such, a deluge of data and evidence has poured into the developing world, flooding a hyper-connected and yet misunderstood population with largely misinformed research.^{41, 42} And in turn, policy and practice in the developing world remains uninformed by such evidence.^{43, 44} This trend illuminates the glaring disparity between developed and developing world experiences, despite the best of intentions and the most innovative research designs and data portals. A necessary call for the restructuring of the “data revolution” rings loudly throughout the developing world.

Data Supply vs. Data Demand

Often referred to as the “last mile problem” whereby products do not ultimately reach their intended consumers, the disconnect between data generators and data users illustrates assumptions made about the “data revolution.”⁴⁵ At a 2012 conference in Nigeria on ‘Evidence Informed Policy,’ over 50 representatives from 18 countries convened to discuss the actual evidence on evidence-informed

³⁸ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

³⁹ Ibid.

⁴⁰ Elgin-Cossart, Molly. "Better Together: A Partnership for the Data Revolution [Part II]."

⁴¹ Ibid.

⁴² Elgin-Cossart, Molly. "Better Together: A Partnership for the Data Revolution [Part I]."

⁴³ Newman *et al.* "What Is the Evidence on Evidence-informed Policy Making?"

⁴⁴ Dhaliwal and Tulloch. "From research to policy.."

⁴⁵ Bodkin, Ron. "Why Solving the Last Mile Problem in Data Analytics Will Start a Revolution."

decision making.⁴⁶ Newman *et al*, the coordinators of the conference, emphasized the crucial distinction between the excessive supply of data from researchers in developed countries, and their disregard for the data's demand.⁴⁷ Data demand, including the incentives and capacity of developing country policymakers and practitioners to actually use data, determines the efficacy of the "data revolution" and yet remains overlooked.^{48, 49, 50, 51} In a free market, supply and demand are variables that interact, each responding to a change in the other and ideally ensuring an equilibrium point. However, open data, or data that can be freely used, shared, and built on by anyone, is a public good.^{52, 53, 53} As such, supply is determined by data generators, rather than data users. Data demand is a critical component of uptake and must be considered when designing, generating, and disseminating data.

In order to inform the future direction of the open data movement, this paper will explore the intricacies of data demand, including the capacity and incentives of decision makers. We will leverage a case study of the Scaling Up Nutrition (SUN) movement in Uganda, drawing from the experiences of these international nutrition policymakers and practitioners to understand the data demand landscape more broadly. A more nuanced depiction of decision makers' experiences can shift the

⁴⁶ Newman *et al*. "What Is the Evidence on Evidence-informed Policy Making?"

⁴⁷ *Ibid*.

⁴⁸ *Ibid*.

⁴⁹ Sapkota, Krishna. "Exploring the Emerging Impacts of Open Aid Data and Budget Data in Nepal."

⁵⁰ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

⁵¹ Stone, Diane. "Using knowledge: the dilemmas of bridging research and policy!"

⁵² Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

⁵³ Jerven, Morten. "What Kind of Data Revolution Do We Need for Post-2015?"

“data revolution” from quick technical fixes to critical thought and action. The following sections seek to contextualize this case study.

The Scaling Up Nutrition (SUN) Movement in Uganda

Maternal and child nutrition is the underlying cause of 3.1 million deaths, 35% of the disease burden in children younger than 5 years and 11% of total global DALYs.⁵⁴ Undernutrition manifests itself through vitamin and mineral deficiencies, stunting (low height for age), and wasting (low weight for height). If a child is malnourished in the first two years of life, the damages to physical and cognitive development are irreversible.^{55, 56} Malnutrition inhibits immune responses, impairs educational achievement, and reduces economic productivity.^{57, 58} These risk factors increase a malnourished child’s susceptibility to a host of other illnesses, and ultimately increase risk of mortality.⁵⁹ The causes of malnutrition range from direct causes, such as inadequate access to food, to indirect factors such as an unhealthy environment, including hygiene and sanitation.⁶⁰ Due to the breadth of underlying causes, malnutrition is a multi-sectoral problem. Addressing malnutrition requires collaboration, not only across sectors but also between researchers in developed countries and decision makers in developing countries. The Scaling Up Nutrition (SUN) movement, the leading international effort to improve maternal and child

⁵⁴ Black *et al.* "Maternal and child undernutrition..."

⁵⁵ Ibid.

⁵⁶ Bhutta *et al.* "Evidence-based interventions..."

⁵⁷ Ibid.

⁵⁸ Black *et al.* "Maternal and child undernutrition..."

⁵⁹ Bhutta *et al.* "Evidence-based interventions..."

⁶⁰ Ibid.

nutrition, brings together stakeholders from across these sectors and countries in order to garner support and mobilize resources. Because of the diversity of decision makers engaged and the need for data to inform coordinated future direction, the SUN movement is an ideal case study for understanding the complexity of data demand. Additionally, malnutrition's pervasive impact underscores the need to address data disparities efficiently and thoughtfully.

The Republic of Uganda joined the SUN movement in March 2011, with crucial buy-in from the Prime Minister and the Chairperson of the National Planning Authority.⁶¹ The Multi-Sectoral Technical Coordination Committee (MSTCC) is Uganda's platform for government agencies, implementing partners, donors, and academia alike to engage with nutrition policy and progress in Uganda.⁶² The Uganda Civil Society Coalition on Scaling Up Nutrition (UCCO-SUN) coordinates civil society organizations, while the Private Sector Foundation Uganda (PSFU) engages the private sector, mainly in food fortification.⁶³ These coordinating bodies joined together to write the 'Uganda National Action Plan,' which lays out specific budgets for a variety of nutrition interventions for 2011-2015.⁶⁴ Due to Uganda's scope of stakeholder engagement and early commitment to the SUN movement, Uganda has been named an "early riser" country.⁶⁵ However, the prevalence of stunting remains at 33.7%, and Uganda has the 13th highest

⁶¹ "Bringing People Together." Scaling Up Nutrition.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Uganda Nutrition Action Plan 2011-2016.

⁶⁵ "Bringing People Together." Scaling Up Nutrition.

number of children under 5 who are moderately or severely stunted.⁶⁶ While the organizational structures exist, implementation and progress remain lacking. The stalemate can at least in part be attributed to the sheer number of agencies and organizations involved, and the difficulty in coordinating them. And in part, the overwhelming supply of data in maternal and child nutrition has not been fully leveraged in decision making. Evidence-based decision making is more important than ever in Uganda's SUN movement. As such, this paper will explore the landscape of data demand in Uganda's SUN movement and develop strategic recommendations in order to maximize evidence uptake, support thoughtful implementation efforts, and ultimately make progress toward reducing malnutrition in Uganda.

⁶⁶ "Bringing People Together." Scaling Up Nutrition.

DRIVING QUESTIONS

The purpose of this study is to maximize evidence uptake across the developing world by closing the gap between researchers in the developed world and decision makers in the developing world. In order to do so, this study will leverage a combination of methods including semi-structured interviews, a literature review, a theoretical framework, and a survey of policymakers and practitioners in Uganda. The following overarching questions will guide the study throughout:

1. What drives the disconnect between researchers in developed countries and decision makers in developing countries?
2. What factors drive a nutrition actor's decision to use data or not?
3. How can we maximize data demand to ensure data uptake?

THEORETICAL FRAMEWORK

Overview

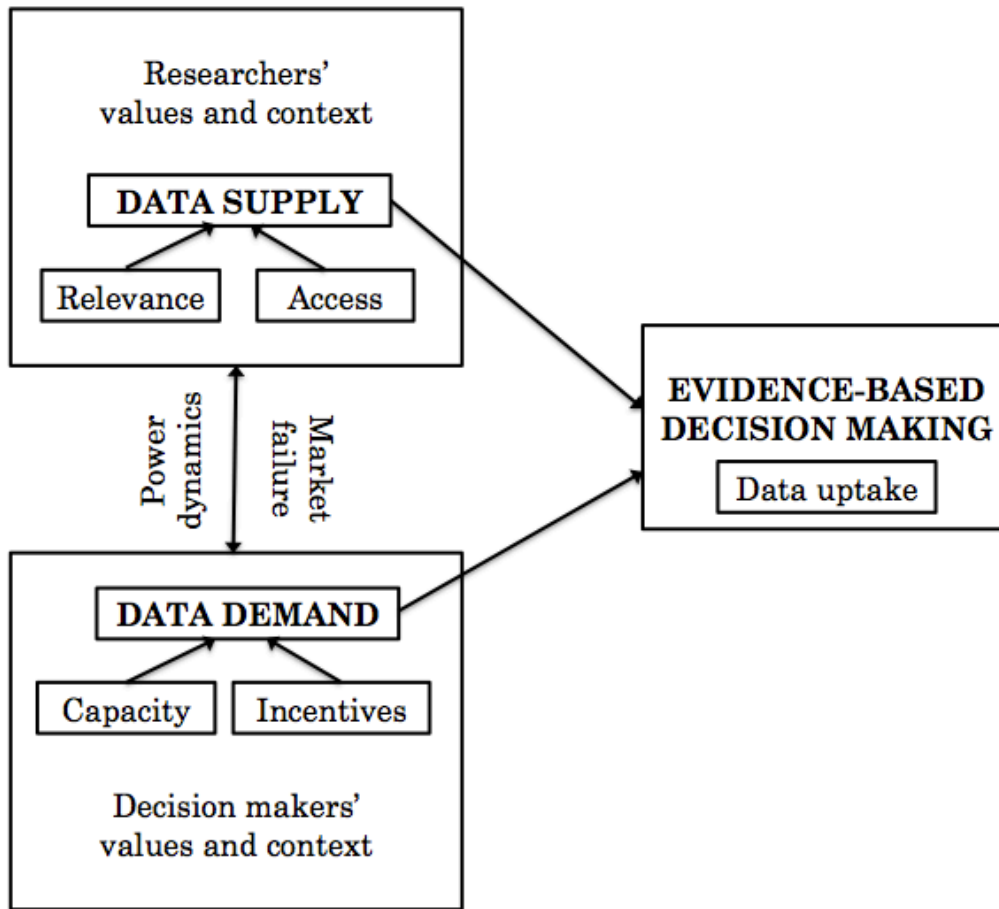
Bowen *et al* underscore that “...the real challenges to using evidence are structural, contextual, system-level barriers, not simple barriers to research transfer.”⁶⁷ This message is the crux of our theoretical framework. The lack of data uptake in the developing world is not a technical problem, but rather a symptom of a greater, structural problem.^{68, 69} Through a review of existing literature and semi-structured interviews with maternal and child nutrition decision makers in Uganda, this section develops a theoretical framework in order to understand systemic factors that could inhibit evidence-based decision-making. Figure 1 illustrates the interactions among these factors; each factor will be discussed in depth in the following sections.

⁶⁷ Bowen *et al*. "More than “using research”: the real challenges in promoting evidence-informed decision-making."

⁶⁸ Ibid.

⁶⁹ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

Figure 1: Theoretical Framework



The Public Goods Problem

In a free market, data supply and data demand would adjust to each other to reach their respective equilibrium quantities. However, a market failure is inhibiting the efficient provision of data: the data supplied by researchers in developed countries is outpacing the data demanded by developing countries.⁷⁰ This market failure reflects the nature of open data. Open data, or data that can be freely used, shared, and built on by anyone, is a public good.^{71, 72, 73} Economists characterize a public good as “non-excludable,” where those who cannot pay are not excluded from the benefits of the product, and “non-rivalrous,” where one person’s consumption does not affect another person’s consumption. For example, a street light is a public good; it is impossible to exclude someone from the benefits of the street light, and one person’s use of the light does not diminish another person’s use. There are several potential market failures at play here, but we will focus on the concept of preference revelation due to its relevance to open data.⁷⁴ In order to supply an efficient quantity of public goods, the government (or whoever is supplying the public good) faces the nearly impossible task of estimating demand for the good.⁷⁵ This is in contrast to an ideal free market, where supply and demand determine each other without need for government intervention. Estimating demand entails gauging constituents’ preferences through surveys, interest groups,

⁷⁰ Jerven, Morten. "What Kind of Data Revolution Do We Need for Post-2015?"

