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Civil Registration and Vital Statistics as Sources of Socio-Demographic Data for Good Governance in Nigeria

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Abstract

Timely and accurate demographic data, resulting from robust Civil Registration and Vital Statistics [CRVS] systems play critical roles in facilitating the realisation of key developmental goals in most countries. A well-functioning CRVS system can afford Nigeria the ambit to gather timely data for evidence-based policy-making. However, just as in many other developing countries, Nigeria's CRVS framework is plagued by weak institutional linkages resulting to poor quality sociodemographic data. Therefore, this paper focused on the importance of a robust CRVS system as source of quality sociodemographic data in Nigeria, with the objective of situating it within the broader context of good governance. The paper is primarily theoretical and employed the activity theory to examine access to and use of population-based data from the CRVS system for good governance. This paper concludes that the inability to generate actionable and quality population-based data due to Nigeria's weak CRVS system, as well as non-data driven socioeconomic policies hinders good governance. Therefore, more investments are needed to scale-up Nigeria's CRVS system and the resulting sociodemographic data should be a priority in driving national policy-making for good governance.

Keywords: Civil registration, good governance, Nigeria, sociodemographic, vital statistics

Introduction

For most low and middle income countries, especially in sub-Saharan Africa, good governance and effective public service delivery have been in short supply and therefore remain one major challenge to their development aspirations. Good governance which borders on the ability of governments and institutions to satisfy the aspirations of citizens is especially fundamental to

harnessing the huge human and material resources that abound in Nigeria. Good governance is described as the “several processes regarding leadership, including policy making, transparency, accountability, protection of human rights and relationship among the public, private and civil sectors in determining how power is exercised” (Mutume, 2005: 11). According to the Mo Ibrahim Foundation, governance is slowly improving in Africa. In 2018, out of 54 African countries, Mauritius, Seychelles, Cape Verde, Namibia and Botswana were ranked the best five countries in overall governance ratings ahead of 33rd ranked Nigeria- with all its undoubted potentials (Ibrahim Index of African Governance (IIAG, 2018).

Good governance entails improving the lot of local populations (Population Reference Bureau (PRB), 2009). Therefore, several development plans, both at the national, regional and global levels have been pieced together to entrench good governance. For instance, the 2000-2015 Millennium Development Goals (MDGs) and currently, the 2016-2030 Sustainable Development Goals (SDGs), the Lagos Plan of Action (1980-2000), the 2001 New Partnership for Africa Development (NEPAD); Nigeria’s Vision 20: 2020 (United Nations, 2015; UN Economic and Social Council; UN Economic Commission for Africa, 1990) are some of many development initiatives to mainstream good governance, especially in low and middle income countries. However, corruption, insecurity and non-adherence to rule of law; lack of citizenship participation and human rights abuse; lack of sustainable economic opportunities and poor human development have been listed as barriers to good governance among African countries (IIAG, 2018).

Lately, access to and use of data in decision-making processes other than merely anchoring decisions on guts or intuitions and overall experience has increasingly been understood as one fundamental imperative to good governance (Davies, 2012). Understanding the population composition, structure and characteristics as sources of data is germane to the decision-making process and outcomes. In this 21st century, data is regarded as a valuable resource and some experts are even of the opinion that data have become the ‘oil of the digital era’ and see the 21st century economy as the ‘data economy’ (The Economist, 2017). In essence, the world is now data driven, where governments, civil societies, corporate organisations like Google, Amazon and Facebook rely on timely data to make informed decisions (Deloitte Centre for Government Insights, 2016).

One aspect of data critical to good governance is demographic data. Demographic data perform dual purpose of either informing effective development planning or are employed to monitor development interventions (Brolan, Gouda, AbouZahr & Lopez, 2017). Unfortunately, they are mostly lacking in many developing countries of sub-Saharan Africa (PRB, 2009). However, where, they exist, they are often incomplete and of poor quality, with access to and use the other challenges blighting the adoption of demographic data in the policymaking process.

