COVID-19 and Evidence-Based Policymaking (EBP): A Call for A Continental-Level Research Agenda in Africa

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Abstract

COVID-19 global outbreak poses a growing threat to society's health, social and economic well-being. The crisis demands robust empirical analysis and facts from experts to policymakers. Knowledge gaps hinder policymakers on how best to respond to the emerging needs of the pandemic. In this respect, evidence-based policymaking (EBP) approaches encourage policymakers to rely on available evidence, analyses, and facts to develop policies for combating COVID-19. The EBP approach contrasts with opinion-driven policies and the use of unverified general information to support particular policy choices. Microsimulation is an important part of what is known as EBP and a powerful tool for policymakers. The goal of this research is to provide an explorative and concise discourse on available microsimulation models as a tool for EBP and to outline a continental-level research agenda in Africa. The knowledge base developed from this study provides policymakers with a valuable resource in combating COVID-19. Additionally, this research offers crucial information on the continental-level research agenda to experts participating in scholarly debates and academic discourses.

Keywords: COVID-19, evidence, knowledge, policy and research.

Introduction

COVID-19 has now become a worldwide emergency given its impact on social and economic systems (Leung & Wuhttps, 2020). The WHO declared COVID-19 a global emergency on January 30, 2020, that posed a significant risk to nations with susceptible healthcare services (Chen, et al., 2020; WHO, 2020). Several governments around the world closed borders, prohibited movement, and imposed quarantines in an attempt to 'flatten the curve' (Gautret et al., 2020). These policy actions constricted global economies, creating concerns of a potential economic downturn and recession (Buck, et al., 2020). Estimating the impact of the coronavirus outbreak remains difficult, but it is clear that measures such as lockdowns caused substantial social and economic harm (Yazdany & Kim 2020). Faced with this tragic catastrophe, researchers globally committed themselves to conduct COVID-19-related research. These include research in economic impact (Warwick, & Fernando, 2020; Baldwin, & Eiichi 2020); social impact (Weiss & Murdoch, Van Lancker & Parolin, 2020); vaccine development (Xu et al., 2020; Qin et al., 2020; Huang et al., 2020); and medication/therapy (Yazdany & Kim 2020; Gautret et al., 2020).

Recently, in terms of COVID-19, several epidemiological, socioeconomic, and medical modelling have been undertaken (Abrigo, et.al., 2020; An, 2020; Chen et.al, 2020; Figari & Fiorio, 2020; Lopez & Rodo, 2020; Peng, et. al., 2020; Verdery & Smith-Greenaway, 2020). For example, Peng, et al. (2020), used a generalised SEIR model to analyse the COVID-19 epidemic in China. Their model reliably estimated the main outbreak variable and projected both the point of infection and the likely end time for five separate provinces of China (Lopez and Rodo, 2020). A revised SEIR framework was employed which contributed to understanding spreading infection during the latent period and integrated the effects of different mitigation percentages. Chen et.al, (2020) undertook modelling by RT-PCR in real-time and analysed the epidemiological, socioeconomic, medical, biological, and chemical characteristics of COVID-19 in the laboratory. In Italy, national policy interventions on family income were estimated by Figari and Fiorio (2020), who simulated the counterfactual scenarios using the EU-wide microsimulation model (EUROMOD). The study presents timely proof of the varying degrees of the relative and absolute vulnerability of individual family income impacted by the lockdown. According to Figari and Fiorio, (2020), these emerge from differences in the security provided by the income-benefit scheme, combined with the private and family situations of people facing the possibility of a loss of earnings. In the context of the USA, An (2020) constructed a microsimulation methodology, emulating the trajectory of the nationwide survey preschool body mass index z-scores (BMIz) and child obesity incidence cohort. This study assessed COVID-19's effect on child obesity (An, 2020). Verdery and Smith-Greenaway (2020) estimated the possible size of COVID-19 family bereavements and focused on a current population microsimulation approximating white and black American kinship networks. Based on the global and local economy trend and COVID-19 spread, Abrigo, et al. (2020) explored several scenarios using microsimulation models and assumptions about the Philippine export market. These scenarios provided indications of the potential magnitude of the loss of economic activity from COVID-19 and COVID-19 interventions. This comprehensive and scientific expertise stems from empirical work that offers EBP.

