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TOWARDS SUSTAINABLE DEVELOPMENT: TRANSFORMING GDP AND HEALTH SPENDING INTO LIFESAVING OUTCOMES TO MEET SDGS IN EAST ASIA & PACIFIC

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Abstract:

The study analyses the pivotal role of healthcare investment towards achieving SDGs in lower- and middle-income East Asia & Pacific countries. The focus of the study is on the transition of the Governments' health spending into lifesaving outcomes, such as infant and maternal mortality rates over the last two decades. By analysing regional data from the UN, the World Bank, and the WHO the result shows how strategic fund allocation can considerably improve health outcomes. Findings highlight the high potential of integrating economic and health strategies to drive sustainable development and achieve SDGs. The study gives valuable insights to the researchers and policymakers by highlighting the crucial role of matching economic growth and health spendings that will guarantee improved results in long-term. The study also emphasises at alignment of health expenditure with the guidelines of global institutions to make real advances towards sustainable development.

Keywords: Public health expenditure, universal health coverage, health outcomes, healthcare systems, sustainable development goals, Maternal mortality, Infant mortality.

JEL Classification: I15, I18, O10, O11, O19, O20.

Introduction:

In the field of healthcare systems across diverse income groups, the challenge of providing equal and reliable medical facilities with limited resources is urgent. Achieving Universal Health Coverage (UHC), which includes the extent of coverage, services offered, and financial burden on the population, necessities complicated decision-making that weighs expenses, advantages, justice, and social principals. In this context, the World Health Organization (WHO, 2010) has emphasized the intricate nature of these choices.

Additionally, the 17 Sustainable Development Goals (SDGs) introduced by the United Nations (UN) adopted by all member states in year 2015 as part of the 2030 agenda for sustainable development. Although SDGs are not legally binding, member states integrate them into their policies for various reasons such as global commitment, holistic development framework, international cooperation, and international institutions' preference in funding and support for projects aligned with the SDGs. Out of these 17 goals, SDG 3 focuses on *ensuring healthy lives and promoting well-being for all at all ages*. Specifically, *targets 3.1 and 3.2,* that are *"Reduce Maternal Mortality"* and *"End all preventable deaths under five years of age".* The quality of healthcare system considers maternal mortality as an important indicator, to reduce which,

multiple factors need to be addressed including access to excellent healthcare services, skilled birth attendance, critical obstetric care, and other health concerns during pregnancy such as anaemia, malaria, and malnutrition. While reducing child or infant mortality (IM) necessitates efforts in several areas, including prenatal care, immunisations, nutrition, and frequent childhood illnesses like pneumonia, diarrhoea, and malaria. After facing significant challenges in improving their healthcare systems and access to essential health services, East Asian and Pacific (EAP) countries, particularly lower-and middle-income countries, have taken significant steps in collaboration with WHO to provide improved medical care and achieve better health results. According to the World Bank, 2024, the EAP region includes Cambodia, Kiribati, Lao PDR, Micronesia, Mongolia, Myanmar, the Philippines, Samoa, Solomon Islands, Timor-Leste, Papua New Guinea, Vanuatu, and Vietnam. These countries have been working hard, with the assistance of WHO and the World Bank, to ensure that their citizens have access to high-quality healthcare without financial hardship and to contribute to global sustainability. In tackling these difficulties, the WHO, the UN, the World Bank, and the other international organizations have demonstrated remarkable commitment to projects such as Universal Health Coverage (UHC) and better Water, Sanitation, and Hygiene (WASH). The World Bank, 2021 also supports nations' attempts through RBF (result-based financing), which links funding to the attainment of specified health service goals (WHO, 2021).

