SIPHER Consortium

Systems science
In Public Health and
Health Economics Research

SIPHER Inclusive Economy Indicator Set:

Summary

June 2023*

Ruth Lupton, Ceri Hughes, and Nik Lomax
On behalf of the SIPHER Task and Finish group for
Inclusive Economy Indicators

*To address subsequent indicator changes made due to data availability and reliability issues, with particular thanks to Andreas Hoehn and Hugh Rice for providing further technical detail on indicator construction.

Citation: Lupton, R., Hughes, C. and Lomax, N. (2023) SIPHER Inclusive Economy Indicator Set: Summary. Project Report. SIPHER Consortium. (doi: 10.36399/gla.pubs.310975). (Enlighten ID 310975)

Introduction

This briefing provides a short summary overview of the SIPHER Inclusive Economy Indicator Set.

A key topic of interest for SIPHER is how policies aimed at promoting more inclusive economies can impact on health outcomes and inequalities. To help us understand and model this we need to know what we mean by an inclusive economy, and we need to be able to measure it. To this end, we developed a set of inclusive economy indicators and produced a dataset at Local Authority Level.[1] This also includes summary measures of life expectancy and life span variation.[2]

We then use this alongside the SIPHER Synthetic Population Dataset at individual level to show how aggregate place-level characteristics (and changes) are linked to individual and small area characteristics (and changes).

Here we introduce the indicators and how they were developed. The SIPHER Inclusive Economy Indicator Set: Technical Paper gives fuller detail on this process, and the derivation of the indicators - available at www.SIPHER.ac.uk.

Scope and Criteria

Inclusive economies can be defined and thought about in lots of different ways, leading to the selection of different indicators. SIPHER aims to analyse and model relationships between economic inclusion and health outcomes. For this reason, we do not include direct measures of economic size or growth in our dataset. In the context of this set of measures we are interested in inclusion not growth. Nor do we include measures of environmental sustainability or health and wellbeing measures. We are also developing other sets of indicators, so that we can examine relationships between these outcomes and inclusive economies.

Within this broad scope, we sought indicators that are:

- Meaningful to decision makers (capturing a recognisable, relevant aspect of inclusive economies);
- Possible to estimate at local authority (LA) level;
- Capable of analysis over time (a consistent time series), both historic and updateable;
- Accessible i.e., published, free and does not require an application, enabling use by non-specialists.

Finally, to enable their use in SIPHER's modelling and decision support tools, the overall indicator set needed to be relatively small.

[1] See https://doi.org/10.17605/OSF.IO/VNSUR

[2] While life expectancy provides a perspective on average mortality patterns, lifespan variation sheds light on within-population inequalities in mortality. Both indicators are based on lifetables for which we estimated mortality rates using a tool for projecting age-specific rates using linear splines models (TOPALS models). These models followed the approach and software provided by Rau R, Schmertmann CP. District-level life expectancy in Germany. Dtsch Arztebl Int 2020;117:493–9. doi:10.3238/arztebl.2020.0493, and Schmertmann, CP: TOPALS fitting with age-grouped data. Available: https://github.com/schmert/TOPALS [github.com]."

How the indicators were developed

In 2021, a synthesis of existing indicator sets was compiled[3], enabling us to select those within and outside our scope and to identify common domains and indicators. These included economic outcomes (such as employment and quality of work) as well as wider domains of inclusion (such as education and democratic participation) which can also be thought of as enablers of economic inclusion as well as having value in their own right.

A draft list of broad domains and sub-domains was shared within SIPHER (including policy partners and community panels), and with an expert advisory group, and refined in order to arrive at a set of measures that were broadly agreed to capture the concept of an inclusive economy.

For each of these domains, indicators were then selected to best match each concept. In some cases (for example community wealth), it proved impossible to find an indicator. In others, commonly used indicators are poor proxies for the concept (for example households with access to broadband as a measure of digital inclusion) but the domain was considered sufficiently important to retain. In one case (work/life balance) the only available indicators were judged to risk distorting the concept, and this dimension was therefore dropped.