Population-based data is needed to measure and monitor progress towards achieving the SDGs (Brolan, Gouda, AbouZahr & Lopez, 2017), while they also help governments plan investments and services, and they impact nearly everything we do. However, for population-based data to become useable evidence for policymaking and actionable in governance, they must be timely, up-to-date, of quality and reliable. If not, poor quality population-based data can be misleading and can lead to bad decisions with serious consequences, especially when used for policy or guiding public health programmes (University of Melbourne and Bloomberg Philanthropies Data for Health Initiative, 2018a). One sure pathway to quality population-based data is robust Civil Registration and Vital Statistics Systems (CRVS). Just like population census and other population sample surveys, the CRVS system is a major and reliable source of population data. However, unlike population censuses and population sample surveys which hold periodically with high cost implications, the CRVS provides data on population dynamics on a continuous basis and provides the yardstick for assessing progress with plans across sectors for improving economic growth, health and well-being and reducing poverty (World Bank/WHO, 2014).

Civil registration is “the continuous, permanent, compulsory and universal recording of the occurrence and characteristics of vital events pertaining to the population as provided through decree or regulation in accordance with legal requirements of a country” (United Nations Statistics Division, 2014: 279). Vital statistics on the other hand is “the collection of statistics on vital events in the lifetime of a person, as well as the description of relevant characteristics related to the events themselves and to the person or persons concerned” (World Bank, 2017). In sum, civil registration and vital statistics systems involve an established mechanism for the purpose of legally registering and recording data on vital events related to civil status of the population, including births, deaths, causes of death, marriages and divorces, on a continuous basis and as provided by the laws and regulations of the country” (Schmider, 2010: 2).

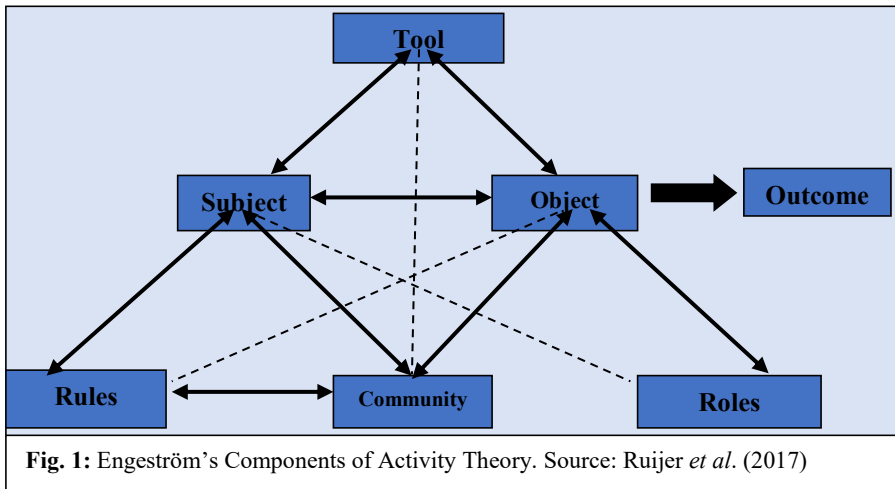
Therefore, a robust CRVS system offers a great window of opportunity for generating reliable socio-demographic data with which national policies and decision-making process can be anchored on. This is especially true since conducting population census in Nigeria is irregular at best, and coupled with the fact that outcomes of previous population censuses have been contested politically and are fraught with controversies. However, despite Nigeria’s population census being irregular and with disputed outcomes, there has been limited effort to link lack of reliable and quality sociodemographic data or their poor use to lack of good governance in Nigeria. Hence, the aim of this paper was to review the importance of a robust CRVS system as source of sociodemographic data for good governance in Nigeria. It also was aimed at contributing to the extant and growing body of evidence needed to scale CRVS systems and entrench good governance by ensuring that national planning is driven by quality sociodemographic data.

The remaining part of this paper is structured into six parts. Following this instruction is the theory. The paper is anchored on the activity theory, a framework that has mostly been employed for its descriptive usefulness than for its predictive strengths. Next is the method through which the search for materials for review was conducted and a background of current situation of CRVS in Nigeria. Further, evidence from reviewed papers were discussed and followed by the discussion of several areas in which CRVS can be engaged to achieve good governance in Nigeria. Finally, the conclusion and recommendation is provided.