The goal of UHC is to provide quality healthcare to the most deprived members of the society. It is also the foundation of the World Bank's mission to completely eradicate extreme poverty and boost prosperity on an accessible environment, as well as a strong motivator for the World Bank's investments in health and nutrition. UHC enables countries to maximise the value of their human capital, implying that a healthy society leads to economic progress. UHC is the essence of *sustainable development goal (SDG) 3.8* that aims to *"achieve universal health coverage, including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all."* (World Bank, 2024). The UHC and SDGs are linked with each other in their core objectives. We cannot ignore any of them while discussing about improved and affordable health services to common people. The SDG 3: *"Good health and well-being",* Target 3.8: *"Achieve universal health coverage, including financial risk protection, access to quality essential health-care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all", and* Indicator 3.8.1: *"Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn, and child health, infectious diseases, non-communicable diseases, and service capacity and access, among the general and the most disadvantaged population)."*It also facilitates *access to essential medicines and vaccines, ending epidemics of communicable diseases*, i.e. Target 3.3. In addition, in a broader situation, UHC provides financial protection to people from financial challenges caused by out-of-pocket health bills, which aligns with SDG 1, i.e. *ending poverty in all its forms everywhere.* Establishing UHC in the national healthcare system strengthens healthcare infrastructure, boosts resilience, and improves emergency response, all of which connect with SDG 9, which focuses on constructing robust infrastructure, encouraging inclusive and sustainable industrialization, and stimulating

innovation. Along with, SDG 10: *"Equity in Health Services"* is supported by UHC in its objective to provide equitable health services (UN, 2024).

Recent research has identified contextual factors that influence modern contraception adoption, including healthcare facility accessibility, exposure to family planning messages, local maternal mortality rates, and quality of family planning services. Health-care systems in all income levels are under intense pressure to fulfil the growing demands of populations with limited resources. To approach UHC along its three dimensions – who is covered, what treatments are supplied, and what financial burden is borne by the population – decisions require difficult trade-offs between costs and advantages, such as efficiency, fairness, and other societal values (WHO, 2010).

Latest research indicate that current birth control is influenced by contextual-level factors such as the proximity of health facilities, exposure to family planning messages, living in areas with low maternal mortality and high antenatal care coverage, and aspects related to the quality of family planning care. Public health is critical for improving health quality and sickness prevention by implementing effective government recommendations and encouraging education and innovation (Claeson et al., 2004; Zhang and Nie, 2021).

Literature review

Oladosu (2022) investigates the influence of public health expenditure on health outcomes in Nigeria and Ghana while reconsidering health outcomes by recording infant, maternal, malaria, and HIV/AIDS mortality. Their results revealed a lack of public health expenditures in both countries, despite the Ghanaian case exposing an adverse relationship that was insignificant, whereas Nigeria suggested a positive one.

Monrad et al. (2022) examined the predictors of state-level COVID-19 immunisation rates in the first 9 months of 2021. They found links between vaccination rates and a variety of state variables, including health spending, vaccine reluctance, financial barriers to care, Democratic vote, and old population share and demonstrated that the drivers of vaccination rates have changed; although supply-side factors were most obviously connected with early vaccination uptake, demand-side factors have become more prominent over time.

Moreira et al. (2022) studied the attempt to establish a link between country-level gender inequality and health expenditure and desire for family planning fulfilled by modern contraceptive techniques (DFPSm) in sexually active Latin American women. The odds of DFPSm were found to be directly related to women's education, wealth index, and number of children.

Pichon-Riviere et al. (2023) developed a conceptual framework to assess how the adoption and coverage of new interventions with a given incremental cost-effectiveness ratio will affect the rate of increase of health expenditures per capita and life expectancy at the population level.

Weng et al., 2023 created a statistical model that fixes personal traits at the city level to investigate the difference of public health expenditures in air quality improvements across the

zones with varying economic development and healthcare coverages, and anticipated an assortment of prospective medical expenditure savings under various air quality requirements.

