Prestieesci Research Review

A RESEARCH PROGRAMME TO DEMONSTRATE HOW ECONOMIC AND DEMOGRAPHIC INEQUALITY AFFECT HEALTHCARE USE AND MEASUREMENTS IN OLDER PEOPLE

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ABSTRACT

Concerns about population ageing and decline have serious implications for long-term viability in today's context of rapid and pervasive urbanisation. This viewpoint justifies their interface by (a) acknowledging the possibilities and threats that shrinking urban populations and ageing populations pose to achieving the UN's Sustainable Development Goals (SDGs), and (b) discussing new interventions to make the most of the possibilities and mitigate the threats to sustainability. If we want to reap the advantages and mitigate the risks of an ageing urban population without compromising sustainability in the long run, we will need to implement a plethora of technological, economic, institutional, and governance efforts tailored to each environment. Having access to tools and information online is becoming an integral aspect of contemporary life. With the use of the WHO Health Equity Analysis Toolkit (HEAT) and cross-country panel data, this research investigates how Internet access affects health inequalities across different socioeconomic groups. Having access to the internet significantly improves average health and decreases health inequities, according to the research. In addition, utilising GBD database data from different countries, this research looks at the economic and social aspects that impact healthcare access. Internet connection, in particular, mitigates the negative impacts of income inequality on healthcare accessibility and substantially enhances it.

Keywords: Health inequality, Healthcare access, Economic inequality, Ageing populations.

INTRODUCTION

At the turn of the twentieth century, the average life expectancy was much lower than 40 years, and the actual gross domestic product per capita was less than one-sixth of its current value. The economics literature provides thorough accounts of several important variables that drove economic development throughout this period (Vollset, 2020). Environmental factors, individual behaviours, and medical interventions all have

well-documented effects on health. However, much remains unknown about the links between health and economic progress. Health affects economic development via a variety of social and economic pathways, and economic success promotes better health through a reciprocal causal channel, making it difficult to illustrate this relationship. Furthermore, improvements in technology and institutional frameworks contribute to thriving economies and healthy populations. Some obstacles make traceable scientific models and real identification more difficult. The study indicates that there is a strong positive correlation between GDP and health. One correlation, the "Preston curve," suggests that countries with better health also have higher per capita incomes. To be sure, this isn't quite ground-breaking; in fact, it was long ago acknowledged that a nation's capacity to progress is contingent upon the wellness of its inhabitants (Settele, 2019). This realisation gave rise to the public health movement. A new spur to this awareness came with the 2001 publication of the World Health Organization's Commission on The Study of Macroeconomics and Health report, which demonstrated that health improvement can be seen as an essential strategy for increasing income and decreasing poverty in low- and middle-income nations. This research was followed in 2005 by an evaluation of the data about the impact of health on the economy in high-income nations, particularly the European Union. Newer studies show strong financial benefits to healthcare spending; increasing investments in human capital is essential for Europe to rise to global competitiveness. Each study concludes that healthcare expenditures should be seen as a societal expense as well as a potential driver of economic growth. Even though health is very unevenly distributed throughout society, most research examining the link between the two has focused on average health (Glomsrød, 2018).

BACKGROUND OF THE STUDY

To address this critical information vacuum, this study uses a cross-national analysis to examine how the Internet affects access to medical care and health disparities. As a starting step, this research compares the effects of Internet access on health inequalities across different income groups. Research has shown that increased access to the Internet significantly improves overall health and reduces health inequities (Ohashi, 2019). The wealth gap in health may be narrowed if more people have access to the Internet. The tendency persists even after accounting for a wide variety of confounding variables that can impact the estimation of health inequality. Secondly, this study delves into the social and economic issues that impact healthcare access. We zero in on the impacts of income inequality, Internet access, and the interaction between these two and all the other factors included in the estimate. While research shows that income inequality makes it harder to get healthcare, it has the opposite effect when internet speeds are higher. Additionally, Internet usage significantly mitigates the negative consequences of income disparities on healthcare access (Kondo,