⁷¹ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

⁷² Stone, Diane. "Using knowledge: the dilemmas of bridging research and policy'."

⁷³ Jerven, Morten. "What Kind of Data Revolution Do We Need for Post-2015?"

⁷⁴ Wilson, LA D. "Preference revelation and public policy..."

⁷⁵ Noam, Eli M. *Public Good Demand Functions: Categories of Preference.*

and the like.⁷⁶ However, preference measurement lacks not only precision, but also objectivity. Because measuring demand for public goods generally falls in the domain of governments, the process is rife with politicized negotiations and its consequent biases. There is minimal incentive to consider the voices of marginalized groups, no matter the type of political system. As such, supply choices for public goods tend to reflect the preferences of these privileged groups, rather than true demand from all constituents.⁸⁴ In turn, public goods are frequently under-supplied or over-supplied, rather than settled at the equilibrium quantity. In the case of open data, the over-supply of data mirrors the preferences of developed country actors, rather than the preferences of data users in developing countries. The intricacies of these power dynamics will be explored before undertaking a more precise measurement of data demand.

Researchers' and Decision makers' Values and Context

The disconnect between researchers and decision makers is not a function of geographic distance nor coincidence, but rather a manifestation of a complex interplay between power, knowledge, and agency (Figure 1).^{77, 78} Newman *et al*, the coordinators of an evidence-based decision making conference in Nigeria, commented on the interaction between research knowledge and power:

⁷⁶ Krepelka, Jan. "Public Goods and Private Preferences: Are They Reconcilable?." (2007).

⁷⁷ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

⁷⁸ Brock, Cornwall, and Gaventa. *Power, knowledge and political spaces...*

“Knowledge and power cannot be separated—this plays out in the way that research is conducted, how research agendas are set, and who is included or excluded from supposedly neutral processes of knowledge identification.”⁷⁹

Neither the policymaking process, nor the research that seeks to guide it, is truly objective.^{80, 81, 82, 83} Rather, power is the filter through which we see the world. Michel Foucault, a French philosopher in the 1970s, proposed the notion of power as discourses—norms of speaking and acting—that are embedded in socially constructed values and perceptions.⁸⁴ In this view, power is a subtle force that shapes actors’ preferences, negotiations, conventions, and the distribution of material resources.⁸⁵ As such, these factors determine which types of knowledge are perceived as valid, and which are not.⁸⁶ Syed Hussein Alatas, a professor at the National University of Malaysia, experiences Foucault’s theory of power firsthand as an academic in the Global South.⁸⁷ He saw how foreign researchers would take data points in Malaysia, process and manufacture the data in England, publish them in books or articles, and then eventually disseminate the product back to developing nations.⁸⁸ In this process, residents of the Global South are treated as informants rather than partners, a crucial distinction that points to the balance of

⁷⁹ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

⁸⁰ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

⁸¹ Brock, Cornwall, and Gaventa. *Power, knowledge and political spaces...*

⁸² Stone, Diane. "Using knowledge: the dilemmas of bridging research and policy'."

⁸³ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

⁸⁴ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

⁸⁵ *Ibid.*

⁸⁶ Crewe, Emma, and John Young. *Bridging research and policy: context, evidence and links*.

⁸⁷ Alatas, Syed Hussein. "Intellectual imperialism: definition, traits, and problems."

⁸⁸ *Ibid.*

power.^{89, 90} Alatas said, “It was assumed that people here know less about practically all subjects than people in the West... and [foreign researchers] expected us to be interested in topics of interest to people abroad.”⁹¹ Alatas named this trend ‘intellectual imperialism’ and traced its roots back to colonialism, arguing that this exploitation of knowledge mirrors the economic exploitation and domination during the colonial period.⁹² ‘Intellectual imperialism’ displaces attention from issues that are of vital concern to Asian and African societies, depletes research capacity in these nations, and fosters dependency.⁹³ These trends both reflect and exacerbate pre-existing power disparities.⁹⁴

International development researchers, international financial institutions, corporations, and the world’s leading governments leverage their power to create a certain type of knowledge, a particular way of looking at and interpreting the world, and “best practices” for alleviating poverty.⁹⁵ But because international development is a field that prizes equality, researchers in the field are often blind to the role of power in their knowledge setting and sharing. Chloe Schwenke, a champion of international development ethics, points out the discrepancy between international aid actors’ good intentions and their simultaneous lack of awareness about how priorities are set and by whom:

⁸⁹ Brock, Cornwall, and Gaventa. *Power, knowledge and political spaces...*

⁹⁰ Cargo and Mercer. "The value and challenges of participatory research: Strengthening its practice."

⁹¹ Alatas, Syed Hussein. "Intellectual imperialism: definition, traits, and problems."

⁹² *Ibid.*

⁹³ Alatas, Syed Hussein. "Intellectual imperialism: definition, traits, and problems."

⁹⁴ *Ibid.*

⁹⁵ Stone, Diane. "Using knowledge: the dilemmas of bridging research and policy'."

“[International development experts] live relatively insulated lives, divorced from...face-to-face encounters with poverty. While these colleagues in international development are almost certainly well intentioned, sensitive, and caring persons, the problems of development that they wrestle with may necessarily appear abstract or remote to them... [they] avoided looking poverty in the face.”⁹⁶

Because researchers and decision makers are so distant from each other’s experiences, they have unrealistic expectations of each other.⁹⁷ Marginalized peoples feel that nobody listens (and that nobody will ever listen) while the privileged feel that marginalized peoples have little to say in the first place.⁹⁸ Paulo Freire, an educator of impoverished children in 1940s Brazil, understood how power disparities fueled these deep-seated misunderstandings.⁹⁹ His students bore the brunt of marginalization and felt helpless in the wake of such constant oppression.¹⁰⁰ Freire saw this helplessness and its role in maintaining the rampant inequalities in Brazil. As such, he pushed for ‘critical consciousness’ in his students, or the ability to both perceive social, political, and economic oppression and use said awareness to take action against oppression.¹⁰¹ Leonard *et al*, Freirein scholars, commented on his philosophy:

“Freirein critical education invites students to question the system they live in and the knowledge being offered them, to discuss the kind of future they want, including their right to elect authority and to remake the school and society they find.”¹⁰²

⁹⁶ Schwenke, Chloe. *Reclaiming value in international development...*”

⁹⁷ Stone, Diane. "Using knowledge: the dilemmas of bridging research and policy'."

⁹⁸ Ibid.

⁹⁹ Leonard, Peter, and Peter McLaren, eds. *Paulo Freire: A critical encounter*.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

¹⁰² Ibid.

‘Critical consciousness’ empowers marginalized and privileged people alike to shake the status quo. When truly bearing the burden of systemic injustice, the default is fatalism. And conversely, when riding the wave of privilege and opportunity, the default is self-interested advocacy. Freire argued that if both marginalized and privileged peoples learned and imagined something different than their own experiences, they could transform the world.¹⁰³

Freire’s theory encapsulates both the problem and the solution in data disconnects. Researchers and decision makers misunderstand each other’s experiences. Both groups think of each other’s activity as generating products instead of engaging in processes.¹⁰⁴ Lomas (1997) describes the disconnect as “two people trying to assemble a jigsaw puzzle, each with half the pieces...but each working in a separate room.”¹⁰⁵ Researchers don’t see the many factors that drive a decision maker’s policy or practice decision.^{106, 107} On the flip side, decision makers are largely ignorant of the incentives, rewards, and organization of the university researcher’s environment.¹⁰⁸ Lomas also notes:

“Much of this failure to apply research more effectively is attributable to a lack of communication between researchers and policymakers and a poor understanding on the one hand, of the environment in which research is generated, and on the other, of the realities facing policymakers trying to interpret and implement research findings.”¹⁰⁹

¹⁰³ Leonard, Peter, and Peter McLaren, eds. *Paulo Freire: A critical encounter*.

¹⁰⁴ Lomas, Jonathan. "Improving research dissemination and uptake in the health sector..."

¹⁰⁵ Lomas, Jonathan. "Improving research dissemination and uptake in the health sector..."

¹⁰⁶ Ibid.

¹⁰⁷ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

¹⁰⁸ Lomas, Jonathan. "Improving research dissemination and uptake in the health sector..."

¹⁰⁹ Ibid.

These misunderstandings are driven by systemic power dynamics. Researchers' privilege enables them to exert their influence and determine the 'right' research priorities without consultation of decision makers. Meanwhile, decision makers who have borne the brunt of marginalization for decades feel powerless and depend on Western research priorities rather than advocating for their own. In order to begin to bridge such gaps, both sides need to adopt 'critical consciousness' and imagine a context different from their own. This paper allows readers to do so by illustrating the experiences of nutrition decision makers in Uganda.

Data Uptake and Evidence-Based Decision Making

The outcomes in this framework are data uptake and evidence-based decision making. We will review both the definitions and assumptions within these variables. Newman *et al* (2012) define evidence-based decision making as a process that considers a broad range of evidence from both citizens and other stakeholders, while managing political, legal, and social realities.¹¹⁰ In this view, data is only one of the factors considered when making a policy decision (Figure 1). We use the phrases 'data uptake' and 'evidence-based decision making' interchangeably, but in a technical sense, data uptake is just one component of evidence-based decision making. One of our guiding understandings is that evidence-based decision making is 'sensible,' but not necessarily rational.¹¹¹ A rational decision would reflect only

¹¹⁰ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

¹¹¹ Lomas, Jonathan. "Connecting research and policy."

the most robust, compelling evidence available, while a ‘sensible’ decision acknowledges the influence of other structural factors.¹¹² Decision makers leverage not only ‘scientific evidence’ or knowledge gained through formal research, but also colloquial evidence or “anything that establishes a fact or gives reason to believe in something.”¹¹³ Scott Plous, a social psychologist, argues that decision makers are constantly “satisficing,” or choosing a path that satisfies their most important needs, even though the choice might not be ideal or optimal.¹¹⁴ The Abdul Latif Jameel Poverty Action Lab (J-PAL), a leader in evidence-based decision-making in international development, notes that researchers often focus on “theoretical, perfect-world situations” while disregarding the “practical, real-world” constraints confronting policymakers.¹¹⁵ This study seeks to de-mystify and then maximize ‘sensible’ evidence-based decisions in international nutrition, while recognizing that connecting research with policy is rarely a linear or logical process.^{116, 117}

In order to understand how decision makers adopt research, entry points for research must be evaluated and targeted. Lomas (2000) argues that policy decisions are based upon policymakers’ values.¹¹⁸ He defines values as a complex interaction between interests, ideologies, and beliefs.¹¹⁹ Interests are how one would *like* the world to work and fluctuate frequently depending on the scenario or policy.¹²⁰ On

¹¹² Lomas, Jonathan. "Connecting research and policy."

¹¹³ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

¹¹⁴ Plous, Scott. *The psychology of judgment and decision making*.

¹¹⁵ Dhaliwal and Tulloch. "From research to policy.."

¹¹⁶ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

¹¹⁷ Lomas, Jonathan. "Connecting research and policy."

¹¹⁸ Ibid.

¹¹⁹ Ibid.