Bedado et al., 2022 explored the scope and factors influencing out-of-pocket (OOP) healthcare expenditure among patients visiting public hospitals in East Shoa Zone, Ethiopia, and discovered that a significant number of outpatient department users paid for medical services out of pocket. Educational status, family size, residence, and respondents' monthly income all had a significant impact on OOP healthcare spending. As a result, the government and stakeholders should step up efforts to create the Urban CBHI scheme and social health insurance, which ensures that all urban residents have access to health care without experiencing financial hardship.

Guariso et al., 2023 evaluated the effects of public spending on over 100 various economic metrics. In contrast to the single-dimensional view of analysing expenditure in terms of overall economic growth, we take a multidimensional approach. (Acharya et al., 2021) used administrative data on past budgetary allocations per capita to public health departments at upper-tier local areas (UTLAs) in England to investigate whether public health funding levels coincide with rapid control of the first wave of the COVID-19 pandemic between March and July 2020, and found no correlation between local public health expenditures and covid-19 control speed. However, overall public spending to improve local regions contributed to a shorter time to peal. (Ayipe & Tanko, 2023) looked into the relationship between public healthcare spending and under-five mortality rates in Sub-Saharan Africa's low-income countries. The study found a robust link between household health spending and under-five death rates and argued a consistent rise in health expenditure and improvements in socioeconomic circumstances are required to reduce under-5 mortality in Sub-Saharan Africa's low-income countries.

Barlow (2020) studied the relation amongst tariff changes and public health consumption in 65 LMICs from 1996 to 2015 and found significant variance in this relationship based on one indication of state capacity: a country's score on the World Governance Indicators government effectiveness (GE) index. The findings indicated that tariff adjustments and domestic taxing capacities have an underappreciated impact on public health expenditure and may contribute to global health spending inequities.

Economic growth improves women's employment and reduce poverty consequently improving gender equality in society and can prevent discrimination against women (Balasubramanian, 2023). Better economic conditions will lead to a healthier tomorrow for women.

Context of the study: Most studies focusing on health outcomes have overlooked this geographical region i.e. East Asia and Pacific (excluding high income). It creates a need to be addressed. Here, no research has measured the association between public health expenditure and health outcomes, specifically infant and maternal mortality, in these countries. Considering this context, this study explores how public health spending connects with actual health outcomes in East Asia and Pacific (excluding high-income).

Further, based on literature review it is found that UHC is critically connected with SDGs, such as SDG 1, SDG3, SDG 9 and SDG 10. Hence, it can be proposed that successful implementation of UHC can significantly impact the achievement of various SDGs and encourage all in all sustainable development.

On this basis, the current research asks the following questions:

1. Is there any relationship between public health expenditure and health outcomes (infant mortality, maternal mortality) in East Asia and Pacific (excluding high-income countries)?

2. Is there any impact of the United Nation's SDGs on health policies and their outcomes in East Asia and Pacific (excluding high-income countries)?

Considering these questions following hypotheses were formulated:

Hypothesis 1. An increase in public healthcare expenditure would improve health outcomes (infant mortality, maternal mortality).

Hypothesis 2. Sustainable Development Goals have a significant impact on health policies and their outcomes in the region.

Methodology: The literature suggests that greater health expenditure leads to better health outcomes, which can be aligned with the theoretical explanation by (Grossman, 1972) i.e., higher investment positively affects society's health. With special reference to East Asia and Pacific (excluding high-income) countries, it is expected that increased public health expenditure is supposed to reduce infant and maternal mortality. Considering state interventions there is an anticipated positive link between public health spending and health outcomes in these countries. However empirical research is needed to confirm these expectations as various factors can influence the relationship between health spending and outcomes.

Also, a WHO report on newborn mortality indicates that most neonatal deaths are not specific to a single disease. The reasons behind neonatal deaths include preterm birth, complications at the time of birth, infections, and birth defects. After the neonatal period and up to 5 years of age, the main causes of death are pneumonia, diarrhoea, birth defects, and malaria including malnutrition as an underlying contributing factor. Most of the newborn casualties can be seen in low and middle-income countries which can possibly be prevented by having improved coverage of antenatal care, skilled care at birth, and postnatal care for accouchee and the newly born (WHO, Newborn Mortality, 2022).