In general, scientific studies show a wide range of agreed principles and observations that require policy interventions with strong technological foundations on a range of policy options for decision-makers (Cairney & Oliver, 2017; De Marchi, Lucertini, & Tsoukiàs, 2016; Hanney et al., 2003). However, less is understood about the relationship between microsimulation and EBP as regards promoting the design, development, and execution of the policy positions. More particularly, research on modelling/microsimulation and policymaking process in Africa is sparse and inconsistent. This research provides an explorative and concise discourse on available microsimulation models as a tool for EBP and outlines a continental-level research agenda for Africa. In the sections that follow, a review of the literature on both EBP and international experiences on microsimulation is presented. This is followed by a continental-level research agenda on COVID-19 and evidence-based policymaking (EBP). The final section presents the conclusions of the study.

Evidence-Based Policymaking (EBP)

The EBP approaches to research have gained increasing prominence in the international research community, thereby inspiring policymakers to talk of a 'new paradigm' for research and many organisations to review and reform their research programmes and practices (Cairney & Oliver, 2017; De Marchi, Lucertini, & Tsoukiàs, 2016; Dinbabo, & Badewa, 2020; Dinbabo, et al. 2020). Advocates of EBP urge policymakers, and those who implement policies, to draw on the currently acceptable research outcomes, evaluations, and past practice to gather solid pieces of evidence. According to them, evidence plays a significant role in determining, formulating, and implementing various policy agendas (Cairney & Oliver, 2017; Head, 2013). Recent years have also witnessed a renewed interest in EBP. This interest is predicated on the premise that evidence-based policy is also likely to offer politicians confidence as part of the decision-making process (Campbell, Benita, Coates, Davies, & Penn, 2007; Ile & Dinbabo, 2015).

Evidence-based policy development dates back to the 1980s when the British government focused on using evidence as a basis to inform both policy and practice, which subsequently led to EBP popularity in the medical sciences and healthcare (Baba & HakemZadeh, 2012). The past decade has seen a drive towards the institutionalisation of EBP, largely attributed to the success of evidence-based medicine (EBM) in developing tools to determine plausible evidence-based practice and regulative frameworks that encourage improved decision making through systematic reviews (Behague et al., 2009). Whitehurst (2002) defined EBP as the assimilation of specialist wisdom only with research studies and available evidence when making choices on how to deliver services. EBP is a framework that helps decision-makers develop possibly the best-informed decisions at the core of policy formulation and implementation. Davies (2004) noted that the use of methodically thorough research findings to identify strategies and initiatives to help to improve policy-related results is an essential component of EBP. Behague et al. (2009) and Cairney and Oliver (2017) advocate for co-ordinated policymaking based on an understanding of evidence which involves the use of research as a means of moving away from common sense-based policy development towards a policy rooted in scientific enquiry. Sanderson (2002) and Cairney and Oliver (2017) furthered this view, arguing that the underlying rationale for EBP is a desire to comprehend and explain how policies influence social and economic systems.

The cross-cutting issue is evidence manifesting itself while the main questions of what is needed to inform policy and how evidence is gathered are raised. In this regard, Marston and Watts (2003) defined *evidence* in the context of the United Kingdom public sector as the preference towards proof that is gathered through proper research, statistical data, policy evaluation, microsimulation, econometrics and expert knowledge. In terms of EBP, intense debates have arisen on the definitions of evidence, the sources of evidence and the types of knowledge that can be categorised as evidence (Baba & HakemZadeh, 2012; De Marchi, Lucertini, & Tsoukiàs, 2016; Glasglow & Emmons, 2007; Sanderson, 2002). It should also be noted that preference is at times given to evidence gathered by research, and specifically quantitative research, as it is generally considered to be less likely to produce false information about the impact of an intervention (Rycroft-Malone et al., 2004). However, the key component to the range of definitions is that evidence must be independently monitored, validated, and used to promote awareness and that policy should be scrutinised (Ile & Dinbabo, 2014; Rycroft-Malone et al., 2004).