¹²⁰ Ibid.

the other side of the spectrum, ideologies declare a person's view of how the world *ought* to work; they are difficult, if not impossible, to change.¹²¹ Poor policy decisions are in part attributable to ideology.¹²² In between interests and ideologies, beliefs encapsulate how we think the world *actually does* work.¹²³ Beliefs are the main entry points of research findings due to their relative malleability and yet substantial influence over policy.¹²⁴ Evidence has a greater chance of influencing policy when the targeted context has many entry points, or common beliefs (i.e. democratic, competitive, decentralized).¹²⁵ Once these entry points are targeted, evidence-based decisions can take many forms. Evidence can help governments decide whether to continue or terminate policy or programs, figure out which programs to modify, and percolate new ideas, information, and perspectives into the arena in which decisions are made.¹²⁶

A chief assumption in this theoretical framework is that a nutrition actor consciously makes a decision of whether to use data or not and considers a careful, comprehensive analysis before making such a decision. This assumption is necessary for distilling the complexity of evidence uptake, however we recognize that in reality, decision making is not an event.¹²⁷ Researchers tend to presume that policymakers develop policy by sitting around a table at a particular time and place

¹²¹ Lomas, Jonathan. "Connecting research and policy."

¹²² Dhaliwal and Tulloch. "From research to policy.."

¹²³ Lomas, Jonathan. "Connecting research and policy."

¹²⁴ Ibid.

¹²⁵ Díaz Langou, Gala, and Vanesa Weyrauch. "Sound expectations.."

¹²⁶ Ibid.

¹²⁷ Lomas, Jonathan. "Connecting research and policy."

with various pieces of evidence spread out on the table.¹²⁸ However, policymaking is not so much an event as it is a diffuse, haphazard, and somewhat volatile process.¹²⁹

Data Supply and Data Demand

Both data supply and demand are included as chief drivers of data uptake, as shown in Figure 1. Data supply includes both the relevance of data to the decision at hand; in this case study, this includes research in the realm of international nutrition. International nutrition research is burgeoning, especially since the release of the two Lancet series on malnutrition in 2008 and 2013.^{130, 131} These authoritative works have provided a strong foundation for evidence-based decision making in international nutrition. Additionally, access to data is a crucial component of data supply. This entails open access data and Internet access, both of which are widely spread across the world. Because data supply is already a priority for most researchers, its intricacies will not be detailed in this paper.^{132, 133, 134, 135, 136} Rather, data demand will be the focus of inquiry.

Based on discussions by Newman *et al*, we posit that data demand comprises capacity and incentives for data use.¹³⁷ We define capacity as knowledge, skills, or

¹²⁸ Lomas, Jonathan. "Connecting research and policy."

¹²⁹ Ibid.

¹³⁰ Bhutta *et al*. "Evidence-based interventions..."

¹³¹ Black *et al*. "Maternal and child undernutrition..."

¹³² Newman *et al*. "What Is the Evidence on Evidence-informed Policy Making?"

¹³³ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

¹³⁴ Booth, David. "Aid effectiveness: bringing country ownership (and politics) back in." *Conflict, Security & Development* 12, no. 5 (2012): 537-558.

¹³⁵ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

¹³⁶ Jerven, Morten. "What Kind of Data Revolution Do We Need for Post-2015?"

¹³⁷ Newman *et al*. "What Is the Evidence on Evidence-informed Policy Making?"

attitudes that constrain or enable behavior. This includes skills like data literacy or attitudes like distrust of the government. For example, Fanwell Banda measured the data literacy of a parliamentary staff of Zambia through an online diagnostic test.¹³⁸ Only one in five was able to pick from a list of the correct definition of a randomized control trial (RCT), while only one in three believed there was a consensus that the CIA did not invent HIV.¹³⁹ Additionally, incentives are defined in this study as motivations to use data and evidence; they encourage or discourage behavior.¹⁴⁰ For example, Datta *et al* 2011 conducted a study in Indonesia and found that evidence is used by policymakers only in certain circumstances, such as if an issue has been highlighted by the president.¹⁴¹ Incentives like this political push to use evidence in decision making shape the type and scope of data that policymakers and practitioners demand.¹⁴² These examples illuminate the complexity of data demand and underscore the need for a comprehensive framework to understand them.

¹³⁸ Newman *et al*. "What Is the Evidence on Evidence-informed Policy Making?"

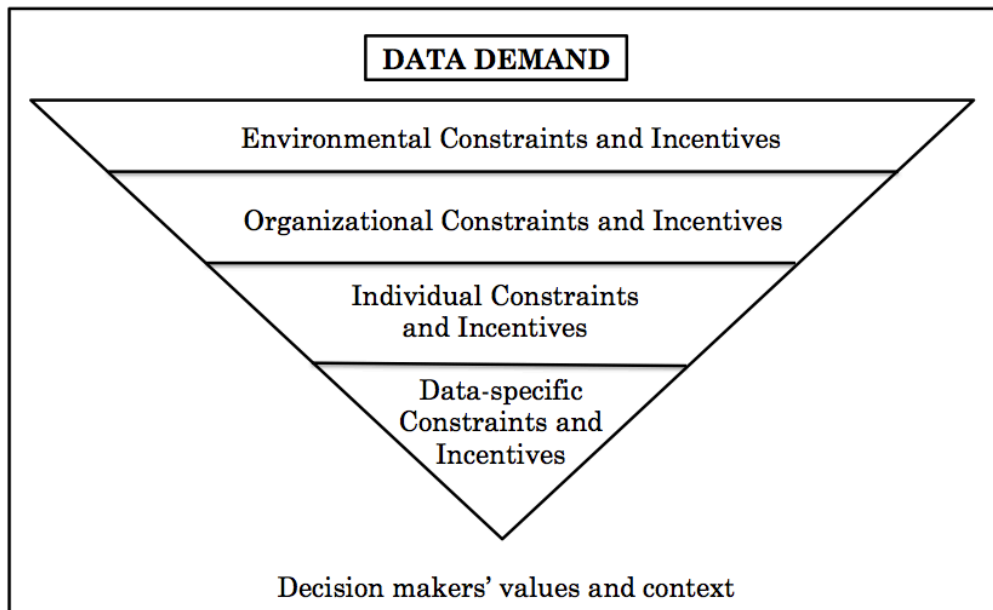
¹³⁹ *Ibid*.

¹⁴⁰ *Ibid*.

¹⁴¹ *Ibid*.

¹⁴² Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

Figure 2: Data Demand Breakdown



Data Demand: Capacity

We consider capacity to demand research evidence on four levels: environmental, organizational, individual, and data-specific. Most of the attention within the topic of data demand has focused on organizational and individual capacity.¹⁴³ This is likely because these categories are the easiest to address with quick fixes, like data literacy workshops or technical staff. As we have emphasized, the landscape of data capacity is much larger and more complex than lack of data literacy and technical capacity, and as such, we consider other factors that could be enabling or constraining a nutrition actor to use data in his or her work.

Environmental capacity includes infrastructure at the country-level, in both formal and informal institutions, that would enable or constrain a decision maker from using data. Case studies in Nepal, India, and Kenya found that a culture of secrecy, pervasive fear of the government, high levels of corruption, and political and bureaucratic resistance to innovation constrained development practitioners from using open access government data.^{144, 145, 146} Stone (2002) argues that demand for data (or “pull”) is weak because of the ignorance of politicians, poor economic climate, overstretched bureaucrats, and political oppression.¹⁴⁷ Powerful interest groups could also play a role in reducing data use.¹⁴⁸ Generally, “politics trumps

¹⁴³ Uneke *et al*, "Promotion of evidence-informed health policymaking in Nigeria."

¹⁴⁴ Sapkota, Krishna. "Exploring the Emerging Impacts of Open Aid Data and Budget Data in Nepal."

¹⁴⁵ Srivastava *et al*, "Open Government Data for Regulation of Energy Resources..."

¹⁴⁶ Chiliswa, Zacharia. "Investigating the Impact of Kenya's Open Data Initiative on Marginalized Communities..."

¹⁴⁷ Stone, Diane. "Using knowledge: the dilemmas of bridging research and policy'."

¹⁴⁸ Dhaliwal and Tulloch. "From research to policy.."

evidence,” and as such, an unstable political climate constrains data demand.^{149, 150, 151, 152} Other factors that could constrain data use include lack of infrastructure, like electricity and internet penetration, which is a greater constraint for those who live further from the capital city.^{153, 154, 155} Furthermore, weak statistical systems reduce data quality, country ownership, and constituents’ demand for data.^{156, 157}

Organizational capacity includes knowledge, skills, or attitudes within organizations that enable or constrain data use. When organizations lack systematic communication and coordination structures, staff cannot efficiently use evidence in their programmatic decisions.¹⁵⁸ A lack of human capital within organizations reduces evidence uptake, especially with regards to technical staff with skills in advanced statistical analysis, computer science, and software.^{159, 160, 161, 162, 163} For example, Uneke *et al* conducted a case study in Nigeria and found that lack of human capital in both leadership and technical positions constrains organizational efficacy and therefore, evidence uptake.¹⁶⁴ A limited budget prevents

¹⁴⁹ Dhaliwal and Tulloch. "From research to policy.."

¹⁵⁰ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

¹⁵¹ Bowen, Zwi. "Pathways to “evidence-informed” policy and practice..."

¹⁵² Bowen *et al*. "More than “using research”"

¹⁵³ Sapkota, Krishna. "Exploring the Emerging Impacts of Open Aid Data and Budget Data in Nepal."

¹⁵⁴ Gonzalez Morales *et al*. "A World That Counts: Mobilizing the Data Revolution..."

¹⁵⁵ "Open Data Barometer Global Report – Second Edition."

¹⁵⁶ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

¹⁵⁷ Jerven, Morten. "What Kind of Data Revolution Do We Need for Post-2015?"

¹⁵⁸ Bowen *et al*. "More than “using research”"

¹⁵⁹ Bowen, Zwi. "Pathways to “evidence-informed” policy and practice..."

¹⁶⁰ Mutuku, *et al*. "Exploratory Study on the Role and Impact of Kenyan Open Data..."

¹⁶¹ Uneke *et al*, "Enhancing health policymakers’ capacity to use information..."

¹⁶² "Open Data Barometer Global Report – Second Edition."

¹⁶³ Srivastava *et al*, "Open Government Data for Regulation of Energy Resources..."

¹⁶⁴ Uneke *et al*, "Enhancing health policymakers’ capacity to use information..."

organizations from expanding their staff and focusing on evidence use.^{165, 166} In semi-structured interviews with stakeholders in Uganda, lack of human capital (especially technical knowledge) and lack of time were the most frequently cited barriers to uptake on an organizational level.

Individual capacity includes knowledge, skills, or attitudes that enable or constrain behavior. Data literacy is the primary entry point for data demand interventions, such as open data literacy boot camps, roundtables, and “hackathons.”^{167, 168, 169, 170} A lack of computer literacy, inability to understand statistical jargon, lack of technical education, and inadequate understanding of the language used in research articles reduces development practitioners’ self-efficacy when implementing evidence in their work.^{171, 172, 173} A survey of nurses in Singapore found that although 64% of respondents expressed a positive attitude toward evidence-based practice, all respondents lacked the time necessary to find and use evidence, which was a common trend across other case studies.^{174,175} This leads to a lack of awareness about data sources and portals.^{176, 177, 178} Even if they do obtain relevant, high-quality data, informants in Uganda described how their low

¹⁶⁵ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

¹⁶⁶ Dhaliwal and Tulloch. "From research to policy.."

¹⁶⁷ Uneke et al. "Promotion of evidence-informed health policymaking in Nigeria."

¹⁶⁸ Gonzalez Morales *et al.* "A World That Counts: Mobilizing the Data Revolution..."

¹⁶⁹ Srivastava *et al.*, "Open Government Data for Regulation of Energy Resources..."

¹⁷⁰ Mutuku, *et al.* "Exploratory Study on the Role and Impact of Kenyan Open Data..."

¹⁷¹ Uneke *et al.*, "Promotion of evidence-informed health policymaking in Nigeria."

¹⁷² Majid et al. "Adopting evidence-based practice in clinical decision making..."

¹⁷³ Uneke *et al.*, "Enhancing health policymakers’ capacity to use information..."

¹⁷⁴ Majid et al. "Adopting evidence-based practice in clinical decision making..."