Maternal mortality can be defined as "the death of a woman from direct or indirect obstetrics causes (within 42 days to less than one year) after termination of pregnancy." Difficulties during pregnancy or delivery can result in death beyond the six-week postpartum period. The increased availability of modern life-sustaining technologies helps reduce deaths due to the above reasons (WHO, 2023).

The target population of this study will be children and mothers from low-income East Asia and Pacific region. This selection is driven by the fact that these groups are most profoundly impacted by the health and medical conditions of the country. Consequently, health outcome variables were specifically chosen to measure infant and maternal deaths.

The data has been collected for a period of 21 years ranging from 2000 to 2020. These decades have witnessed the emergence and implementation of Sustainable Development Goals (SDGs) a part of which is truly dedicated towards improvement in global health. The data is annual time series data from 2000 to 2020 retrieved from the World Bank data bank (https://data.worldbank.org/). The variables considered while collecting data are public health expenditure, infant mortality, maternal mortality, GDP, urban population, and female school enrolment. The rationale behind selecting these variables lies in Goal 3 of the sustainable development goals i.e., Good Health and Well-being. The variables are used to examine the relationship between an independent variable i.e., public health expenditure (as a share of GDP in USD) and a dependent variable i.e., health outcomes (in the form of infant and maternal mortality) and GDP, urban population, and female school enrolment as control variables in selected geographical regions. This study used a linear regression analysis performed on SPSS to examine the relationship and the effect of public health expenditure on health outcomes in low-income East Asia and Pacific.

Data Analysis & Results: The data from World Bank presents the following general analysis:

First, a gigantic leap in the GDP of this geographical region can be seen. From US$ 1734 billion in 2000 to US$ 17 trillion in 2020 (figure 1), indicates a significant increase in the economic growth of the region.

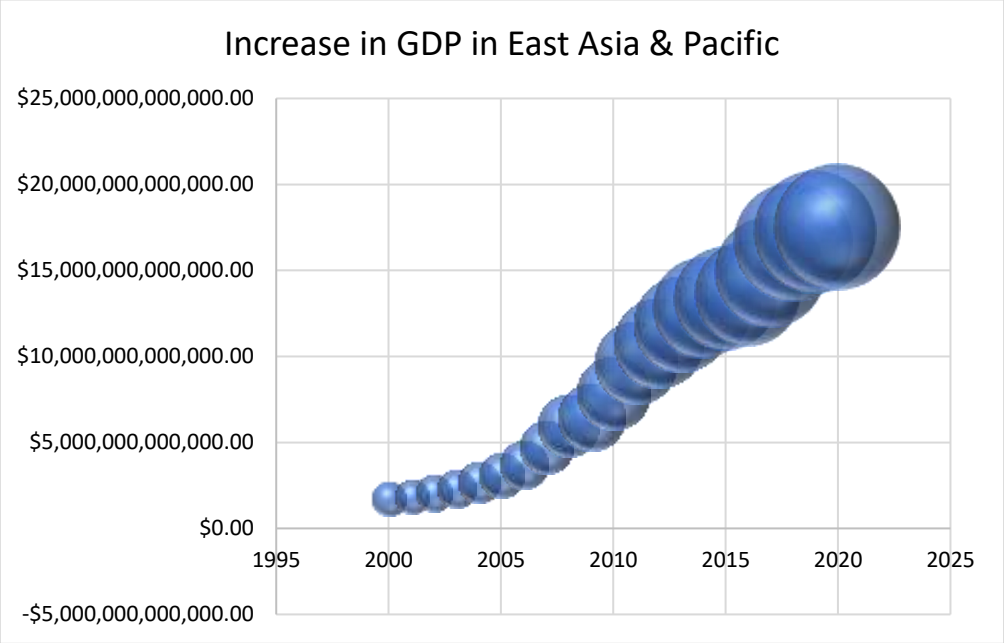

Figure 1: GDP Over the Years in EA&P Region (Excluding High Income)