A final stage involved the elimination of some indicators which were not available at the right spatial scale, or not accessible to the research team (or wider potential users) without special permissions and access requirements.

[3] The synthesis is linked in our initial blog What is an inclusive economy - and how do you know if you've got one? Published August 2021

The Final Indicator Set

ECONOMIC OUTCOMES		
Domain	**Sub-domain**	**Indicator**
Participation in economic activity	Participation in paid employment	Percentage of working-age people (aged 16-64) who are employed, for local authorities (from NOMIS Annual Population Survey (APS)
	Involuntary exclusion from the labour market	Share of working-age people (aged 16-64) who are inactive due to ill health or disability (from APS)
Benefits of economic activity being widely shared	Wealth inequality	Ratio of median house prices in least expensive wards to median in most expensive (Office for National Statistics - ONS estimates)
	Earnings inequality	Ratio of weekly earnings for residents in FullTime work between 80th and 20th percentiles within the local authority area (Annual Survey of Hours and Earnings (ASHE)
	Poverty	Percentage of children living in low income households (based on national relative threshold, After Housing Costs) (modelled estimates for local authorities)
	Decent pay	Proportion of employee jobs that are paid below the Living Wage (as defined by the Living Wage Foundation) (source: requested from ONS)
	Job security/precarity	Share of employees on a permanent contract (APS)
WIDER OUTCOMES/ENABLERS		
Domain	**Sub-domain**	**Indicator**
Education & skills	Whether people are gaining the skills & qualifications to enable economic participation & success	Percentage of adults aged 20-49 with a Level 2 or higher NVQ qualification
Connectivity	Digital exclusion	Proportion of individuals who are classified as a) e-withdrawn, b) passive and uncommitted internet users, or c) settled offline communities. Based on the Internet User Classification (IUC)
	Physical connectivity	Proportion of LSOAs/DZs within the local authority area that are among the 50% most accessible LSOAs/DZs for each devolved nation. See full note in Table 7B of the Technical Paper for detail on construction for each devolved nation
Affordability/costs of living	Housing affordability	Ratio of median house prices to median gross annual earnings (for residents)
	Cost of Living	Proportion of households in the local authority area that are defined as fuel poor, according to national definition. An alternative measure of food insecurity is also included in the dataset, see technical note
Structures & systems enabling inclusion	Inclusion in decision-making	Voter turnout in local elections

Working together to tackle health inequalities and improve the health of the public.

The conditions in which we are born, grow, live, work, and age are key drivers of health and health inequalities. Preventing illness related to these 'social determinants of health' requires well-coordinated policies across many sectors, such as the economy, welfare, housing, education, and employment.

SIPHER's innovative systems science approach offers a powerful framework to explore the complex real-world relationships and interdependencies of diverse policies that shape our public health and wellbeing.

A major research investment by UKPRP, the SIPHER Consortium is a collaboration of policy and academic experts working with practice partner organisations to create evidence-based products that deliver improved public health policy.

Policy Partners

Sheffield City Council

GMCA Greater Manchester Combined Authority

Public Health Scotland

Scottish Government Riaghaltas na h-Alba

Academic Partners

University of Glasgow

University of Sheffield

University of Strathclyde Glasgow

University of Leeds

Newcastle University

Manchester 1824 The University of Manchester

University of Nottingham UK | CHINA | MALAYSIA

UKPRP Prevention Research Partnership Joint action for a healthier, fairer future

The SIPHER Consortium is supported by the UK Prevention Research Partnership (Grant MR/S037578/2), which is funded by the British Heart Foundation, Cancer Research UK, Chief Scientist Office of the Scottish Government Health and Social Care Directorates, Engineering and Physical Sciences Research Council, Economic and Social Research Council, Health and Social Care Research and Development Division (Welsh Government), Medical Research Council, National Institute for Health Research, Natural Environment Research Council, Public Health Agency (Northern Ireland), the Health Foundation and Wellcome.

sipher@glasgow.ac.uk @SipherC www.sipher.ac.uk