¹⁷⁵ Dhaliwal and Tulloch. "From research to policy.."

¹⁷⁶ Gonzalez Morales *et al.* "A World That Counts: Mobilizing the Data Revolution..."

¹⁷⁷ Srivastava *et al.*, "Open Government Data for Regulation of Energy Resources..."

¹⁷⁸ Mutuku, *et al.* "Exploratory Study on the Role and Impact of Kenyan Open Data..."

position in their organization reduced their ability to implement new, evidence-based programs. This constraint was cited by other case studies as well.¹⁷⁹ In some cases, decision makers are simply not interested in data use, as shown in a case study of the Kenya Open Data Initiative (KODI).^{180, 181}

Data-specific capacity includes factors about the data itself that inhibit data usage. The availability of data is a chief determinant of data uptake and as such, many decision makers call for open access data, including case studies in South Africa and the Philippines.^{182, 183, 184, 185, 186} The Open Data Barometer surveyed 1,290 different datasets from around the world and found that only 10% of them were open access.¹⁸⁷ For instance, a case study of the ‘Open Data Philippines’ initiative found that most government data was published and stored in hard copies, rather than online, thereby excluding data use to privileged government officials.¹⁸⁸ Even when data is published online, it is sometimes presented in PDF format, which limits a decision maker’s ability to analyze the data.¹⁸⁹ As such, the

¹⁷⁹ Bowen *et al.* "More than “using research”: the real challenges in promoting evidence-informed decision-making."

¹⁸⁰ Chiliswa, Zacharia. "Investigating the Impact of Kenya’s Open Data Initiative on Marginalized Communities..."

¹⁸¹ Lwanga-Ntale *et al.* "The Potential of Open Data to Impact Resource Allocation for Poverty Eradication in Kenya and Uganda."

¹⁸² Elgin-Cossart, Molly. "Better Together: A Partnership for the Data Revolution [Part II]."

¹⁸³ Ibid.

¹⁸⁴ Okwaroh, Kenneth. "A Data Revolution to End Poverty?"

¹⁸⁵ Van Schalkwyk *et al.* "Case Study: Open Data in the Governance of South African Higher Education."

¹⁸⁶ Sherwin *et al.* "Exploring the Role and Opportunities for Open Government Data and New Technologies in MHCC and MSME: The Case of the Philippines."

¹⁸⁷ "Open Data Barometer Global Report – Second Edition."

¹⁸⁸ Sherwin *et al.* "Exploring the Role and Opportunities for Open Government Data and New Technologies in MHCC and MSME: The Case of the Philippines."

¹⁸⁹ Srivastava *et al.*, "Open Government Data for Regulation of Energy Resources..."

format and usability of data can constrain data usage.^{190, 191, 192} A case study of Kenya’s Open Data Initiative (KODI), among others, found that poor data quality and outdated information significantly hinder usage and value of data portals.^{193, 194, 195, 196} Data is frequently outdated due to the cost of data collection.¹² For example, Demographic and Health Surveys (DHS)—the “gold standard” population survey for developing contexts—costs anywhere between \$2 – 5 million dollars per country.¹⁹⁷ And even high-quality, cost-effective data may lack relevance for the particular policy question.^{198, 199, 200} Additionally, research efforts sometimes overlap or present conflicting results from different contexts, which confuses decision makers and inhibits data uptake.^{201, 202}

Data Demand: Incentives

We consider incentives that influence demand for evidence on four levels: environmental, organizational, individual, and data-specific. Discussions surrounding data uptake do not tend to focus on decision makers’ incentives, or

¹⁹⁰ Dhaliwal and Tulloch. "From research to policy.."

¹⁹¹ Elgin-Cossart, Molly. "Better Together: A Partnership for the Data Revolution [Part II]."

¹⁹² Lwanga-Ntale *et al.* "The Potential of Open Data to Impact Resource Allocation for Poverty Eradication in Kenya and Uganda."

¹⁹³ Mutuku, *et al.* "Exploratory Study on the Role and Impact of Kenyan Open Data..."

¹⁹⁴ Lwanga-Ntale *et al.* "The Potential of Open Data to Impact Resource Allocation for Poverty Eradication in Kenya and Uganda."

¹⁹⁵ Gonzalez Morales *et al.* "A World That Counts: Mobilizing the Data Revolution..."

¹⁹⁶ Srivastava and Aggarwal. "Open Government Data (OGD) and Energy Resources in India."

¹⁹⁷ Hyslop, Daniel. "Resourcing a Data Revolution for Peace and Security."

¹⁹⁸ Frenk, Julio. "Balancing relevance and excellence..."

¹⁹⁹ Mutuku, *et al.* "Exploratory Study on the Role and Impact of Kenyan Open Data..."

²⁰⁰ Stone, Diane. "Using knowledge: the dilemmas of bridging research and policy'."

²⁰¹ Srivastava and Aggarwal. "Open Government Data (OGD) and Energy Resources in India."

²⁰² Dhaliwal and Tulloch. "From research to policy.."

motivations for data use. In part, this is because incentives reflect complicated, underlying problems that are difficult to address. Additionally, researchers tend to assume that development decision makers are “pro-development,” and as such, their incentives should be aligned with data use.²⁰³ However, Booth (2011) points out that in most of sub-Saharan Africa, this assumption is not necessarily valid because public policies are largely driven by short-run political considerations, rather than the efficient delivery of public goods.²⁰⁴ Furthermore, even if evidence is employed in decision making, it may only reflect and sustain existing power structures, serving to add legitimacy to political action after the decision has been made.²⁰⁵ This view is an unpopular one, but must be explored in order to wholly understand the factors that drive evidence uptake in developing countries.

Environmental incentives are institutional factors on the country-level that motivate data use. Legislation compelling data openness is a significant factor in creating a culture of data sharing and use.^{206, 207} Case studies in Nepal, India, and South Africa cited the recent signing of the Right to Information (RTI) as an incentive to use government data.^{208,209, 210} Additionally, many developing countries are beginning to develop National Strategies for the Development of Statistics

²⁰³ Booth, David. "Aid effectiveness: bringing country ownership (and politics) back in." *Conflict, Security & Development* 12, no. 5 (2012): 537-558.

²⁰⁴ Ibid.

²⁰⁵ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development*.

²⁰⁶ Srivastava *et al*, "Open Government Data for Regulation of Energy Resources..."

²⁰⁷ Glassman, Amanda. "Delivering on the Data Revolution in Sub-Saharan Africa."

²⁰⁸ Sapkota, Krishna. "Exploring the Emerging Impacts of Open Aid Data and Budget Data in Nepal."

²⁰⁹ Van Schalkwyk *et al*. "Case Study: Open Data in the Governance of South African Higher Education."

²¹⁰ Srivastava *et al*, "Open Government Data for Regulation of Energy Resources..."

(NSDSs), which detail long-term plans for building statistical capacity within the government.²¹¹ If there is a political push to use evidence in decision-making or if the government provides rewards for innovation, constituents will be more likely to use data in order to align with governmental priorities.^{212, 213, 214} According to Acemoglu and Robinson (2012), a culture of innovation and technological change is a crucial prerequisite for economic growth, and as such, advocating for innovation is in a government's best interest.²¹⁵ With regards to nutrition policy specifically, the Scaling Up Nutrition (SUN) movement is a major mobilizing force in over 40 countries.²¹⁶ In Uganda, SUN stakeholders created a Uganda Nutrition Action Plan (UNAP) for 2011-2016 that laid out specific budgets and plans for collaboration within certain topic areas.²¹⁷ This document provides a centralized collaboration mechanism, which incentivizes coordinated progress and targeted evidence usage.²¹⁸ In the same vein, the urgency of the malnutrition problem in Uganda, where stunting remains at 33.7%, can motivate nutrition actors to implement evidence-based programs.^{219, 220}

Organizational incentives are factors at the organizational level that incentivize data uptake. A study in England surveyed nurses' perception of evidence

²¹¹ Cointreau, Margo. "My Data Revolution Is Not Your Data Revolution."

²¹² "Open Data Barometer Global Report – Second Edition."

²¹³ Sapkota, Krishna. "Exploring the Emerging Impacts of Open Aid Data and Budget Data in Nepal."

²¹⁴ Crewe, Emma, and John Young. *Bridging research and policy: context, evidence and links*.

²¹⁵ Acemoglu, Robinson, and Woren. *Why nations fail: the origins of power, prosperity and poverty*.

²¹⁶ "Bringing People Together." Scaling Up Nutrition.

²¹⁷ Uganda Nutrition Action Plan 2011-2016.

²¹⁸ Ibid.

²¹⁹ Black *et al.* "Maternal and child undernutrition..."

²²⁰ "Bringing People Together." Scaling Up Nutrition.

based practice and found that their main motivators for data use came from the hospital they worked for.²²¹ These motivators can include peer reviews within organizations, an organizational culture that promotes critical inquiry, and human capital within the organization designated for research and M&E.^{222, 223, 224, 225} Throughout the semi-structured interviews, SUN stakeholders frequently cited the influence of donors; donors have enormous influence over the trajectory of their partners and can thereby encourage evidence use.²²⁶ Additionally, a close partnership between an organization and a body of researchers can increase the organization's ownership over the evidence, and thereby promote the uptake of said research.^{227, 228, 229, 230, 231, 232}

Individual incentives are factors that motivate data use for policymakers and practitioners personally. Professional ambition, or desire to be a leader in the field of international nutrition, can motivate nutrition actors to implement evidence-based policy and practice. Uneke *et al* conducted a workshop for health policymakers in Nigeria, assessed its impact, and found that the workshop

²²¹ Gerrish and Clayton. "Promoting evidence-based practice: an organizational approach."

²²² Ibid.

²²³ Bowen *et al*. "More than "using research": the real challenges in promoting evidence-informed decision-making."

²²⁴ Bowen, Zwi. "Pathways to "evidence-informed" policy and practice..."

²²⁵ Mutuku, *et al*. "Exploratory Study on the Role and Impact of Kenyan Open Data..."

²²⁶ Dhaliwal and Tulloch. "From research to policy..."

²²⁷ Ibid.

²²⁸ Vila, Susannah. "User Engagement Strategies for Open Data."

²²⁹ Booth, David. "Aid effectiveness: bringing country ownership (and politics) back in." *Conflict, Security & Development* 12, no. 5 (2012): 537-558.

²³⁰ Cargo and Mercer. "The value and challenges of participatory research: Strengthening its practice."

²³¹ Frenk, Julio. "Balancing relevance and excellence..."

²³² Lomas, Jonathan. "Improving research dissemination and uptake in the health sector..."

increased policymakers' capacity to implement evidence-based policy through its focus on coalition building, regulation, and policy guidance.²³³ As such, previous training in data literacy and implementation can incentivize decision makers to change their evidence use behavior.^{234, 235} A partnership with a researcher who is producing evidence can increase ownership over the research and incentivize a decision maker to employ said evidence.^{236, 237, 238, 239, 240, 241} Mentorship from a staff member who has the necessary technical skills can incentivize a decision maker to use data.²⁴² Key informants in Uganda emphasized that pressure from both the bottom (beneficiaries who are being impacted by the decision) and from the top (donors who are funding the programs) can incentivize evidence use.

Data-specific incentives are characteristics about the data specifically that encourage its usage. During semi-structured interviews in Uganda, informants emphasized that if the data is about a topic that has clear policy implications or has been heavily marketed, then policymakers and practitioners are more likely to use it. For example, the 1st 1000 days of a child's life is a crucial window for improved nutrition that could have implications for the rest of their life. This evidence has

²³³ Uneke *et al.* "Enhancing Leadership and Governance Competencies..."

²³⁴ Majid *et al.* "Adopting evidence-based practice in clinical decision making..."

²³⁵ Uneke *et al.* "Enhancing Leadership and Governance Competencies..."

²³⁶ Uneke *et al.* "Promotion of evidence-informed health policymaking in Nigeria."