Theoretical Framework: Activity Theory

In this paper, the Engeström's (2001) activity theory was adopted to examine the use of population-based data from the CRVS systems for good governance. The activity theory is more of a descriptive meta-theory or framework than a predictive theory (David, 2007) and has been employed in human computer interaction research (Kuuti, 1996) and also in developmental work research (Engeström, 2000 & 2005). The theory borders on the activities people engage in, those involved in such activities, the goals and intentions for engaging in such activities, the results and products ensuing from those activities, the rules and norms that limit those activities and the community in which those activities occur. According to David (2007), activities consist of conscious goal-directed actions, where its elements dynamically change over time. Activities are also collective form of doing, directed to and driven by an object (goal), in addition to being open systems (Engeström, 2001).

The activity theory consists of several elements: **subject**- the individual or collection of actors, civil societies and public administrators involved in the activity; **object**- the entity for which the activity is consciously directed at; **tool**- the means whereby the object or goal is achieved and can influence the activity and in turn can be altered by the activity. **Community**-consists of all actors directly involved in an activity, who share the object with the subject; **rules**- the direct applied and implied norms, rules and social interactions of a community that guide actions or activities accepted by a community; **roles**- roles that prescribe different tasks to individual members of the group within the community, thereby creating some kind of division of labour; and, **outcome**- the change of the object into an outcome prompts and sustains the existence of an activity. The interaction of the various components of the activity theory is illustrated in figure 2 below.



Engeström's activity theory provides a useful understanding of how a broad scope of factors interact to influence human activities, in this case, the generation and use of population-based data for decision-making process in governance. Achieving a specific *outcome* in this case, good governance, requires the production of certain *objects*, including population-based data. The *subject* is the provider of population-based data, in this case the National Population Commission (NPC) which generates population-based data and the National Bureau of Statistics which publishes data resulting from the CRVS systems. The CRVS ecosystem represents the *tool* that mediates activities by providing channels for interaction between government and the citizenry. Here, the CRVS systems provide up-to-date and reliable population-based data for evidenced-based decision-making that could result in good governance.

Activity is also mediated by the *community*. Here, the community can consist of citizens, public administrators and other civil societies who are directly involved in generating and use of population-based data for decision-making. Further, the community may enforce *rules* and guidelines that bear on generating and use of population-based data. These rules refer to the legal frameworks that mandate citizens to register vital events and determines how population-based data are generated and used for good governance. The *roles* of various actors differ in contexts. The NPC has the role of generating vital statistics while the National Bureau of Statistics (NBS) has the mandate of publishing the vital statistics in addition to civil societies and NGOs such as UNICEF who may collaborate with government to find innovative ways of motivating citizens register vital events as well as government to scale up CRVS system.

Methods

Search Strategy

This systematic review adopted the Preferred Reporting Items for Systematic reviews and Meta-Analysis Protocol (PRISMA-P) 2015 (Moher, Shamseer, Clarke, Gherzi, Liberati, Petticrew, Shekelle, Stewart and PRISMA-P Group, 2015). A search of literature using Google Scholar and other electronic journals including the *Lancet Series- Who Counts*, PubMed, PLOS, BMC; other electronic databases from multidisciplinary fields such as, United Nations, World Bank Group, United Nations Children's Fund, African Union, University of Melbourne and Bloomberg Philanthropies Data for Health Initiative, etc. was undertaken. In addition, reference lists from already retrieved articles were further analysed to have access to further related literature. The search specifically for materials on CRVS covered research from Africa, Asia, Europe, Latin America, etc. published between 2007 and 2019. The year 2007 was set as the baseline because it was the first time a global attempt was made by the *Lancet Series- Who counts?* - to expose the developmental failures many low and middle income countries face owing to weak CRVS system. To have access to materials on CRVS, the following word combinations were employed in the search: civil registration and vital statistics systems; civil registration, vital statistics and good governance, civil registration, vital registration and development; civil registration, vital statistics in health systems; civil registration, vital statistics and national identity management.