In this regard, Baba and HakemZadeh (2012) suggested that policy inferences must be subjected to rigorous testing and called for closer linkages between research and government-sponsored evaluations as a means of establishing grounded evidence, based on what works in policy terms. Several authors (Behague et al., 2009; Cairney, & Oliver, 2017; De Marchi, Lucertini, & Tsoukiàs, 2016; Glasglow & Emmons, 2007; Ile & Dinbabo, 2014; Pawson, Wong & Owen, 2011) have also contended that EBP could benefit from the use of practical trails and other research designs as a means to thread together available intelligence. It produces explanations suggesting that building local research capacity could contribute to finding policy solutions suitable in the local context. It can also be argued that dissatisfaction with the judgement-based and/or opinion-based policymaking is the main reason for a shift to EBP by the scientific community. Current social science research also demonstrates that there is significant demand for immediate EBP formulation that responds to the present situation of COVID-19. Thus, EBP emphasises the importance of producing observable, a verifiable confirmation and using practical trails to test evidence under different circumstances. Baroni and Richiardi, (2007) noted that, generally, microsimulation is one of the tools that assist in practical EBP for education and research.

Microsimulation Models

Models of microsimulation primarily aim at analysing and forecasting alternative solutions for social and economic policy options. The framework allows measurements at the microlevel of some of the policy impacts. They are integral parts of the so-called EBP and valuable instruments for politicians (Jara, & Varela, 2019; Urban & Pezer, 2018; Dinbabo, 2011; Baroni & Richiardi, 2007). Numerous scholars contributed to the creation of various microsimulation forms. They developed various models based on these studies and discussed methodological perspectives. The model of microsimulation in social science generally investigates the implications of policy measures that can occur in different structures and institutions.

The microsimulation model was described by Martini and Trivellato (1997: 85) as

> *computer programmes that simulate aggregate and distributional effects of a policy, by implementing the provisions of the policy on a representative sample of individuals and families, and then summing up the results across individual units.*

Merz (1994: 1) has meanwhile described microsimulation as

> *a forecasting instrument that operates at the level of the individual behavioural entity, such as a person, family, or firm. Such models simulate large representative populations of these low-level entities to draw conclusions that apply to higher levels of aggregation such as an entire country.*

Microsimulation for Trippe and Stavrianos (1998) is a tool to simulate how a change to a government transfer programme would affect the costs and caseload of that programme. According to O'Donoghue and Dekkers (2017) and Jara and Varela (2019), microsimulation is based on an extensive sample of the population, represented as observations. Merz (1994) asserted that microsimulation is a predictive tool because it can predict the effects of these factors. A benchmark simulation is required when modelling a policy's direct and adverse reactions to predict the "status quo" situation. A comparative analysis of their effects with different possibilities then presents the important and adverse effects of the government policies. Static and dynamic modelling are the two main forms of models widely used in many countries (Creedy et al., 2002; Dinbabo, 2011; Merz, 1994; Siebertova, et.al, 2016; Spielauer & Dupriez, 2019). Static models function on cross-sectional datasets which offer an overview of the population at a particular time (Creedy et al., 2002:8). They usually involve static "ageing" procedures to update or project their datasets into the long term. Such procedures re-weigh personal records to align total external control measures for income, employment, and key demographic characteristics. Dynamic models function on structures with large, longitudinal databases with individual histories (Lloyd, 2003;

Martini & Trivellato, 1997). These two distinct types of models contain differences in the management of various components arising from such factors as client-needs discrepancies and model design styles (Martini & Trivellato, 1997).