²³⁷ Dhaliwal and Tulloch. "From research to policy.."

²³⁸ Vila, Susannah. "User Engagement Strategies for Open Data."

²³⁹ Booth, David. "Aid effectiveness: bringing country ownership (and politics) back in." *Conflict, Security & Development* 12, no. 5 (2012): 537-558.

²⁴⁰ Cargo and Mercer. "The value and challenges of participatory research: Strengthening its practice."

²⁴¹ Lomas, Jonathan. "Improving research dissemination and uptake in the health sector..."

²⁴² Majid *et al.* "Adopting evidence-based practice in clinical decision making..."

been highlighted by the SUN movement and the Lancet series on malnutrition, and therefore carries a significant amount of clout in the world of international nutrition.^{243, 244, 245} If the data is funded by a donor or a partner, a decision maker is more likely to use the data because s(he) can trust the source.^{246, 247, 248, 249, 250} Decision makers prefer to use data that has a clear sustainability mechanism, so that they know the data will be updated regularly.²⁵¹

Ultimately, the landscape of data demand is a complex web that many researchers neglect to explore when considering research dissemination. Both systemic and technical factors drive a decision makers' desire to use data or not. Many data dissemination tactics neglect the systemic issues, which drives the disconnect between data supply and demand in international development. In order to test this theoretical framework and identify which factors are most pressing to development policymakers and practitioners today, we will employ a case study of nutrition decision makers in Uganda. The case study is detailed in the following sections.

²⁴³ Bhutta *et al.* "Evidence-based interventions..."

²⁴⁴ Black *et al.* "Maternal and child undernutrition..."

²⁴⁵ "Bringing People Together." Scaling Up Nutrition.

²⁴⁶ Uneke *et al.*, "Promotion of evidence-informed health policymaking in Nigeria."

²⁴⁷ Dhaliwal and Tulloch. "From research to policy.."

²⁴⁸ Vila, Susannah. "User Engagement Strategies for Open Data."

²⁴⁹ Cargo and Mercer. "The value and challenges of participatory research: Strengthening its practice."

²⁵⁰ Lomas, Jonathan. "Improving research dissemination and uptake in the health sector..."

²⁵¹ Alkire, Sabina. "A New Household Survey to Catalyze the Data Revolution."

METHODOLOGY

This research topic was born out of a desire to bridge the gap between researchers in the US and policymakers and practitioners in the developing world. We attribute this disconnect, at least in part, to how research agendas are generally driven by researchers' interests rather than need. In order to mitigate this disconnect, this research began with semi-structured interviews with 42 policymakers and practitioners affiliated with Uganda's SUN movement. These discussions took place in July 2013 and August 2014 in Kampala, Uganda. The stakeholders were selected mainly by snowball sampling, where after an interview, an informant would pass along the contact information of another informant. The informants included stakeholders from donor offices, government offices, Makerere University, civil society organizations, and implementing partners. All of the informants were connected to Uganda's SUN movement. The discussions were semi-structured, with the sole aim of understanding the landscape of nutrition policy and practice in Uganda. During these interviews, clear themes began to emerge such as barriers to data uptake and how these barriers inhibited the SUN movement's progress, despite substantial internal momentum. After recognizing that these were issues that were underrepresented in the international development research agenda, we developed a research question in partnership with some key stakeholders. Partnership was a central aim in this research, where the informants helped to develop the research question, vet the research design, and disseminate the research findings.

After developing the research question, we created a theoretical framework based on existing literature and comments from informants. Then, we designed a pilot survey to test the theoretical framework. Five of the informants took the pilot survey, and their questions and comments informed the final survey. The final survey consisted of 21 questions and was developed in Qualtrics software. We sent the survey to all 42 informants via personal emails. We received 24 responses, which is a 58.5% response rate. After cleaning and analyzing the data, we interpreted the results and developed a research brief to disseminate to the informants.

Ultimately, this methodology prioritizes partnership. Despite their relatively high status within their country, policymakers and practitioners in Uganda are systematically marginalized on an international scale. Marginalization is a practice in power, where people are pushed to the edges of space – whether that space be political, economic, or social –because of their identities, experiences, or environments.²⁵² This dynamic plays out in how research agendas are set, and who is included or excluded from supposedly objective processes of knowledge production.²⁵³ While we do not presume that we are combating these structural forces, we do attempt to at least mitigate them and to spark a conversation on changing the dynamic between researchers in the US and policymakers and practitioners in the developing world.

²⁵² Vasas, Elyssa B. "Examining the margins: A concept analysis of marginalization."

²⁵³ Newman, Fisher, and Shaxson. "Stimulating Demand for Research Evidence..."

RESULTS

Background Information

The survey was distributed to 41 different stakeholders via email in February 2015. By the end of March, there were 24 total responses, a 58.5% response rate. However, respondents were free to skip questions and as such, not every individual responded to every question. The respondents represented 8 different organizations, as shown in Figure 8. There were 6 types of organizations surveyed: donor country office (i.e. USAID/Washington), recipient country government (i.e. Office of the Prime Minister, Uganda), government or UN agency recipient country office (i.e. USAID/Uganda mission), academia (i.e. Makerere University in Kampala, Uganda), civil society organizations, and implementing partners (i.e. FHI360). While the survey was sent to stakeholders at all of these types of organizations, not all organizations were represented in the group of respondents. Figure 4 shows this breakdown, where implementing partners have the greatest representation. The mean number of years that respondents worked at their organization was 4.6 years and the median number of years was 3.5 years. The respondents had a wide range of titles at their respective organizations, ranging from Country Director / Chief of Party to M&E specialist to cartographic supervisor. 40% of respondents had a primary specialization in nutrition, 25% specialized in public health more broadly, and the rest focused on M&E or data analysis.

In order to characterize the types of decisions that data and evidence were being used for among these respondents, respondents were asked what the last

decision related to policy and practice they made was. An M&E officer at a UN agency recently designed “the five year country programming framework for Uganda,” for his agency. A director for service delivery at an implementing partner was “transitioning from input-based financing to performance-based financing of public health facilities in northern Uganda.” A senior technical advisor at an implementing partner “advised the project to open up a regional office in East Central Region to cater for the emerging demands of implementing partners and high rates of teenage pregnancies and new HIV infections.” A researcher for a nutrition lab was choosing which districts to focus his research on. A country project coordinator for an implementing partner said:

“I decided to expand and scale up our reach to the rural drug retailers in the country using a medical detailing strategy this financial year so as to impact the health workers’ behaviors and attitudes towards proper recognition and treatment of the 3 major childhood killer diseases.”

There was a wide range of decisions made by the respondents. They were asked to characterize their most common decisions into the following categories: service improvement, planning services, supply management, staffing decisions, and budget preparation / allocation. They were permitted to select as many categories as needed to describe their decision-making behavior. The results are shown in Figure 5, where planning services was the most common response, closely followed by service improvement. The role of data and evidence in these decision-making behaviors will be explored in the rest of the section.

Figure 3: Organizations Surveyed

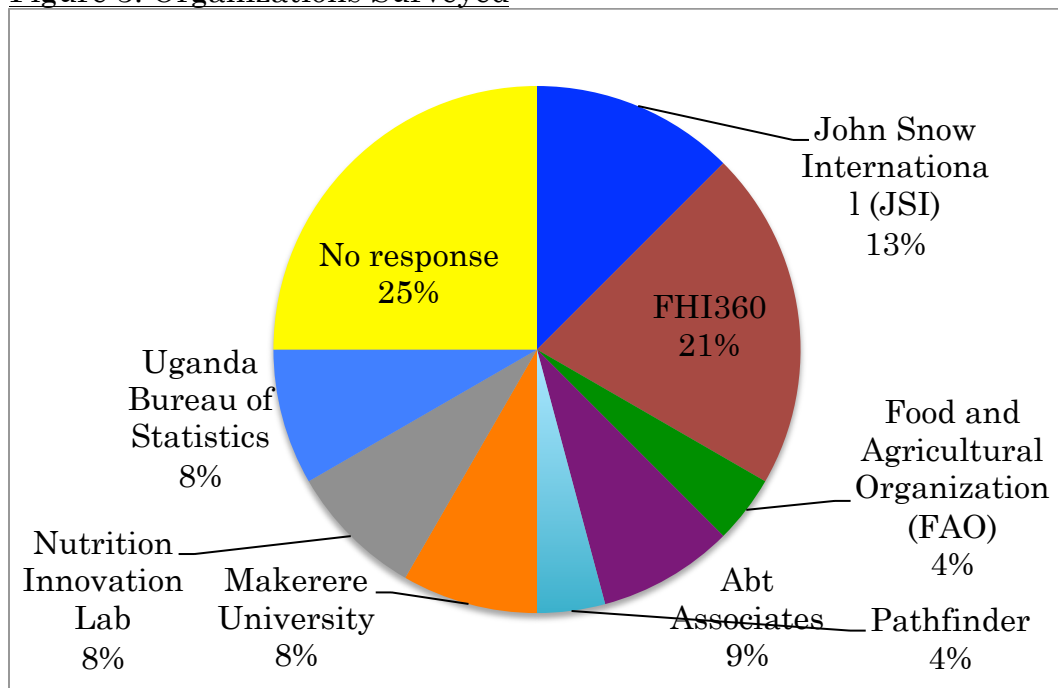
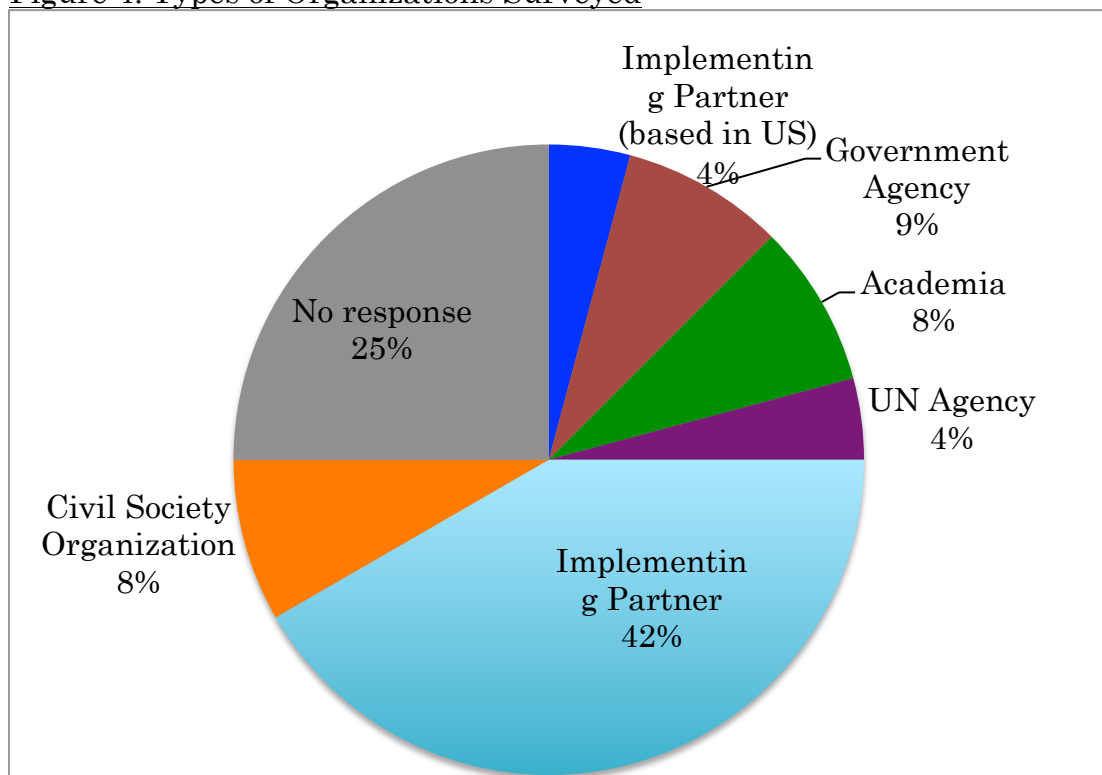
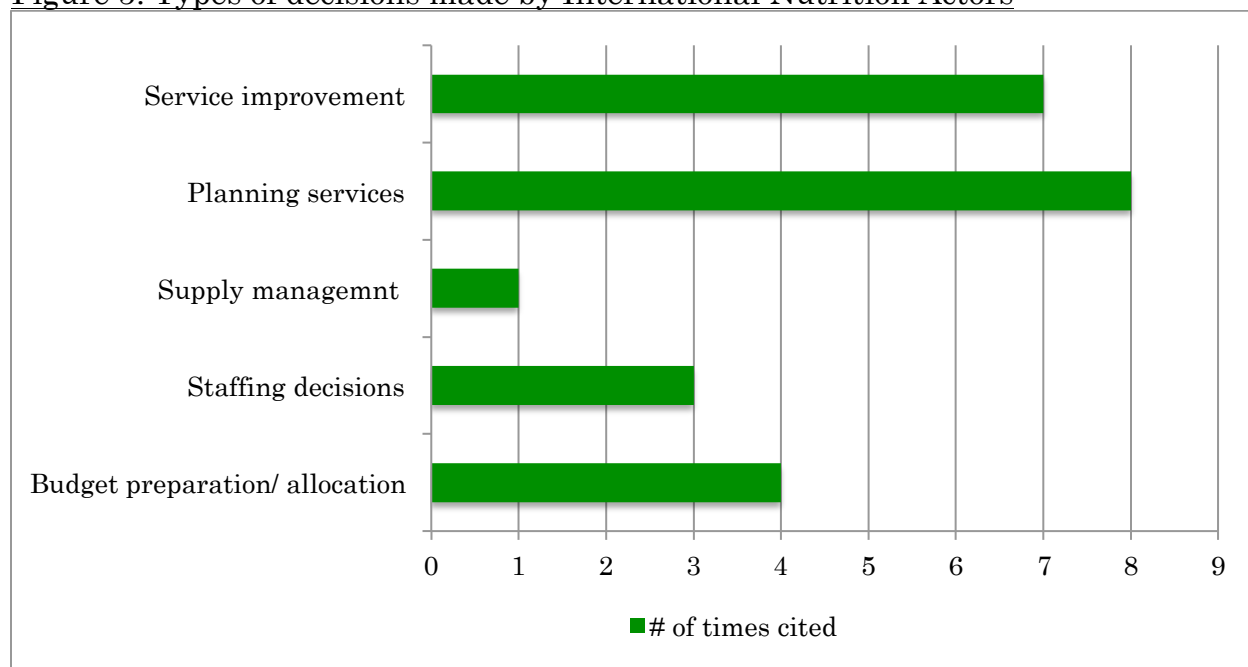