Inclusion Criteria

Studies and papers appearing in peer-reviewed journals, conference proceedings, working papers as well as policy briefs dwelling on CRVS irrespective of the target region were included. Further, materials linking CRVS and good governance, health systems, achievement of sustainable development goals and population data generation were all included. The search turned in a total of 107 literatures. The abstracts of the materials were screened to make sure they were related to good governance. A total of 53 materials failed to meet the good governance criteria and subsequently were excluded while 54 others were retained for review.

Current State of Civil Registration and Vital Statistics in Nigeria

The promulgation of Ordinance 21 in 1863 which birthed the registration of births in Lagos state marked the first formal attempt at institutionalising civil registration in Nigeria. This was further scaled up to cover the entire country by 1917 (Adedini & Odimegwu, 2011; Salawu, 2009 and NPC, 2008). Perhaps, in recognition of the importance of CRVS to national development, the Nigerian government established the in 1988 the NPC, with the responsibility of collecting, analysing and disseminating demographic data. It however took four years after the NPC was established for Nigeria's CRVS law captioned Births, Deaths, etc. (Compulsory Registration) Act of Nigeria to be enacted in

1992. The act provides for the compulsory registration of births, deaths, etc., and for matters connected therewith (UNICEF, 2017a) according to international conventions and operates a centralised structure, with the NPC responsible for registration of all vital events.

On a national scale, more than 70% of child births are registered in the country, and there are urban-rural disparities in proportion of registered child births, with a little above 50% of urban children registered while about 22% of rural births are registered (UNICEF, 2017b). In order to overcome the challenges associated with birth registration and ensure that no child is left behind, the NPC in association with other stakeholders like UNICEF rolled out the *RapidSMS*, where healthcare workers in remote hamlets can send new-born data to registration officers via mobile devices for documentation (UNICEF Innovation, 2012). Here, each civil registrar has his/her unique ID and reports the number of birth registration cases every other week. Those reported cases are all updated on the *RapidSMS* dashboard, which is accessible over the web.

The completeness rate of registration of vital events have been improving over the years, but particularly for birth registration, albeit less than expected. The WHO puts Nigeria's birth registration completeness rate as at 2013 at 30%; and sadly, there is no national average for death registration in Nigeria (WHO, 2013) and only 23 out of 36 states (FCT included) reported on the numbers of deaths that were recorded between 2014 and 2016 (NBS, 2018). The scenario is same for marriages, with only few states supplying records marriages, divorces and annulments (NBS, 2018).

From this foregoing therefore, Nigeria consequently has incomplete vital statistics, lacking in leadership and particular viable framework to assess, improve and track progress. Perhaps, this informs why Nigeria ranked very low in an assessment of CRVS systems on the basis of Vital Statistics Performance Index (VSPI <0.70) between 2005 and 2012 (University of Melbourne and Bloomberg Philanthropies Data for Health Initiative, 2018b). Nigeria was particularly weak in three components - *registration completeness, cause of death detail and data quality*. Hence, there is poor data from CRVS system to inform government policies and good governance and this impacts effective public service delivery and sustainable development.

Nigeria's CRVS systems is weak, lacking in leadership and frameworks just as in many other countries in developing countries. The greatest challenge to the registration of vital events with the non-enforcement of the law and not with the law itself. For instance, since the CRVS laws Act of 1992, the NPC is yet to commence collecting data on marriages and divorces in the country, even though they have committed to collecting such data soon. In fact, as at 2018 most states could not report number of marriages, divorces and annulments recorded between 2014 and 2016 (NBS, 2018). Another basic challenge to the registration of vital events is the lack of enthusiasm on the part of citizens. Although many individuals are aware of their obligation to register vital events as they occur, practice has remained low over the years. Further, poor registration of vital events is associated with the norms and values of

many cultures. It is widely believed among certain cultures that registering deaths, for instance, amounts to glorifying it and thus, more deaths will be recorded as a result. Expectedly, the failure of citizens to get involved in governance by supplying records of vital events as they occur, and lack of data driven policymaking process encumbers good governance.