Microsimulation as a Tool for EBP

The debate on the relevance of microsimulation models for EBP spans over fifty years, with contributions being made by, amongst others, Creedy et al., (2002); Jara, and Varela (2019); Lloyd (2003); Martini and Trivellato (1997); Merz (1994); O'Donoghue and Dekkers (2017); Orcutt (1957); Siebertova et.al. (2016); Spielauer and Dupriez (2019); and Urban and Pezer (2018). In general, EBP helps to reduce the prevalent scepticism about government effectiveness (Hall, 2008). Policy analysis, whether necessary for post hoc analysis or the introduction of a new policy or the revision of an existing one, requires the use of appropriate analytical tools, especially when an evidence-based approach to policymaking is adopted. The models allow micro-level quantitative analysis of the consequences of some of the policies. They further noted that microsimulation models are considered an integral part of so-called EBP and as valuable instruments for politicians. According to Siebertova et al. (2016), microsimulation models have been increasingly applied in the last few years as part of EBP. Baroni and Richiardi (2007) noted that while most of these models continue to stay within the academic institutional domain, government agencies are becoming increasingly keen to take over the application in EBP. Dinbabo (2011) indicated that microsimulation is used today in virtually every developed country as well as in some emerging economies.

Analysts such as Jara and Varela (2019); Klevmarken and Olovsson (1996); O'Donoghue and Dekkers, (2017); Siebertova et al. (2016); Spielauer and Dupriez, (2019); and Urban and Pezer (2018) proposed the comparative advantage of microsimulation models when it comes to EBP. Their recommendation may not only aid in improving the models of microsimulation and related policy analysis but also improve the usefulness of microsimulation modelling for EBP. Most researchers have recognised both the promise of microsimulation models for EBP and the danger of using judgment-based or opinion-based policymaking. Baroni and Richiardi (2007) demonstrated how microsimulation modelling can be useful for politicians, as part of EBP. They also referred to Orcutt (1957) who had, 50 years earlier, pointed out the usefulness of microsimulation modelling for public policymaking.

Klevmarken and Olovsson (1996) promoting the importance of microsimulation models for EBP, but conscious of the current restricted use of microsimulation models for this purpose, stated that the best possibility of getting the public sector engaged in the outcomes of microsimulation models is to begin by demonstrating the benefits of these models. In a case study (the South African Microsimulation Model-SAMOD), Dinbabo (2011) demonstrated that modelling of microsimulation could be used by the public sector for EBP, at least in the field of development studies. Nevertheless, he concluded that the prospect of microsimulation models affecting policymaking is undesirable where political factors dominate the advice of scientists. Notwithstanding the volume of literature on policy analysis, little attention has been given to EBP on the microsimulation models, such as static or dynamic models. Therefore, this work aims to fill the current research gap by providing an application of microsimulation models to EBP of COVID-19, which also seems to be absent from the African literature on policy analysis and evaluation. The next section presents a review of the literature on international experiences of microsimulation models.

International Experiences

The last few years have witnessed significant development in the complexity of various types of microsimulation frameworks and their usage in social, cultural, policy, and strategy activities (Dinbabo, 2011). The selection and application of computer-based microsimulation modelling techniques are influenced by both the aims of the analysis and the availability of resources (Dinbabo, 2011). In this way, understanding the implementation of static microsimulation in different regions of the world and its contextual factors helps inform the effective execution of a study's proposed assessment technique. Besides, the assessment of practice, i.e. the use and implementation of microsimulation models in different parts of the world, greatly enhances the device's reliability. As a result, researchers, practitioners, and decision-makers should be equipped to make informed decisions taking technological advances into account. Currently, government agencies and academic institutions are using a significant number of static and dynamic microsimulation models worldwide. The following table summarises selected microsimulation models around the world.

Table 1: Brief illustration of selected microsimulation models around the world.