Figure 4: Types of Organizations Surveyed



*Based in Uganda unless otherwise specified

Figure 5: Types of decisions made by International Nutrition Actors



*Data Landscape among Respondents***1. Respondents understand the value of evidence-based decisions. As**

such, they want to use data to the best of their ability. When asked why they use data, respondents emphasized that data is the way to make rational decisions. For example, a nutrition programmer in academia said, “Data and evidence was needed as a basis or rationale for the decision taken.” Additionally, respondents noted the need for data at every step of the decision making process. A country director at an implementing partner organization said, “Data gives an indication of why the decision is required, how the decision should be implemented, and the likely outcome of the decision.” Respondents also desire evidence-based decisions in order to mobilize resources. A civil society representative said that data “provides evidence and hence justification for the need of increased investments in nutrition” Data was also cited as necessary for ensuring that root causes are addressed. One chief of party for a nutrition program said, “All our health communication interventions are based on evidence so that the real problem of the audiences are addressed for better outcomes and use of resources.”

2. When considering what kind of data to use, respondents examine many factors, chief among them: relevance, quality, and reliability.

Respondents seek data that is relevant to their context and decision. A technical advisor at an implementing partner organization looks for “availability of the

data specific to area or national information, scope of the interventions to be put in place, and donor requirement and prescription.” Data quality was also a chief concern among respondents, which an M&E officer at a UN agency defined as “accuracy, validity, and currency.” Additionally, many respondents referenced the reliability of the data as an important factor. The same M&E officer also noted the importance of the “general acceptability and reputation of source as a reliable point of reference.” A senior technical advisor at an implementing partner organization asks questions like “What is the source of this evidence? Is it reliable?” when choosing what type of evidence to use.

3. Despite their desire to use data, respondents underscored the complexity and lack of evidence uptake in Uganda. Respondents have standards for data as cited above, but available data does not meet those standards. A researcher in academia noted that “Most data is usually on a small scale and it lacks proper analysis or policy implications.” In a similar vein, an M&E officer at a UN agency said that “uptake bottlenecks start with inadequacy of quality data or evidence.” A director at an implementing partner organization said:

“Evidence uptake is very slow in Uganda, even when the evidence is generated in-country. This may be related to bureaucracy in decision making and resource constraints especially if the evidence requires additional funding for implementation.”

A technical advisor at an implementing partner organization also noted some barriers and incentives for uptake:

“In Uganda, the trend and pressure of using evidence for decision making has grown especially from donors and organizations that care about their reputation. Use of data is the only rational way to make decisions and influence policy. This is however not true with some government agencies where issues like corruption and political interference limit the use of data for decision making.”

Some respondents referenced potential solutions to this problem. For example, a nutrition programmer in academia stressed the need for “supportive mechanisms...to make it [evidence uptake] a reality rather than a myth.”

4. In line with their desire and efforts to implement evidence-based decisions, all respondents used some type of data to inform their last decision. However, they used a limited set of data sources. The only two sources cited were the Demographic and Health Survey (DHS) or new data generated by their project. There was no reference to data sharing or external datasets besides the DHS. A public health specialist for a nutrition program said:

“I used data from both the national demographic health survey as well as the project midline survey results that showed that although we had made significant improvement in health providers knowledge and stocking of the acceptable drugs for these illnesses, there were still gaps in their diagnosis and adherence to the recommended treatment practices which this detailing strategy would help fix.”

This combination of DHS data and new project-specific data was common. A director at an implementing partner organization discussed how his project generated their own data. He said, “Every year, the program collects LQAS household survey data...” A senior technical officer at an implementing partner

used “qualitative information [that her project] collected from the local governments and coordination structures.” If the project was not generating its own new data, they were using their own data from past years of the project. A US-based project officer for an implementing partner said, “We used program data and evidence from previous programming years to inform the direction of technical activities.” Some respondents did not reference the type of data used. For example, a program manager at an implementing partner said, “I used data to make the decision. I had to confirm if the previous surveys had provided sufficient data that could address programming needs in the four sub counties [where we work]...”

- 5. There are a host of factors driving this disconnect between desire to use data and lack of scope and variance in data sources. The theorized framework was tested among these respondents in order to understand their most pressing concerns. See Tables 1 and 2.** Respondents were given a list of 7 factors for each category and were asked to rank their top three most pressing constraints or incentives for each category. The results are displayed in Tables 1 and 2. For environmental constraints, lack of infrastructure was cited 13 times. Other environmental constraints frequently cited were lack of interest from the government, priorities of the local government, poor culture related to evidence use, limited prioritization of nutrition as a major development issue, and lack of political will. For individual constraints, an important factor cited

was that nutrition was not a primary focus. For data-specific constraints, availability of data was cited 8 times as a significant barrier to uptake.

For environmental incentives, the Uganda Nutrition Action Plan (UNAP) was cited 11 times as an incentive for evidence use. Additionally, 10 respondents cited the urgency or the malnutrition problem in Uganda as a significant incentive, in addition to collaboration within the SUN movement. Others cited were investment in more frequent nutrition data updates. Significant organizational incentives were an organizational culture that promotes critical inquiry (12 times), desire to implement successful projects (12 times), and reporting requirements from donors (9 times). A significant individual incentive was professional ambition, or a desire to be a leader in the field, which was cited 9 times. Other individual incentives cited were implementing a successful, sound program, and professional desire to produce evidence for organizational results and achievements. The most significant data-specific incentive was that data was seen as valuable for program implementation, which was cited 12 times.

- 6. The types of constraints and incentives that respondents faced were not all equal.** Respondents said that environmental-level constraints were the greatest barrier to uptake, and organizational incentives were the most compelling to encourage evidence uptake (Tables 3 and 4).

Table 1: Constraints to Evidence Uptake among International Nutrition Actors

Environmental Constraints		
Rank	Factor	Frequency
1	Lack of infrastructure	13
2	Lack of internet access	9
3	Unstable economic climate	7
4	Corruption	5
5	Unstable political environment	4
6	Fear of the government	2
7	Lack of electricity	2
Organizational Constraints		
Rank	Factor	Frequency
1	Lack of coordination	6
2	Lack of budget	6
3	Lack of staff with technical skills needed to use data	5
4	Lack of human capital in general	3
5	Lack of communication	2
6	Organizational structure prevents input	2
7	Mission of organization does not support evidence use	1
Individual Constraints		
Rank	Factor	Frequency
1	Lack of time	6
2	Lack of awareness of available data portals	5
3	Lack of data literacy	1
4	Lack of education	1
5	Lack of interest	1
6	Lack of computer literacy	0
7	Low position within organization	0
Data-specific Constraints		
Rank	Factor	Frequency
1	Availability of data (i.e. data source is open access)	8
2	Poor data quality	7
3	Relevance of data (i.e. whether it pertains to local issues)	7
4	Format and usability of data (i.e. data portal)	5
5	Outdated information	5
6	Overlapping research efforts	3
7	Conflicting data sources	2

Table 2: Incentives for Evidence Uptake among International Nutrition Actors

Environmental Incentives		
Rank	Factor	Frequency
1	Uganda Nutrition Action Plan (UNAP)	11
2	Urgency of the malnutrition problem in Uganda	10
3	Collaboration within the SUN movement	9
4	Government investment in determining priority areas	7
5	Political push to use evidence in decision making	5
6	Legislation compelling data openness	0
7	Government provides rewards for innovation	0
Organizational Incentives		
Rank	Factor	Frequency
1	Organizational culture that promotes critical inquiry	12
2	Desire to implement successful projects	12
3	Reporting requirements from donors	9
4	Desire for reputability	4
5	Close partnership between researchers and practitioners	2
6	Human capital in organization designated for research	2
7	Peer reviews within organization	1
Individual Incentives		
Rank	Factor	Frequency
1	Professional ambition (i.e. desire to be a leader in the field)	9
2	Pressure to implement a successful program from donors	6
3	Relevance to personal experience (i.e. focus on local data)	5
4	Previous training in data literacy	5
5	Partnership with a researcher	4
6	Mentoring from staff with technical skill	3
7	Pressure due to perceived impact on beneficiaries	3
Data-specific Incentives		
Rank	Factor	Frequency
1	Data seen as valuable for program implementation	13
2	Good reputation of the researcher or data generator	5
3	Evidence is heavily marketed (i.e. 1 st 1000 Days of Life)	5
4	Data will be updated regularly	5
5	Theme in literature with clear policy implications	3
6	Partnership with a researcher who is generating the data	3
7	Data generation funded by your donor	3

Table 3: Level of Greatest Constraints Faced among International Nutrition Actors