Trends in Maternal Mortality and Infant Mortality Rates (2000-2020): There is a general decrease in maternal mortality between 2000 -2005 with rates dropping from 128 to 111 per 100000 live births. The decline continues, reaching to 88 per 100000 live births in 2010. It fluctuates and increase slightly to 90 in 2011 and then decline to 70 in 2019. A small rise (76) is noticed in 2020. Despite some fluctuations, there is a significant decrease in maternal mortality rate between the period. Infant mortality declines steadily from 33.16 to 24.47 per 1000 live births between 2000-2005, which reached to 18.27 in 2010. There is further decline noticed in infant mortality between 2011-2020 but at a slower rate, reaching 12.55 per 1000 live births in 2020. There is a consistent decrease in infant mortality over two decades, clearly indicating improvements in healthcare and living conditions (figure 2).

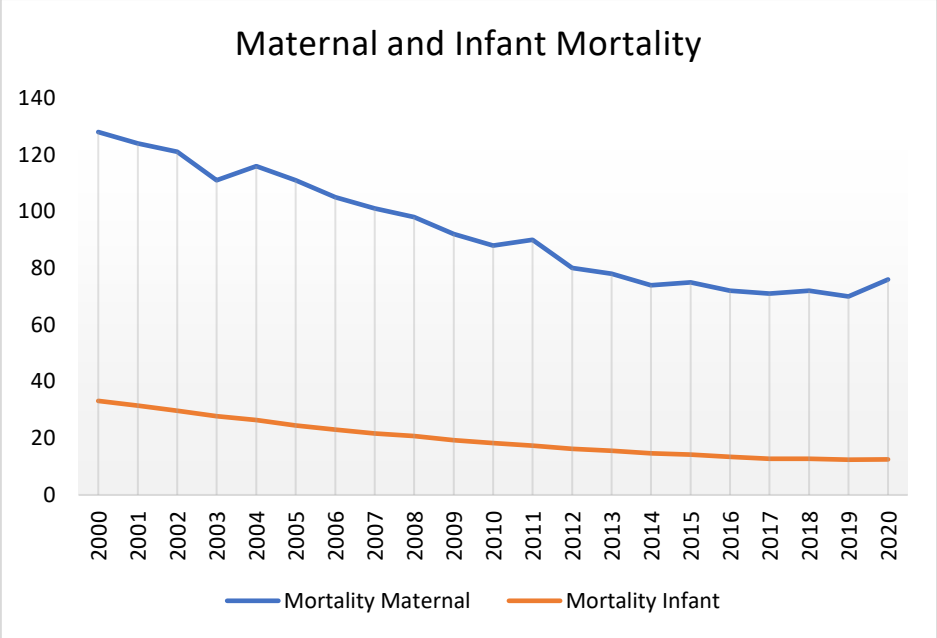

Figure 2: Maternal Mortality & Infant Mortality in EA&P Region (Ex High Income)

The continuous and consistent increase in both GDP and health expenditure reflects a positive relationship where economic growth allows for higher health expenditures, which in turn can improve overall health outcomes. The period under consideration shows a significant economic growth and a parallel increase in healthcare expenditure by the government. This suggests that as there is an expansion in the economy, investment in healthcare have also increased, potentially contributing to better health results, and supporting overall economic development. This picture identifies an important role of health investments in sustaining economic progress (figure 3).