Despite national and regional governments as well as development partners concerted efforts at scaling up CRVS, there have been lack of leadership and underfunded CRVS improvement initiatives in Nigeria. Multilateral partners such as the World Bank, WHO, and UNICEF, and other philanthropic bodies, have been at the forefront of scaling up CRVS systems (University of Melbourne and Bloomberg Philanthropies Data for Health Initiative, 2018b; APAI-CRVS, 2017; Lopez & Setel, 2015; United Nations Economic and Social Commission for Asia and the Pacific, 2014 and World Bank/WHO, 2014). Ensuring a robust CRVS system will positively impact policymaking and outcomes by providing data and statistics to guide good governance.

CRVS and Good Governance: Evidence from Literature Inclusiveness and Human Rights

Through the CRVS system, the realisation of many fundamental human rights in international declarations and conventions are facilitated. A well-functioning CRVS system also provides legal identity, proof of age and nationality to people, including the most vulnerable groups- women, children and persons affected by natural disasters and conflicts (*Brolan, Gouda, AbouZahr, and Lopez, 2017; Peters, 2016; AbouZahr, Savigny, Mikkelsen, Setel, Lozano, Nichols, Notzon and Lopez, 2015*). Such is the functionality of CRVS that when efficient, ensures that every citizen counts and is counted. Having a basic means of identification confers on citizens, especially, children, some level of protection from exploitation, child labour and child marriage (*Wenz and AbouZahr, 2016; UNICEF, 2013; Plan, 2009*). Furthermore, in terms of birth registration, CRVS serves as the anchor for certain fundamental human rights as well as privileges. In some countries, some documents such as birth certificates or declaration of age are needed before individuals have access to services such as education and healthcare. Others, including death and cause of death certificates enable bereaved families to claim inheritances and rights (*Data2X, 2014; Plan, 2009*).

For women, certificates such as marriage and divorce certificates ensure women's ability to prove family relationships, claims to inheritance in case of spouse's death as well as empower them to participate in modern societal affairs and express their civil and political rights too (*Pryor, 2016; AbouZahr et al, 2015; Data2X, 2014*). Having a CRVS system that has the record of citizens and in turn has citizens that fully participate in modern society encourages inclusiveness and good governance because policy making is guided by continuous, up-to-date and reliable data about the population, health and social characteristics of all citizens (*Cobos Muñoz, AbouZahr and de Savigny, 2018*).

CRVS in Health Systems

Public health in most developing countries still remains a major concern to a greater percentage of the population and a well-functioning CRVS can play pivotal role at improving health systems. Globally, a quarter of births go unregistered (UNICEF, 2013 & 2017), while a good number of under-five deaths fail to be registered (United Nations, 2017). In addition, most maternal and adult deaths, especially, those occurring outside medical facilities are also not attributed to particular medical causes (Jackson, Wenz, Muniz, Abouzahr, Schimder, Braschi, Kassam, Diaz, Mwamba, Setel and Mills, 2018; World Bank & WHO, 2014; WHO, 2012). Therefore, most available CRVS data in most developing countries are often incomplete and of poor quality (Cobos Munoz, Abouzahr and de Savigny, 2018). Of particular importance is the cause of death statistics. Detailed information regarding death by age, sex, and their causes are needed to understand the emerging pattern of diseases and ultimately the ability to develop appropriate responses and monitoring frameworks by government (WHO, 2013). Certainly, forging adequate policy responses to emerging health patterns requires a robust Health Information System [HIS] (Lopez and Setel, 2015).

A link between the health system and a well-functioning CRVS system will provide timely data with which government and health officials can monitor and act on the health status of the population. Perhaps, the claim that “the health and development challenges of the coming decades cannot be tackled effectively without reliable data for births, deaths, and causes of death, which only a comprehensive CRVS can deliver” cannot be over emphasised (AbouZahr, Savigny, Mikkelsen, Setel, Lozano and Lopez, 2015: 1407). Hence, no other system can produce a requisite health data in informing policy responses in such a regular and disaggregated manner *in population other than a well-functioning CRVS system* (Brolan, Gouda, AbouZahr, and Lopez, 2017; Maurice, 2016; Hill, Lopez, Shibuya, and Jha, 2007).