2020). There are three main points that this research brings forth. The link between the Internet and major health impacts is first explained by this study. The influence of Internet connectivity on access to medicine and health inequities is substantial, as we show. Our findings suggest that public health programs could benefit from removing barriers to health information access and increasing Internet connectivity. Another unique aspect of this study is the way it looks at the role of the Internet in explaining the correlation between income inequality and healthcare accessibility. By showing that having Internet access mitigates the negative consequences of income inequality on healthcare access, our findings emphasise the crucial role of the Internet in impacting health outcomes. Third, this study uses representative data to further our understanding of the factors that affect the availability of healthcare and health disparities. This research does an empirical examination using cross-country panel data that spans over 20 years and includes a large number of developed and developing countries. Because of the extensive and comprehensive data, we can fully use the variations over time and across countries in the computations. It provides a useful tool for future research on health disparities in the past and strategies for filling public health gaps using technology (Roberts, 2019).

PURPOSE OF THE STUDY

This study's main goal is to investigate how economic and demographic disparities affect older people's health outcomes and healthcare use. To detect discrepancies in access to healthcare and outcomes, this study looks at how characteristics including poverty, education, and access to medical services affect older persons' health measurements. To create focused interventions that improve healthcare accessibility and health outcomes for older adults, the research ultimately seeks to educate politicians and healthcare professionals on the crucial connections between inequality and health.

LITERATURE REVIEW

Two literary strands are developed in this essay. The first set of studies examines the relationship between health and economic development as it relates to Internet access. Research on healthcare access, health inequities, and the variables that affect and measure these problems makes up the second corpus of literature. By facilitating the effortless exchange and accessibility of information regardless of one's physical location, the Internet has revolutionised ways of communication and trade (Zheng, 2022). Access to electronic data for a range of applications is made possible by the Internet's robust and ubiquitous capability, in addition to delivering a broad diversity of products and services. A dramatic decrease in the cost per unit of data processing and noticeable improvements in networking speed have resulted from technological breakthroughs over the previous few decades. This improved performance and the

associated cost reductions greatly accelerated the spread of Internet access throughout the 1990s, but there are still substantial regional variances. In this age of the Internet, businesses are becoming more integrated due to the complementary nature of dense networks, online services, and many apps. Although national economies and multinational firms have profited substantially from the technology revolution, the Internet's empowering influence has been mostly felt by individual consumers and small businesses. Along with its positive effects on the economy, the Internet has far-reaching consequences on people's health. The proliferation of the Internet has greatly reduced informational barriers, and people now have access to health information from sources that were previously unimaginable. The free and easy access to medical records online has altered the roles of both patients and physicians by removing their authority to regulate the sharing of personal health information. It is well-known that an alarmingly large number of people utilise the Internet to look for health-related information. Access to the Internet is positively associated with healthcare utilisation and, by extension, health outcomes, lending credence to the idea that the Internet is becoming an increasingly valuable resource for health-related information (Chen, 2021).

RESEARCH QUESTIONS

How do demographic and economic inequalities influence healthcare utilization and health outcomes among ageing populations?

RESEARCH METHODOLOGY

China's many different organisations were responsible for carrying out the research. The researcher chose a quantitative technique because of the restricted resources and the short amount of time available. Using a random sampling process, every respondent was contacted for the survey. Following this, a sample size of 875 was determined using Rao Soft. Individuals confined to wheelchairs or who were unable to read and write would have the survey questions read aloud by a researcher, who would then record their answers word for word on the survey form. While participants waited to complete their surveys, the researcher would inform them about the project and field any questions they may have. On occasion, it was asked that people finish and send back questionnaires simultaneously.