The school enrolment of girl child appears to accelerate over time, from 57.48% in year 2000 to87.64% in year 2020. The growth in urban population could be linked with the increased school enrolment of females. The other factor could be improvement in education policies leading to increased school enrolment. After year 2014 the enrolment rate in the region has stabilized around 83-87%, which can be understood as higher level of enrolment are more challenging as the rate approaches saturation. Overall, the urban population and female school enrolment both have shown growth trends. The increase in school enrolment rates overtakes the increasing urbanization, which indicates substantial progress in educational access for girls. It also suggests that a favourable environment is being developed for advancements in education sector over the years (figure 4).

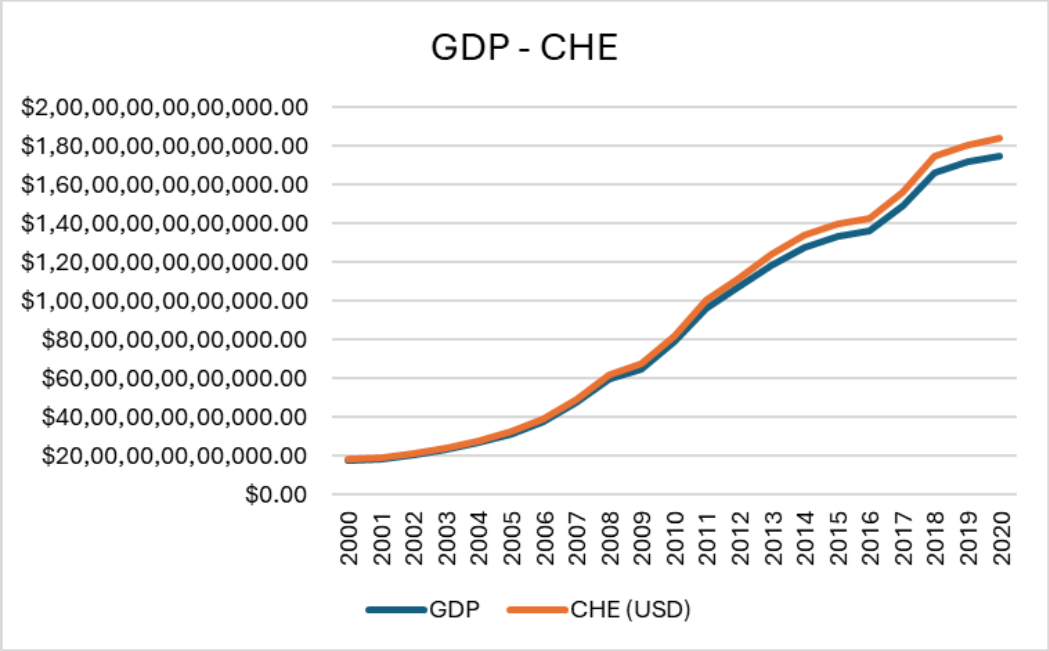

Figure 3: GDP & Current Health Expenditure in EA&P Region (Ex. High Income)