The CRVS vital statistics performance index (VSPI) has been employed to measure health outcomes, such as healthy life expectancy (HALE), maternal mortality ratio (MMR) and Probability of death before age five [5q0] (University of Melbourne, Bloomberg Philanthropies & Data for Health Initiative, 2018). The VSPI explains the “degree to which a CRVS system accurately and completely registers and certifies vital events. It measures quality, completeness, and timeliness of CRVS-derived mortality data on a continuous scale with six indicators” (University of Melbourne, Bloomberg Philanthropies & Data for Health Initiative, 2018a: 2). It was found that there existed a strong association between VSPI score and health outcomes. In this light, an increase in the VSPI score was related to increase in the number of healthy years a person was supposed to live for, as countries with higher VSPI scores experienced low rates maternal and under-five mortality (University of Melbourne, Bloomberg Philanthropies & Data for Health Initiative, 2018a). The study concluded that good performance of CRVS coincided with good health at global levels, mindless of income and other factors.

CRVS and Population based Data

Timely vital statistics enable government and other stakeholders to monitor progress towards national, global and developments goals and to periodically review health priorities (APAI-CRVS, 2017; Rampatige, Mikkelsen, Hernandez, Rileya & Lopez, 2014). Nigeria is expected to become the third most populous nation in the world by 2050 (UNPD, 2019), yet, has been unable to conduct a national population census twelve years on from 2006, the last time it was conducted. More so, Nigeria's previous population census results have been politicised and contested, further casting doubts on their reliability for data driven decision-making process. Therefore, the country can turn its massive demographic characteristics into strength only when it has a reasonable understanding of its population dynamics. This can be achieved through a robust CRVS system as it generates data on population dynamics regarding births, deaths, marriages and population size (AbouZahr, Savigny, Mikkelsen, Setel, Lozano and Lopez, 2015). Instead of working with estimates, a well-functioning CRVS has been observed to provide actual health and population statistics (American College of Obstetricians and Gynaecologists, 2018; Data2X, 2014). Availability and access to population-based data alone cannot ensure evidence driven policy making. Reliable and up-to-date data is mostly possible through a well-functioning CRVS system that ensures universality, continuity and permanence unlike other means of population data collection mechanisms (Cobos Munoz, Abouzahr and Savigny, 2018; AbouZahr, Savigny, Mikkelsen, Setel, Lozano and Lopez, 2015). Therefore, a well-functioning CRVS becomes a powerful tool for acquiring actionable population data, thereby arming government in making better policies.

CRVS System and Interoperability with other Databases

Good governance can be enabled by linking different databases to create a more efficient and smarter system for accessing information in governance. Aside applying CRVS to education and healthcare systems, Peters (2016), the World Bank (2015) had observed that CRVS can as well be employed in sharing information across different government platforms. Sharing of data between government and private sectors has been envisaged although there are fears of unethical behaviours (Cavoukian and Jones, 2012). Hence, there are laws in most western countries preventing data sharing between public and private sectors (Organisation for Economic Co-operation and Development, 2013; Cavoukian and Jones, 2012). For instance, Peters had observed the possibility of linking data from several sources, as CRVS, employment and taxation could bring about easier understanding of general movement patterns and thereby leading to better policies (Peters, 2016).

In other cases, there could be a linkage between the electoral and CRVS systems. The electoral body may decide to purge their database of deceased persons by cross matching them against death records provided by the CRVS system (United Nations, 2014). Such linkages could produce an accurate, up-to-date list of persons qualified to vote at various electoral levels, thereby

injecting more credibility, seamlessness and efficiency into the electoral processes (APAI-CRVS, 2017). Achieving such could definitely bring about good governance and more confidence in citizens and the space to participate in governance.

A well-functioning CRVS system holds immense opportunities in realising the goals of national identity systems. This is especially true where persons lose their identification documents in the wake of conflicts and natural disasters and need to be reunited with families (AbouZahr, Savigny, Mikkelsen, Setel, Lozano, Nichols, Notzon and Lopez, 2015). For instance, following the 2013 Typhoon disaster in the Philippines, many people lost their documents. It took the central archives of the central CRVS to replace the lost certificates (Abouzahr, Azimi, Bersales, Chandramouli, Hafuna, Khan, Kulkayeva, Marskell and Sauyekenova, 2014). AbouZahr, Savigny, Mikkelsen and others have advocated that individual identity system should be linked to the CRVS which is the mechanism that stores a person's data from birth to death (AbouZahr, Savigny, Mikkelsen *et al.*, 2015).