Name	Type of the models - Static/Dynamic	Country
FAMSIM	Static	Austria
GLADHISPANIA	Static	Spain
SPSD/M,	Static	Canada
STINMOD	Static	Australia
TAXMOD, PSM and POLIMOD	Static	UK
EUROMOD	Static	in Europe
DESTINE	Dynamic	France
DYNACAN	Dynamic	Canada
DYNAMITE	Dynamic	Italy
DYNASYM and PENSIM	Dynamic	US
LIAM	Dynamic	Ireland

MIDAS	Dynamic	New Zealand
MOSART	Dynamic	Norway
PENSIM II	Dynamic	UK
SESIM	Dynamic	Sweden

Source: Adapted from (Dinbabo, 2011: 121 - 126).

It can be argued that microsimulation is appropriate and applicable in terms of producing EBP. For example, static microsimulation in the African context can help to show how social welfare grants influence both wealth distribution and the spending plan. In this regard, Merz (1994) suggests that, in contrast to macro-models, the stability of micro-models is the probability of obtaining precise knowledge about the distributional effects of new policies. The advantages of using dynamic microsimulation models include simulating inter-temporal issues, involving historical information and allowing the integration of future population behavioural changes into policy initiatives, or the development of economic, demographic, or social scenarios. However, their limitations include large data requirements, high maintenance and development costs, and lack of agreed testing methods for verification (Merz, 1994).

United States: Microsimulation models emerged in the late 1950s in the United States. The Urban-Brookings Tax Policy Centre is a large-scale microsimulation conceptualisation of the federal tax system in the US (Merz, 1994). The federal statistical program provides a large variety of micro-data that models can rely upon. For instance, US static microsimulation comprises models including the transfer income model (TRIM), the extended transfer income model (TRIM2), income maintenance reforms (RIM), household transfer microanalysis (MATH), the simulated tax and transfer system (STATS), OTA, TAXSIM and HITSM. The RIM was constructed by the Urban Institute in the late 1960s (Merz, 1994). These models are used in federal departments as well as many other US organisations. Merz asserted that only the TRIM/TRIM2 component allows for a modification of short and intermediate-range simulation studies in population development "static ageing". This also allows for the simulation of several cash transfer schemes (Dinbabo, 2011).

Canada: Statistics Canada produced several models of microsimulation and also general-purpose instruments to assist with their development. Currently, the Canadian Ministry of Finance is using only a static microsimulation model, i.e. TTSIM, which detects the distributional impact of revenue-transfer schemes, such as taxes on government programs and goods, payroll tax, subsidies for the disabled, reimbursable sales tax rebates, provincial and federal state taxes, child welfare, etc (Dinbabo, 2011). According to Statistics Canada, (2009) SPSD/M is a detailed and relevant microsimulation model of families and individuals in Canada (Statistics Canada, 2009).

Australia: Lloyd (2003) stated that STINMOD is the static simulation model that can be used by NATSEM for Australian government income tax and transfer payments. This is available to the public, operates on a personal computer, and can be accessed via a user-friendly interface. Bremner et al. (2002) acknowledged that STINMOD relates to the government income tax and regulation systems that serve Australian citizens. It involves analysing the distribution of the income impact of a new tax-transfer policy or evaluating the financial as well as underlying economic impacts of policy changes. Lloyd (2003) and Lutz (1997) showed that STINMOD is often used to assess the wider economic effect of a current tax-transfer programme or to anticipate the fiscal and redistributionist effect of policy decisions (Dinbabo, 2011).

Europe: In Europe, many static microsimulation models were built. In the early 1990s, Lietz and Mantovani (2006) contributed to a study in which Merz tested over 40 major national models in Europe mainly Germany. These days, almost every EU state's members are using EUROMOD for personal income taxation. EUROMOD is a static microsimulation model used in several EU countries. This was designed by a group of 18 organisations, directed by the Unit for Microsimulation at the University of Cambridge, (Levy et al., 2006; Lietz & Sutherland, 2005). The key objective in building an effective European income-benefit microsimulation framework emerged from research questions in the contemporary policy, and more explicitly, those that analyse the characteristics of tax-benefit systems and the similar effect of reform measures across Europe (Lietz & Sutherland, 2005).