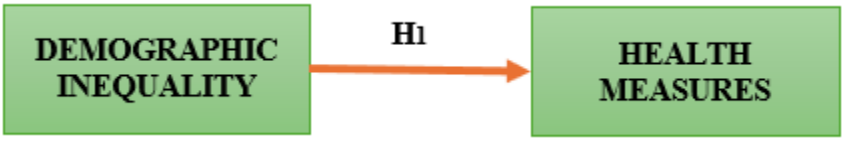
Sampling: Research participants filled out questionnaires to provide information for the research. Using the Rao-soft programme, researchers determined that there were 875 people in the research population, so researchers sent out 962 questionnaires. The researchers got 945 back, and they excluded 27 due to incompleteness, so the researchers ended up with a sample size of 918.

Data and measurement: A questionnaire survey was used as the main source of information for the study (one-to-correspondence or Google-form survey). Two distinct sections of the questionnaire were administered: Both online and offline channels' (A) demographic information, and (B) replies to the factors on a 5-point Likert scale. Secondary data was gathered from a variety of sites, the majority of which were found online.

Statistical Software: SPSS 25 was used for statistical analysis.

Statistical tools: To get a feel for the data's foundational structure, a descriptive analysis was performed. A descriptive analysis was conducted to comprehend the fundamental characteristics of the data. Validity was tested through factor analysis and ANOVA.

CONCEPTUAL FRAMEWORK



RESULT

Factor Analysis

The process of verifying the underlying component structure of a set of measurement items was a widely used application of Factor Analysis (FA). The observed variables' scores were believed to be influenced by hidden factors that were not directly visible. The accuracy analysis (FA) technique was a model-based approach. The primary emphasis of this study was on the construction of causal pathways that connect observable occurrences, latent causes, and measurement inaccuracies. The appropriateness of the data for factor analysis may be assessed by using the Kaiser-Meyer-Olkin (KMO) Method. The adequacy of the sampling for each model variable as well as the overall model was assessed. The statistics quantify the extent of possible common variation across many variables. Typically, data with lower percentages tends to be more suited for factor analysis.

KMO returns integers between zero and one. Sampling was deemed adequate if the KMO value falls within the range of 0.8 to 1.

It is necessary to take remedial action if the KMO is less than 0.6, which indicates that the sampling is inadequate. Use their best discretion; some authors use 0.5 as this, therefore the range is 0.5 to 0.6.

• If the KMO is close to 0, it means that the partial correlations were large compared to the overall correlations. Component analysis is severely hindered by large correlations, to restate.

Kaiser's cutoffs for acceptability are as follows:

A dismal 0.050 to 0.059.

• 0.60 - 0.69 below-average

Typical range for a middle grade: 0.70–0.79.

Having a quality point value between 0.80 and 0.89.

The range from 0.90 to 1.00 is stunning.

Table 1: KMO and Bartlett's

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.923
Bartlett's Test of Sphericity	Approx. Chi-Square	3252.968
	df	190
	Sig.	.000

The overall significance of the correlation matrices was further confirmed by using Bartlett's Test of Sphericity. A value of 0.923 was the Kaiser-Meyer-Olkin sampling adequacy. By using Bartlett's sphericity test, researchers found a p-value of 0.00. A significant test result from Bartlett's sphericity test demonstrated that the correlation matrix was not a correlation matrix.

TEST FOR HYPOTHESIS

Dependent Variable

Health Measures:

Maintaining and enhancing the health of both people and communities requires health measures. They include a broad spectrum of tactics used to prevent illnesses, encourage healthy living, and guarantee access to essential medical treatment. Public health efforts that educate people about proper diet, exercise, and the value of regular checkups are among the core components of health initiatives (Fry, 2020). To promote constructive behavioural changes, these ads often focus on particular health concerns, such as smoking, obesity, and mental health. Another essential element is vaccination campaigns. These initiatives greatly lower the prevalence of illnesses that might cause serious health problems or even death by vaccinating communities against infectious diseases. Herd immunity, which protects people who cannot be vaccinated, is often emphasised by public health officials. Another essential health metric is access to healthcare services. This involves making certain that localities have access to sufficient medical facilities, reasonably priced prescription drugs, and qualified healthcare providers. In recent years, telemedicine has become a useful technology that has made healthcare more accessible to those who live in rural places or have mobility issues. The adoption of laws that support clean ecosystems is another crucial step. This entails controlling pollution, guaranteeing potable water, and providing secure shelter. These elements are essential for avoiding illnesses and advancing general well-being. Given the substantial influence that mental health has on general health, mental health programs have gained popularity. To address this important component of health, support networks, counselling services, and educational campaigns are being included in health initiatives more and more (Nansai, 2020).