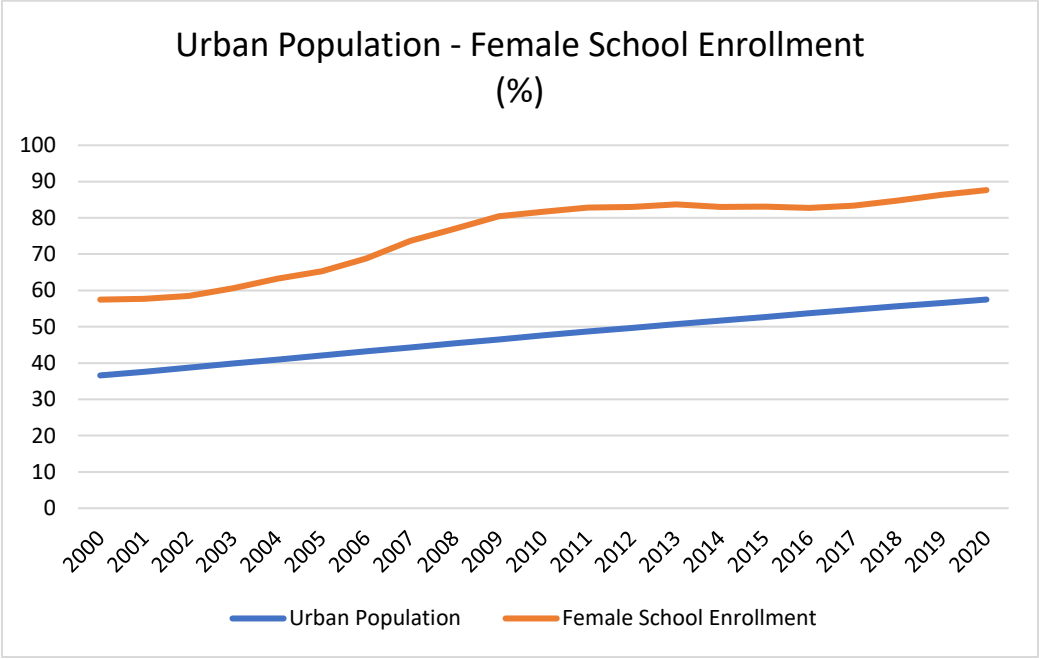

Figure 4: Urban Population & Female School Enrollment in EA&P Region (Ex. High Income)

Next, Pearson's coefficient of correlation among different dependent and independent variables is calculated (presented in following table 1).

Correlations[b]

		GDP	Current Health Expenditure (CHE)	Urban Population (UP)	Female School Enrolment (FSE)	Infant Mortality (IM)	Maternal Mortality (MM)
GDP	Pearson Correlation		.927**	.985**	.900**	-.939**	-.948**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Current Health Expenditure (CHE)	Pearson Correlation			.876**	.711**	-.776**	-.801**
	Sig. (2-tailed)			.000	.000	.000	.000
Urban Population (UP)	Pearson Correlation				.943**	-.980**	-.973**
	Sig. (2-tailed)				.000	.000	.000
Female School Enrolment (FSE)	Pearson Correlation					-.975**	-.960**
	Sig. (2-tailed)					.000	.000
Infant Mortality (IM)	Pearson Correlation						.988**
	Sig. (2-tailed)						.000
Maternal Mortality (MM)	Pearson Correlation						
	Sig. (2-tailed)						

**. Correlation is significant at the 0.01 level (2-tailed).
b. Listwise N=21

Table 1: Correlation Coefficient

Discussion:

The coefficient of correlation (table 1) between GDP and Current Health Expenditure is positive 0.927 which shows that increasing GDP allows countries to elevate spending on health services and vice-versa. Increased health expenditure can be used to improve health system resilience, better health infrastructure, recruitment of health workers, health awareness programmes in rural areas, industry innovation, and better crises management. As supported by the World Bank data that there is a significant increase in the expenditure (%age of GDP) on health care system in the region reflecting a growing commitment to improving health services and their outcomes. East Asia & Pacific countries have significantly increased their budget on health services to support initiatives aimed at achieving UHC (World Bank, 2024) (OECD, 2022). It is also highlighted by the World Bank that investments in health have consequently improved health indicators across the region such as vaccination, nutrition, healthcare services to remote areas, particularly through result-based financing (World Bank, 2021).

A high positive correlation (0.985) between GDP and Urban Population indicates that with increasing GDP significant number of people move to urban areas. This is evident in Asia-Pacific region where urbanization is closely linked with economic growth. The UN Economic and Social Commission for Asia and the Pacific (ESCAP) reports that urbanization in this region has accelerated due to economic development. More people are migrating to cities for better opportunities (World Bank, n.d.; ESCAP, 2013). Urban areas generally offer better healthcare facilities, superior infrastructure, and a higher concentration of health professionals,

resulting in better healthcare services. The disparity in healthcare availability and quality leads to better health outcomes for urban residents, while rural populations struggle with higher rates of undiagnosed conditions and limited access to essential medical services. Research on China's health system performance indicates that urban residents enjoy greater access to healthcare, facing fewer obstacles related to cost and distance than those in rural areas (Qin, et al., 2020). Moreover, many Asia-Pacific countries experience a substantial gap in the number of healthcare workers between urban and rural regions, further worsening the disparities in healthcare access and quality (Dayrit et al., 2018; Mahendradhata et al., 2017).