Africa: As part of the development of sustainable development targets for Africa, Adelzadeh (2005) built a web-accessible microsimulation system whereby users can change certain components of the current program and add a particular social aid value. His online system provided five African nations (Nigeria, South Africa, Cameroon, Uganda and Botswana) with user-friendly connectivity to microsimulation models. According to him, "own" fiscal and transfer policy scenarios can be established or enacted by a "what if?" simulation study. Adelzadeh subsequently illustrated how the model can describe the deprivation, redistribution and financial effect of one's economic decisions and contrasts the simulation outcomes with either the current state or baseline situation. Haarmann and Haarmann (2006) used a microsimulation model of Namibia to demonstrate the effects on the economy within the highly unequal Namibian population. Many developing countries are only now designing social security systems for helping the poorest of their people. New microsimulation models include Ethiopia, Ghana, Mozambique, Tanzania and Zambia in Africa.

Various authors (Adelzadeh, 2005; Dinbabo, 2011; Samson et al., 2002; Woolard, 2003) utilised the microsimulation model analysis approach to explain South Africa's welfare programs and poverty policies. For example, Adelzadeh (2005) created the South African tax and transfer simulation model (SATTSIM) that is available on the web, where user can change some aspects of the current way of bringing in a simple government welfare value.

In South Africa's context, he also used a progressive income tax microsimulation model to directly compare the performance of 10 different scenarios to reduce unemployment and poverty by 2015. Samson et al. (2002) examined the Socio-economic effect of the present situation of the welfare payments in South Africa, using a microsimulation model. Their assessment showed that perhaps the effects of social grants from South Africa on household members is developmental. Woolard's (2003) assesses the influence of a Basic Income Grant (BIG) on poverty gap steps, explores the tax structure's wealth redistribution impacts, and examines at the connection between funding for social assistance and sustainable development. Her research shows the viability of incorporating raises in personal income tax to claim back the grant's expenses. She argued that BIG serves as the basis for those other welfare benefits. It is obvious according to the above analysis that models of microsimulation can also be used in South Africa for EBP. The static microsimulation system explains several key features of welfare-based ideals and helps analyse the efficacy and scope of policies and programs in reacting to poverty. Given past discriminatory practices and disparities, it is indeed essential to have a proactive solution to rectify everything through the passing of appropriate legislation and implementing an action plan. In this respect, it can be asserted that in South Africa, the microsimulation model, specifically a South African tax-benefit Microsimulation Model (SAMOD) is helping to pursue EBP.

Overview of SAMOD: This is a static microsimulation model and its first operational version was released (SAMOD v1.1), using the EUROMOD framework (Wilkinson, 2009). Since then, the focus shifted to creating SAMOD's analysis of various conceptual state welfare scenarios. Usually, microsimulation models provide a tentative hint, at best, of the potential effects of tax reforms in very limited circumstances (Creedy et al., 2002; Dinbabo, 2011). SAMOD offers evidence of tax system reforms and management on the transition "in the morning-after effect". When analysing the impacts of policy reforms, SAMOD provides estimates of the volume of taxes collected at various percentile income rates for different population groups. The key benefits/advantages of using SAMOD include much simpler use of a framework for analysing and designing a microsimulation prediction model; built to be fairly easy to use and quick to run, and open to a wide variety of users. It keeps the full scope of variability found in simple survey results. It shows how the rise in the Child Support Grant influences income distribution and micro-model spending, and ‘severity’ relative to macro-models enhances gathering reliable information on the distributional effect of policy changes (Creedy et al., 2002; Dinbabo, 2011).