Independent Variable

Demographic Inequality:

The differences that occur between diverse population groups according to a variety of factors, including age, gender, ethnicity, economic status, and geographic location, are referred to as demographic inequality. Significant variations in quality of life and health consequences result from these disparities, which often show themselves in access to opportunities, resources, and services. Economic disparity is among the most obvious manifestations of population inequality. Because of systematic discrimination or limited access to education and training, certain groups may encounter obstacles to employment, equitable pay, and professional development (Takayanagi, 2020). This economic disparity has the potential to hinder social mobility and prolong poverty cycles, impacting generations. Another crucial area where a demographic imbalance is noticeable is healthcare access. Due to some reasons, such as limited access to preventative care, insurance, and high-quality healthcare facilities, marginalised populations often have shorter life expectancies and greater rates of sickness. Language

and cultural limitations may also make these populations' experiences receiving healthcare even more difficult. Demographic disparity is also influenced by differences in education. Lower educational achievement may result from underfunded, resource-poor schools attended by children from underprivileged families. This lack of knowledge might exacerbate economic inequality and restrict future work chances (Miao, 2022).

A Relationship between Health Measures and Demographic Inequality

The well-being of different population groups is greatly impacted by the intricate interaction between demographic disparity and health indices. Existing demographic discrepancies are often exposed and made worse by health interventions, which include programs like immunisation campaigns, healthcare access, nutrition education, and preventative screenings. Not all demographic groups may be equally reached by health measures when they are put into place. For example, obtaining healthcare services is sometimes hampered for marginalised populations, which are characterised by poor socioeconomic position, ethnicity, or geographic remoteness. Financial limitations, a lack of shipping, and language or cultural difficulties that impede efficient contact with healthcare practitioners are a few examples of these obstacles. Compared to more affluent communities, these people may therefore have worse health outcomes and greater incidence of avoidable illnesses (Ariga, 2019).

Based on the above discussion, the researcher formulated the following hypothesis, which was to analyse the relationship between Health Measures and Demographic Inequality.

“H01: There is no significant relationship between Health Measures and Demographic Inequality.”

“H1: There is a significant relationship between Health Measures and Demographic Inequality.”

Table 2: H_1 ANOVA Test

ANOVA					
Sum					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	39488.620	533	5655.517	965.479	.000
Within Groups	592.770	384	5.356		
Total	40081.390	917			

In this study, the result is significant. The value of F is 965.479, which reaches significance with a p-value of .000 (which is less than the .05 alpha level). This means the “H1: There is a significant relationship between Health Measures and Demographic Inequality” is accepted and the null hypothesis is rejected.