Discussion

The nexus between good governance, population-based data and CRVS systems is an important and obvious one and has been demonstrated in this review. A well-functioning CRVS has been reported to be consistent with efficiency in national planning process by arming authorities with adequate knowledge about local populations. For instance, to effectively harness its demographic capacity, reap large demographic dividends and meet its population-related targets, Nigeria requires essential up-to-date population data. Unfortunately, in the face of Nigeria's poor demographic data due to irregular population censuses and poorly functioning CRVS system, the ability to make good use of its population strength for socioeconomic development does not look promising. A weak CRVS system generates poor and incomplete population-based data for public sector planning, which in turn leads to poor public service delivery and governance.

Otherwise, data from population census and other periodic population sample surveys should be complemented by timely and up-to-date data from the CRVS system. A robust CRVS system certainly would come in handy to provide accurate demographic data in-between population census years for measuring both fertility and mortality estimates at both national and subnational levels on regular basis (University of Melbourne and Bloomberg Philanthropies Data for Health Initiative, 2018b). In this case, a sound CRVS system provides the platform to support good governance by ensuring evidence-based planning and accountability. Else, national planning anchored on inadequate or obsolete data would have little meaningful impact on an increasingly complex Nigerian society.

Perhaps, the 2018 IIAG report on good governance demonstrates the relationship between well-functioning CRVS system and good governance. Apart from Egypt, Mauritius, Seychelles and South Africa- the only four

countries in Africa to maintain properly functioning, compulsory and universal CRVS system that meets international standards (UNECA, 2014), most Africa countries have no well-functioning CRVS systems. Following the 2018 IIAG report on governance in Africa, Mauritius, Seychelles, Cape Verde, Namibia and Botswana were ranked the 1st, 2nd, 3rd, 4th and 5th respectively in overall governance in Africa. Interestingly, these countries with the exception of Egypt also ranked very highly in civil registration and statistical capacity according to the IIAG governance report. For instance, Cape Verde and Namibia came joint 1st in civil registration while Botswana was ranked 4th (IIAG, 2018).

Meanwhile, Nigeria which ranked 26th and 19th in civil registration and governmental statistical capacity respectively came 33rd in overall good governance (IIAG, 2018). This suggests among other factors, an apparent link between well-functioning CRVS systems and availability of government statistical capacity on one hand and good governance on the other. Well-functioning CRVS systems involve satisfactory level of registration coverage and completeness of recording vital events and cause of death information. Through a robust CRVS systems, accurate and timely population-based data and other relevant official statistics imperative to governance are generated and when applied to the decision-making process of government, good governance could certainly be deepened in Nigeria.

The linkages between the CRVS and health systems could be profitable to good governance and effective public service delivery. Creating linkages between CRVS and health systems could lead to efficiency in governance and public service delivery and could as well free up resources to be ploughed back into other sectors. For instance, understanding the causes of death from the CRVS would help authorities develop appropriate public health measures and make necessary investments in the health sector that results to saving more lives, better health status, overall well-being of the population. Therefore, Nigeria must be proactive in governance and avoid passive systems in public service delivery if its development goals are to be achieved.

Similarly, interoperability between the CRVS system and other databases will ensure more efficiency and can help curb corruption in governance. Linkages of vital records and other databases such as the national identity management system, voter and licensing databases other than having different institutions for different purposes could save more resources and time for the government. In such cases, the electoral body may decide to clean up the voter register of deceased persons by cross matching them against death records provided by the CRVS system with little or no cost and timely too (United Nations, 2014). The outcome could be a heightened confidence in the electoral process (APAI-CRVS, 2017) unlike when voters observe names of their deceased relatives in the voter register and could result in building more confidence of citizens in government and the space to participate in governance.