All simulations models have their constraints, and these must be recognised when generating simulation studies of policies. Since no system is without its constraints, the performance from microsimulation should be treated with caution (Dinbabo, 2011; Creedy et al., 2002). One of the limitations of using SAMOD is that static microsimulation is restricted to estimating the so-called "first-round" impacts, that is, those monetary implications on family income from entirely implementing the system rules, all else being equal, including the lack of individual or household behavioural reactions (Baroni & Richiardi, 2007). Nevertheless, given some deficiencies, microsimulation models are commonly used to generate EBP knowledge.

Call for a Continental Level COVID-19 Research Agenda

The African Union (AU) has formulated the African Joint Continental Strategy for COVID-19 Outbreak with the particular goals of preventing serious disease and death from COVID-19 infection in the Member States and reducing social instability and economic effects of COVID-19 outbreak. The Strategic paper advocates evidence-based public health approaches for COVID-19 tracking, prevention, diagnosis, care, and regulation. Besides, the AU has set up COVID-19 Response Fund to collect money to improve the Member States' continental response and mitigate the socio-economic and humanitarian effects of the pandemic on African populations (African Union, 2020). Given that EBP assumes that policymakers and those who implement policies will utilise the best available evidence from research evaluation and practices, the best plausible way to realise this is through microsimulation. Besides, EBP is grounded in scientific enquiry rather than common sense, microsimulation realises this objective (Cairney, & Oliver, 2017; De Marchi, Lucertini, & Tsoukiàs, 2016; Dinbabo & Badewa, 2020; Head, 2013). Within the context of the above analysis, the general observations gained from the investigation can be collated and the key priorities for a national research agenda in Africa can be identified. The following call for a continental-level COVID-19 research agenda is proposed for researchers in the field to undertake various modelling research in Africa.

Table 2: Call for a Continental level COVID-19 research agenda to undertake various modelling research to support EBP in Africa.

Proposed COVID-19 Research Agendas to Support EBP in Africa
Modelling the distributional impact of the COVID-19 crisis at the regional, national, provincial and local level as well as estimating the potential impact of COVID-19 on poverty and another wellbeing of people.
Agent-based modelling and simulation of COVID-19 on the economic and likely impact of public health measures.
Projection of COVID-19's spread of disease, health system needs, and macroeconomic impacts at regional, national, provincial and local level.
Analysis of welfare safety immediately following COVID-19 outbreak and assessing the potential impact on life expectancy and assessing the impact concerning its effect on deprivation and inequality in the households.
Analysing the interconnection between COVID-19 and performance of social assistance and social welfare systems that will help to understand the effectiveness of the social policy.
Evaluative research on the impact of COVID-19 is crucial for EBP and very helpful for policymakers. In this regard, a typical approach focusing on survey data

with records of income and a microsimulation method for simulating taxes and benefits.
Research on adapting EUROMOD for African countries to assess the economic well-being and redistributive impact of COVID-19 on selected African countries.
COVID-19 socio-economic impact modelling, policy response and prospects in Sub-Saharan Africa.
Monitoring and evaluation of Africa's response to the COVID-19 pandemic and assessing its implication on Agenda 2063.

Conclusion

Against the background of the research problem, this study places a particular emphasis on EBP and appeals for a continental-level research agenda based on microsimulation models. It started from the assumption that microsimulation models are an important element for EBP. Despite the study's limited reach, it succeeds in pointing out the importance of these microsimulation models to facilitate EBP. In general, EBP helps policymakers and service providers make good decisions and produce better results by sketching the best available evidence from assessment, evaluation, and other sources. This includes considerations of the existence, size, and complexity of the issue, and policy solutions that can be considered to resolve the problems. The research indicates that high-quality work informs EBP, which is developed using systematic and scientific methods. This study also demonstrates the usefulness of microsimulation models in undertaking EBP. In general, the research is successful in identifying a key Continental level COVID-19 research agenda to undertake EBP. In general, due consideration must also be given to the funds needed to implement the set of policies, the costs and effectiveness of the procedure policy and on whom those risks and benefits will fall, as well as the economic, social, and environmental sustainability of the policy.

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