DISCUSSION

There are still some arguments, but everyone agrees that better health is essential to a company's performance and the transition to long-term economic development. That there is a correlation between economic development and health in wealthy nations is much more dubious. The high expense of modern healthcare systems is a concern for many people who believe it may slow down development. Two primary issues are at the centre of the discussion. Since the older people in industrialised nations are the main beneficiaries of longevity benefits, a decrease in the financial aid ratio and, by extension, individual consumption levels, may be a result of longer lifespans. An associated issue is that the high cost of healthcare for the elderly is a drag on economic development, even when productivity increases are substantial. Secondly, it is thought that the integration of productive resources by "oversized" health-care sectors endangers economic performance, as health spending percentages in several OECD nations are close to or exceed the 10% threshold. There is waste in health insurance, and there is a lot of money going into medical research and development. Developed nations' investment, R&D-based economic development, and human capital accumulation are impacted by health, as described in the first portion of this section. This research not only sheds light on whether or not ageing slows down economic growth, but it also mainly treats health and lifespan gains as external factors. In the past, researchers used an overlay generations structure, which assumes that people in industrialised nations are always at risk of dying, to try to predict how a rise in lifespan would affect economic performance. This model substitutes the standardised agent assumption seen in most neoclassical growth models. In this case, a longer life expectancy boosts savings, which, following the steps outlined in classical theory of economic development, causes the economy to expand faster until it enters stability. The steady-state long-term growth rate is mostly unaffected by life expectancy. The neoclassical model was subsequently superseded by theories of autonomous development relying on spillovers from learning by doing. Only in the case of age-dependent mortality can this impact be shown statistically, even if it is computed analytically for age-independent mortality. As a supply-side engine of economic expansion, the effect of falling mortality rates on asset accumulation has been the subject of much debate thus far. Assuming consumption rises with age up to the point when considerable mortality begins to occur, this condition is often met. Countries including the United States, Finland, Germany, and Japan have this problem, according to statistics from the National Transfer Accounts. In theories that believe that long-

term prosperity is only driven by the accumulation of human capital or learning-by-doing spillovers, technical innovation cannot be used to explain economic progress. As people live longer, they save more money overall, which brings the equilibrium interest rate down. This is the main process at work. Funding R&D initiatives that are successful results in an increase to the discounted stream of revenue. Therefore, there is a greater incentive for research and development, which boosts both the economy and technology in the long run. Declining fertility rates are associated with faster economic growth because this benefit more than makes up for the hit to total human capital accumulation from lower fertility rates. In order to increase human capital—the primary resource for research and development—health and education must work hand in hand. Economic development is a long-term benefit of health investments.

CONCLUSION

Using this perspective, we have examined the potential benefits and drawbacks of an ageing and declining urban population from a sustainability perspective, and we have proposed some novel measures to make the most of the benefits and lessen the impact of the risks. In light of our findings, this demographic shift will significantly impact the realisation of several SDGs. Some of the more encouraging recent approaches are as follows: (a) greater availability and quality of healthcare; (b) alterations to the extent and configuration of parks and other public areas; and (c) fostering social inclusion via citizen participation and the shared creation of urban knowledge. Incorporating particular to the setting policy and practice courses will be essential to both take advantage on the possibilities that and eliminate the challenges brought about by ageing populations and declining for sustainability. This is because the root causes differ greatly between SDG targets and location contexts. Given the rapidity of these changes, swift action is required, particularly as official figures could be underestimating the rate of population decline and ageing. There is considerable evidence that economic development is positively correlated with health, especially in less developed nations that have recently undergone a demographic shift and in studies that focus on the health of women and children. Better health in these communities leads to fewer births, more women in the workforce, and more resources for people's education and training. A demographic dividend and sustained economic expansion in the future are both possible outcomes of bringing these factors together. Improving maternal and child health via measures like iodine supplementation and the human papillomavirus vaccine is anticipated to have a significant impact on long-term progress, prosperity, and economic development. For well-established economies, the situation is tougher, even while productivity increases are large. Reductions in the burden of chronic illnesses benefit older persons more than younger ones since they are less likely to be working. The specifics of social security systems and the possible balancing effects of a longer working life will determine the extent to which a longer lifetime leads to higher capital

growth and efficacy growth. The potential negative effect of wasteful health care expenditure on economic growth is another source of worry. Despite the obvious need for more efficient health care systems generally, economic growth is not an appropriate metric for evaluating the worth of health and health care. The costs of reduced consumption would likely be outweighed by the advantages of even little improvements in wealthy countries' health. These advantages are magnified even more by the acceleration of medical innovation that has resulted from healthcare's widespread accessibility. Spending on healthcare should take a back seat to addressing the growing disparity in the fair distribution of health benefits.

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