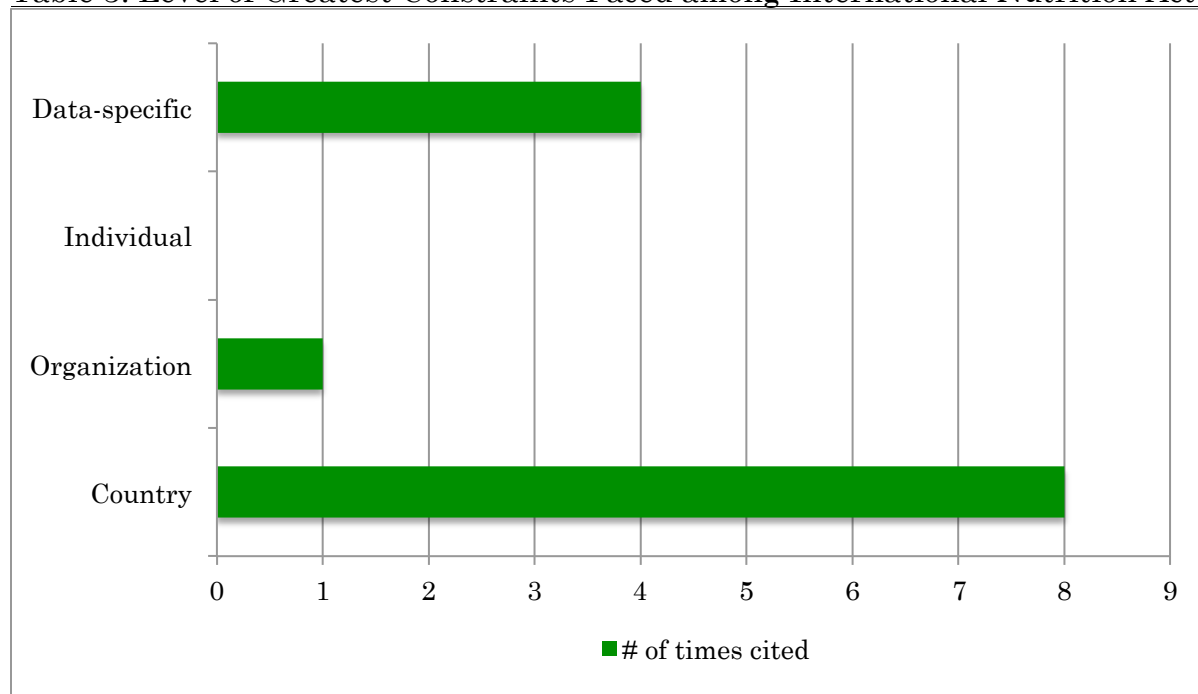
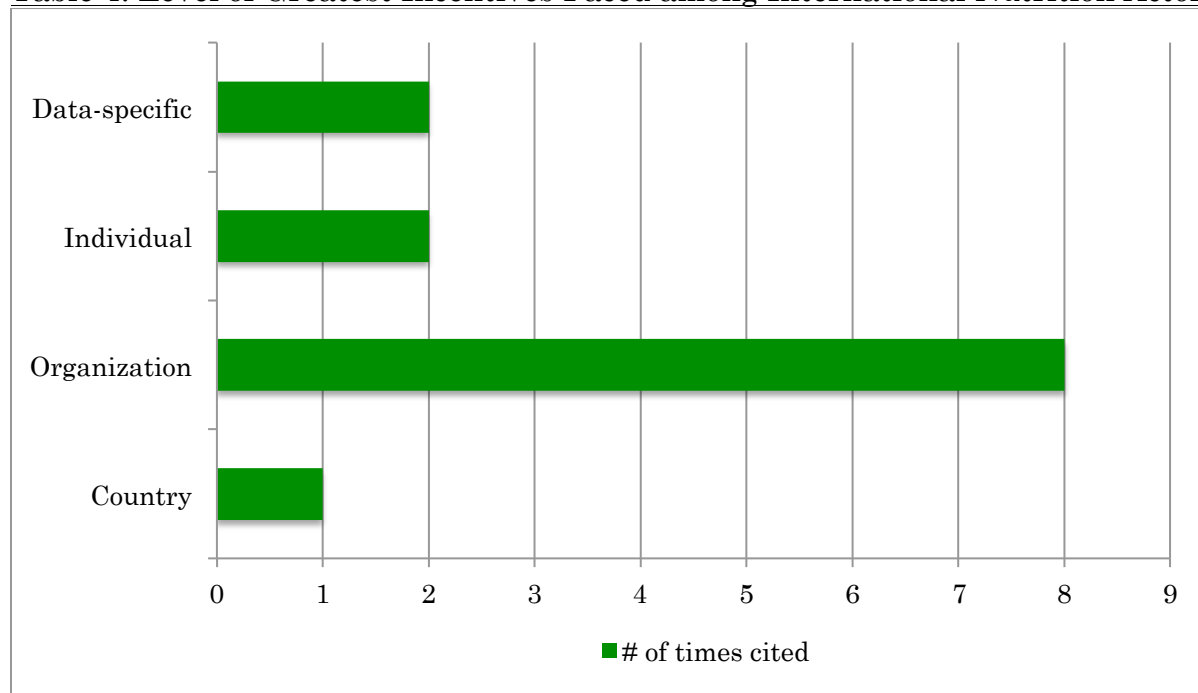


Table 4: Level of Greatest Incentives Faced among International Nutrition Actors



DISCUSSION

The disconnect between researchers and decision makers is fueled by misunderstandings of each other's contexts. As Dhaliwal and Tulloch point out:

“Researchers may feel that policymakers are not responding sufficiently or quickly enough to what they believe is convicting evidence, while policymakers feel that researchers are too narrowly focused on the ‘theoretical, perfect-world’ situation with disregard for the practical ‘real-world’ constraints confronting policymakers.”²⁵⁴

A case study of decision makers in Uganda's Scaling Up Nutrition (SUN) movement will illuminate the context of decision makers and begin to bridge gaps in understanding. As an “early adopter” country in the SUN movement, Uganda has great promise for moving forward with evidence-based nutrition programming. However, a lack of infrastructure, lack of Internet access, and availability of data are three significant constraints to evidence use facing nutrition decision makers in Uganda (at least eight respondents cited these factors in their top three constraints). But on the flip side, the Uganda Nutrition Action Plan (UNAP) and the urgency of the malnutrition problem in Uganda are two significant incentives for evidence uptake among respondents. Additionally, an organization can improve evidence use by creating an organizational culture that promotes evidence use, emphasizing a desire to implement successful projects, and enforcing reporting requirements from donors. These factors were all cited as significant incentives for respondents. An individual's professional ambition and perception of the data's

²⁵⁴ Dhaliwal and Tulloch. "From research to policy.."

value also incentivize data uptake. These are concrete steps that international nutrition actors can take to steer the “data revolution” in an inclusive direction.

Respondents underscored the complexity of evidence uptake in Uganda, despite substantial internal momentum for evidence-based decision making. Decision makers maintain standards for the data they seek, and the data available does not meet these standards. As such, respondents use a limited scope of data sources; they either generate their own data or use DHS data. While their use of these sources is justified, decision makers do not consider the enormous range of data and evidence available in their field. Additionally, a lack of data sharing and use of external data sources inhibits efficient progress. Indeed, a disconnect between researchers and decision makers persists, even in the wake of the “data revolution.” The current landscape of data supply in international nutrition reflects the preferences of developed country actors, rather than developing country data users.

LIMITATIONS

In order to examine the efficacy of this study, we will review the limitations of the methodology. One limitation of this study is that not all elements of the theoretical framework were tested in the survey. Only incentives and constraints were presented to the respondents in order to examine the landscape of data demand. While power dynamics and market failures played a significant role in the theoretical framework, they were not tested in the survey methodology. These questions would have been more easily presented in a structured interview setting. In the future, more research needs to systematically examine the factors driving the disconnect between developed and developing world contexts.

Another limitation of this study is the small sample size. However, there was a 58.5% response rate with the email survey, which reflected the benefits of partnership in a research design. Additionally, in the theoretical framework, there were assumptions made in order to narrow down to the greatest constraints and incentives. Respondents were asked to choose from lists of incentives and constraints rather than generate their responses independently. The lists were based off of an extensive literature review and semi-structured interviews with key informants in Uganda. While this strategy may have limited respondents' answers, it allowed us to narrow down the most pressing constraints and incentives while presenting a comprehensive framework.

The international nutrition network in Uganda is not necessarily a representative sample of the global international aid arena and we do not mean to

generalize as such. Because Uganda is a relatively politically and economically stable country with a substantial amount of infrastructure, the constraints and incentives that Ugandan decision makers face are certainly different from even neighboring countries. Future studies should seek to do a cross-country analysis of these topics. As Stone (2002) points out:

“...different policy environments, institutional structures, and political arrangements produce different sets of opportunities and constraints for dialogue, call forth varying strategies for policy researchers, and have dramatically diverse implications from one political system to the next.”²⁵⁵

Additionally, we do not mean to imply that bridging gaps between research and policy is the ultimate solution. Research is certainly not a panacea for poverty.²⁵⁶ Despite the most well-intentioned partnerships, social and economic problems will persist. However, closing these gaps is an enormous step. Increasing understandings of developing country contexts will begin to deconstruct the current balance of power on a global scale. Empowering decision makers to take ownership of their country and work is transformative, and as Freire pointed out, can shake the world.²⁵⁷

²⁵⁵ Stone, Diane. "Using knowledge: the dilemmas of bridging research and policy'."

²⁵⁶ Ibid.

²⁵⁷ Leonard and McLaren, eds. *Paulo Freire: A critical encounter*. Routledge, 2002.

STRATEGIC RECOMMENDATIONS

1. Critically examine context. In line with Freire’s definition of ‘critical consciousness,’ both researchers and decision makers need to critically examine the context and values within which they are situated. Research will be more likely to impact policy and practice if it fits within the political and institutional limits and pressures of policymakers and resonates with their values, which include ideology, beliefs, and interests.²⁵⁸ Data reflects a normative viewpoint, or the researcher’s beliefs.²⁵⁹ When these norms are challenged, any data created will be inclusive of a broader range of stakeholders and thereby more likely to be valued and leveraged.

Table 3: Strategic Recommendations for Improving Evidence Uptake among International Nutrition Actors

1. Critically examine context.
2. Prioritize partnership
3. Maximize value for decision makers.
4. Rethink research dissemination.
5. Reform culture surrounding evidence use and promotion.

2. Prioritize partnership. People accept information more readily from those they trust.²⁶⁰ Several case studies have shown that when intended users, stakeholders, and other research beneficiaries are engaged up front in the

²⁵⁸ Crewe, Emma, and John Young. *Bridging research and policy: context, evidence and links.*

²⁵⁹ Jones, Shaxson, and Walker. *Knowledge, policy and power in international development.*

²⁶⁰ Crewe, Emma, and John Young. *Bridging research and policy: context, evidence and links.*

research planning process, they are more committed to using the research findings to take action.²⁶¹ When marginalized groups are engaged as partners rather than informants, they have ownership over the research and are more likely to leverage it in their work.^{262, 263, 264} A director for health services delivery at an implementing partner said that research needed to be “tailored to address policies and practice” in order for it to be used. Researchers can engage decision makers through three tiers of engagement: sharing the scope and purpose of the research, research implementation and context, and interpretation and application of the research outcomes.²⁶⁵ Alternatively, another way to increase shared understandings is to involve researchers in the decision making process, rather than the other way around.²⁶⁶

- 3. Maximize value for decision makers.** One of the top most pressing incentives for nutrition decision makers was that “Data is seen as valuable for project implementation.” As discussed before, value includes decision makers’ ideologies, beliefs, and interests, with a focus on beliefs. If researchers seek to understand and target decision maker’s beliefs, decision makers will be more likely to use

²⁶¹ Cargo and Mercer. "The value and challenges of participatory research: Strengthening its practice."

²⁶² Cointreau, Margo. "My Data Revolution Is Not Your Data Revolution."

²⁶³ Vila, Susannah. "User Engagement Strategies for Open Data."

²⁶⁴ Cargo and Mercer. "The value and challenges of participatory research: Strengthening its practice."

²⁶⁵ Ibid.