The National Identity Management Commission (NIMC) could also benefit greatly in terms of time and money spent to produce and issue national identification cards if it directly accesses the CRVS database. The current

scenario whereby persons wait for many years after enrolment to receive national identification is discouraging at best. The CRVS captures registration of birth and death and other vital events throughout the life course and therefore should be a veritable resource in managing individual identity with proper linkages across various government databases and there have been evidences of its workability in more developed climes (AbouZahr, Savigny, Mikkelsen *et al.*, 2015; Abouzahr, Azimi, Bersales *et al.*, 2014). The implication will be a government that has provided means of national identification and aware of the existence of all its citizens.

A robust CRVS systems has implications for Nigeria's national security as well. Nigeria has witnessed too numerous fatalities resulting from alleged herdsmen/farmers' crises of late. There have been arguments regarding the nationalities of the protagonists. While a lasting solution to the menace is being sought, a well-functioning CRVS system could offer some panacea to these violent recriminations, especially, where CRVS has been moved from paper-based and manual system to the digital CRVS platform. Persons who slip through Nigeria's borders to compromise our national security could easily be apprehended with check of the CRVS database. Birth records and national identity records as captured in the CRVS would have played some major role in the national security.

Interestingly, the Nigerian government in June 2018 embarked on a conditional cash transfer scheme to 3000 poor households in 19 states from the returned Abacha loot (BBC News, June 29, 2018). The worrying aspect with the scheme was how poor households were to be determined, given no poor household database existed in Nigeria. However, determining poor households could have been a lot easier if Nigeria has a well-functioning CRVS system containing socio-economic data on the population. Accessing the CRVS database by the appropriate government agencies could have been the best option to identify the poor for the conditional cash transfer scheme since a well-functioning CRVS system contains all socio-economic and demographic data of all persons. This will ensure that the scheme would not be hijacked by the wrong people.

Further, a well-functioning CRVS would help government become more responsive to its citizens. Through the CRVS system, the realisation of many fundamental human rights in international declarations and conventions are facilitated. For instance, birth certificates could provide some levels of protection against child marriage, child labour and child trafficking and prevent children from exploitation. Also, through the CRVS system, illicit adoptions can be checked. It could also deepen inclusiveness by granting the right for women and children to claim inheritances in cases of death. For the older persons, a well-functioning CRVS system ensures access to old-age allowances, such as pensions and gratuities. It comes handily in Nigeria's context, given the stress undergone by retirees during regular screening exercises. Frail looking pensioners line up periodically for screening, with some losing their lives in the process. However, a well-functioning CRVS system could bring in

more efficiency to pension administration and overall governance. Here, interested government agencies can access data of retirees on the CRVS system and purge those that have died, while saving resources on occasional screening. Therefore, to entrench good governance and development, comprehensive national up-to-date statistics, evidence-driven public sector planning and a robust and reliable CRVS system must be a priority for Nigeria.

The activity theory has also afforded a basic understanding of how complex factors interact in the generation of sociodemographic data through CRVS and application of same data for good governance. Hence, achieving good governance is the expected outcome which could be achieved with reliable and up-to-date data. Government institution and other multilateral agencies such as NPC and UNICEF serve as subjects by producing sociodemographic data. To achieve good governance, the community, comprising of everyone that play certain roles in producing and using sociodemographic data cross path. This includes motivating citizens to register vital events as they occur and the desire by government to be guided by them in decision making.

Conclusion

This review has illustrated the interconnection between CRVS system, population-based data and good governance with theoretical evidences. The CRVS system holds veritable opportunities for Nigeria's development through generation of population-based data for evidence-based decision-making, good governance and effective public service delivery. Good governance and effective national planning require timely and reliable population-based data. Otherwise, no meaningful development can be anchored on obsolete, incomplete and unreliable population-based data. This is especially true with Nigeria's inability to conduct a reliable and timely population census and coupled with a poor CRVS system. Hence, for Nigeria to reap the benefits of evidence-based planning in good governance, then a well-functioning CRVS system should be prioritised. Consequently, there is urgent need for national and subnational governments to own up global efforts at scaling up CRVS by making investments wherever necessary. Such investments should include digitalising Nigeria's CRVS ecosystem. The digital CRVS ecosystem is more resilient than the paper-based and manual CRVS system and could easily be linked with many other system databases for synergy.

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