²⁶⁶ Ross *et al.* "Partnership experiences: involving decision-makers in the research process."

data in their work. A member of a civil society coalition discussed what he values in data:

“There is need for continued access to country specific disaggregated data (at all levels and for sex); this calls for investments in relevant data collection and dissemination channels such as free access to journals, country specific and reliable online data source/base that is continuously uploaded with new data.”

These values and more need to be examined and integrated into research dissemination tactics.

- 4. Rethink research dissemination.** A lecturer in academia emphasized that “More emphasis and investment should be on dissemination.” Dissemination includes publication activities (i.e. production of memos and briefs) and convocation activities (i.e. workshops and conferences, dialogues between researchers and policymakers).²⁶⁷ Respondents underscored the importance of both kinds of research dissemination. A project officer for project implementation noted that “Research findings [should be] communicated and disseminated in more digestible formats, e.g. two-pagers vs. twenty page reports.” A technical advisor at an implementing partner also mentioned another publication activity:

“Research dissemination needs to be intensified and simplified more. Need for more research briefs in simple clear language that everybody can access and utilize. Dissemination needs to go beyond technical personnel to other decision makers at the country level who often don’t have time to read and internalize heavy research reports...”

²⁶⁷ Díaz Langou, Gala, and Vanesa Weyrauch. "Sound expectations.."

The type of language used in publication activities needs to be carefully examined, in addition to the formats they're being presented in. In line with this, a supervisor in a government agency suggested that:

“Dissemination should be done with a wide range of methods, like web-based, hard-copy publication to be kept in the resource centers, use the social media if possible and use some of the research findings as part of academic curricula at universities.”

Additionally, convocation activities are crucial for maximum evidence uptake. A program manager at an implementing partner called for the organization of “more conferences and workshops for discussing evidence based programming.” Newman et al advocated for learning events that can bring together academics, government, professionals, and CSOs to encourage collaboration and the growth of open data initiatives.²⁶⁸ Lomas advocates for “training workshops on research literacy, case studies of effective use of research resources, and hand-holding the decision maker during involvement with a relevant research program.”²⁶⁹ Additionally, many scholars noted the importance of “intermediaries” or organizations and media outlets that interpret data and create visualizations.²⁷⁰ They can develop new tools that translate raw data into information for a broader constituency of non-technical potential users and enable citizens and other data users to provide feedback.”²⁷¹

²⁶⁸ Uneke *et al*, "Promotion of evidence-informed health policymaking in Nigeria."

²⁶⁹ Lomas, Jonathan. "Improving research dissemination and uptake in the health sector..."

²⁷⁰ Chiliswa, Zacharia. "Investigating the Impact of Kenya's Open Data Initiative on Marginalized Communities..."

²⁷¹ Gonzalez Morales *et al*. "A World That Counts: Mobilizing the Data Revolution..."

5. Reform culture surrounding evidence use and promotion. The UN Secretary-General has called for a “data revolution,” and as such, reforming the culture of evidence use is more important than ever.²⁷² Rather than merely publishing data on an open source portal, there is a need to support conversations around the data and its use.²⁷³ Promote organizational cultures that are responsive to change and innovation.²⁷⁴ Data should be viewed as a common resource, where everyone from researchers to decision makers can learn and change their decisions.²⁷⁵ Open data has enormous potential impacts, including increasing government efficiency and increasing the inclusion of marginalized groups in decision making. These impacts should be prioritized in the open data movement.

²⁷² Dhaliwal and Tulloch. "From research to policy..."

²⁷³ Davies, Tim. "Supporting Open Data Use through Active Engagement."

²⁷⁴ Bowen *et al.* "More than “using research”: the real challenges in promoting evidence-informed decision-making."

²⁷⁵ Davies, Tim. "Supporting Open Data Use through Active Engagement."

CONCLUSION

A “data revolution” is sweeping across the field of international development, pledging evidence-based progress and country-owned solutions to poverty. However, this rhetoric echoes the idealism of developed country actors who presume too much and ask too little of their developing country counterparts. In reality, data supply is rapidly outpacing data demand, inhibiting evidence uptake and exacerbating cross-country disparities. This market failure illuminates the “intellectual imperialism” sparked by the privilege of well-intentioned data-generators and maintained by the powerlessness of historically marginalized data users.²⁷⁶ Both sides appear trapped in their disparate contexts, unwilling or unable to imagine a context outside of their own. But as Freire argued, critical thought and action regarding one’s own context can shake the status quo.²⁷⁷ In an effort to bridge these gaps in understanding, we conducted a case study of maternal and child nutrition decision makers in Uganda. This study included preliminary interviews with 27 decision makers in Uganda, an extensive literature review, and a survey of 42 stakeholders involved in Uganda’s Scaling Up Nutrition (SUN) movement. This methodology both informed and confirmed a nuanced depiction of data demand that comprises the constraints and incentives that decision makers face to using evidence in their work. Respondents emphasized their desire to use data, and yet the lack of context-appropriate data available. Additionally, a lack of infrastructure (e.g. statistical capacity and stable Internet access) significantly constrained data users from implementing evidence-

²⁷⁶ Alatas, Syed Hussein. "Intellectual imperialism: definition, traits, and problems."

²⁷⁷ Leonard and McLaren, eds. *Paulo Freire: A critical encounter*.

based decision making, while their perception of the data's value incentivized data use. These factors, among others, need to be considered when designing, implementing, and disseminating research in both maternal and child nutrition and international development more broadly.

The lack of evidence uptake in the developing world is not a technical problem, but rather a symptom of complex power disparities that subtly guide the entire international development agenda. As Schwenke emphasized, this web of power is not enforced maliciously, but rather upheld by good intentions.²⁷⁸ In a way, this makes the web trickier to identify and subvert. But so often, underlying our attempts to alleviate poverty is a sense of entitlement—privilege gives us the power to exert our influence, even when that influence is meant to be positive. This study pushes back against this reality. As the “data revolution” gathers momentum, researchers and decision makers alike need to imagine a context outside of themselves and leverage this empathy to chart a new, inclusive course of action.

²⁷⁸ Schwenke, Chloe. *Reclaiming value in international development: The moral dimensions of development policy and practice in poor countries.*

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APPENDIX I: SURVEY QUESTIONS

The following 20 minute survey will help to identify the various constraints that policymakers and practitioners in Uganda face to using data and evidence in their work. All responses to the survey will be kept confidential. Your name will not be published nor associated with any of your responses. You may stop the survey at any time.

1. Given the information above, do you consent to participate in this survey?
2. What is your name?
3. What organization do you work for?
4. What is your title or position at the organization?
5. How long have you worked at your organization?
6. What is your specialization?
7. In your work, what types of decisions do you typically make?
 - a. Budget preparation/ allocation
 - b. Staffing decisions
 - c. Supply management
 - d. Planning services
 - e. Service improvement
 - f. Other (please comment)
8. What was the last major decision related to policy or programs that you made?
9. Did you use data or evidence to make that decision? Why / why not?
10. When considering what kind of evidence to use in your work, what factors do you consider?
11. In the country in which you work, what are the top 3 constraints people face to using evidence in nutrition planning and programming? (rank 1-3)
 - a. Political environment
 - b. Corruption
 - c. Fear of the government
 - d. Electricity
 - e. Internet access
 - f. Economic climate
 - g. Distance from capital
 - h. Other (please comment)
 - i. None of the above
12. In the country in which you work, what are the top 3 incentives people face to using evidence in nutrition planning and programming? (rank 1-3)
 - a. Political push to use evidence in decision making
 - b. Legislation compelling data openness (i.e. Freedom of Information Act)
 - c. Government investment in determining national priority areas
 - d. Government provides rewards and recognition for innovation
 - e. Uganda National Action Plan (UNAP)
 - f. Collaboration within the SUN movement

- g. Urgency of the malnutrition problem in Uganda compels evidence based action
 - h. Other (please comment)
 - i. None of the above
13. In the organization in which you work, what are the top 3 constraints people face to using evidence in nutrition planning and programming? (rank 1-3)
- a. Mission of the organization does not support evidence use
 - b. Organizational structure prevents input
 - c. Lack of communication
 - d. Lack of coordination
 - e. Lack of human capital in general
 - f. Lack of staff with technical skills needed to use data
 - g. Lack of budget
 - h. Other (please comment)
 - i. None of the above
14. In the organization in which you work, what are the top 3 incentives people face to using evidence in nutrition planning and programming? (rank 1-3)
- a. Influence of the organization itself
 - b. Reporting requirements from donors
 - c. Peer reviews within organization
 - d. Human capital in organization designated for research
 - e. Close partnership between researchers and practitioners
 - f. Organizational culture that promotes critical inquiry
 - g. Desire for reputability
 - h. Other (please comment)
 - i. None of the above
15. In your work, what are the top 3 constraints that you individually face to using evidence in nutrition planning and programming? (rank 1-3)
- a. Lack of data literacy
 - b. Lack of computer literacy
 - c. Lack of education (i.e. inability to understand statistical terms)
 - d. Low position within organization
 - e. Lack of awareness of available data portals
 - f. Lack of time
 - g. Lack of interest
 - h. Other (please comment)
 - i. None of the above
16. In your work, what are the top 3 incentives that you individually face to using evidence in nutrition planning and programming? (rank 1-3)
- a. Professional ambition (i.e. desire to be a leader in the field)
 - b. Pressure due to perceived impact on beneficiaries
 - c. Relevance to personal experience (i.e. focus on local data)
 - d. Previous training in data literacy
 - e. Previous training in computer literacy

- f. Mentoring from staff with technical skill
 - g. Partnership with a researcher who is producing the evidence
 - h. Pressure to implement a successful program from organization or donors
 - i. Other (please comment)
 - j. None of the above
17. In terms of the data itself, what are the top 3 constraints you face to using such evidence in nutrition planning and programming?
- a. Availability of data (i.e. whether a data source is open access)
 - b. Format and usability of data (i.e. data portal)
 - c. Outdated information
 - d. Poor data quality
 - e. Relevance of data (i.e. whether it pertains to local issues)
 - f. Overlapping research efforts (i.e. several organizations creating similar portals)
 - g. Conflicting data sources (i.e. several portals with different information)
 - h. Other (please comment)
 - i. None of the above
18. In terms of the data itself, what are the top 3 incentives you face to using such evidence in nutrition planning and programming?
- a. Theme in literature with clear policy implications
 - b. Evidence is heavily marketed (i.e. 1st 1000 Days of Life)
 - c. Good reputation of the researcher or data generator
 - d. Partnership with a researcher who is generating the data
 - e. Data seen as valuable towards improving program implementation
 - f. Data generation funded by your donor
 - g. Data will be updated regularly
 - h. Other (please comment)
 - i. None of the above
19. When making decisions about using evidence in nutrition planning and programming, on what level are the biggest constraints you face?
- a. Country
 - b. Organization
 - c. Individual
 - d. Data-specific
 - e. When making decisions about using evidence in nutrition planning and programming, on what level are the biggest incentives you face?
 - f. Country
 - g. Organization
 - h. Individual
 - i. Data-specific
20. How could research dissemination be changed to work better for you?
21. Do you have any comments on the survey or on the topic of evidence uptake in Uganda?

APPENDIX II: OPEN DATA INITIATIVES INDEX

1. Abdul Latif Jameel Poverty Action Lab (J-PAL)
<http://www.povertyactionlab.org/>
2. AidData
<http://aiddata.org/>
3. Code4Africa
<http://www.codeforafrica.org/>
4. Global Development Network
<http://www.gdn.int/>
5. Global Open Data Initiative
<http://globalopendatainitiative.org/>
6. Open Data Foundation
<http://www.opendatafoundation.org/>
7. Open Data Institute
<http://opendatainstitute.org/>
8. Open Data Research Network
<http://www.opendataresearch.org/>
9. World Wide Web Foundation
<http://webfoundation.org/>