Further, a high positive correlation (0.900) between GDP and Female School Enrolment shows that increasing GDP is fundamental to the increasing level of women education consequently increasing social and health education among young girls during adolescence. As this phase of life is critical for understanding hygiene and other health related issues that may harm at later stages of life of a woman (WHO, Adolescent health, n.d.).

Strong positive correlation of (0.943) between Urban Population (UP) and Female School Enrolments presents that urban areas offer better access to educational facilities and resources leading to higher enrolment rates among females. Other than that, urban areas might have more supportive socio-economic conditions for female education such as superior economic opportunities, infrastructure, and more progressive social norms. It is important to note that correlation does not imply causation, one should also look for other underlying factors that influence both the factors. This occurrence can be used by policymakers to understand the significance of urbanization and to make targeted efforts in the direction of improving educational facilities in rural areas. Also, very significant negative correlations are found between UP & IM, and UP & MM (-0.980 and -0.973 respectively) indicate direct inverse relationships between urbanization and mortality rates.

High negative correlation of Current Health Expenditure (CHE) with Infant Mortality (IM) and with Maternal Mortality (MM) suggests a strong inverse relationship between health spendings and mortality rates. Correlation of (–0.776) between (CHE & IM) indicates that as health expenditure increases, infant mortality tend to decrease significantly. Specifically, more investments in health services such as prenatal-postnatal care, vaccinations, and paediatric healthcare, contribute to the reduction of infant deaths. Correlation of (–0.801) between (CHE & MM) indicates even stronger negative relationship. Increased spending on healthcare services such as access to skilled birth attendants, emergency obstetrics care, and antenatal care, leads to fewer maternal deaths. The finding supports the hypothesis (1) that increasing health expenditure will improve the health outcomes, i.e. infant mortality and maternal mortality.

Above findings are also in agreement with the hypothesis (2) that Sustainable Development Goals have a significant impact on health policies and their outcomes in the East Asia & Pacific (excluding higher income) countries.

Concluding Remarks:

This study presents a considerable interaction between economic growth, healthcare investments, and mortality (maternal and infant) reduction and consequently achieving SDGs in East Asia & Pacific (excluding high-income) countries. A detailed study of GDP and public health expenditure data reveals that strategic financial allocations can overwhelmingly enhance

outcomes of public health programs, particularly in lowering infant and maternal mortality rates.

Combining public and economic strategies enables nations to simultaneously accomplish local and global goals. For a better and healthier tomorrow, governments should prioritize implementing axiomatic approaches for the development of health services. Such as the MLCC program (midwife-led continuity of care) helped reduce preterm births by up to 24% (WHO, Newborn Mortality, 2022). Hailemeskel et al. (2022) also found that the use of the MLCC model improved maternal and neonatal health outcomes in Ethiopia. This study gives an insight into the necessity for integrated economic and health policies, which are supported by collaborative efforts of global institutions such as the UN, the World Bank, and WHO. The study supports the idea that to effectively achieving sustainable development, policymakers must prioritize health expenditures within the broader economic frameworks. Aligning economic growth with targeted health investments can help make progress toward meeting the SDGs and fostering equitable and sustainable health and economic prosperity.

Future Scope:

However, while the correlation is significant between GDP, CHE, FSE, UP, IM, and MM, further analysis could be done to control for other variables that might affect health outcomes such as income levels, government policies, and cultural factors. One should not assume direct causation without further analysis. Below (figure 5) is a proposed framework to be tested in future.

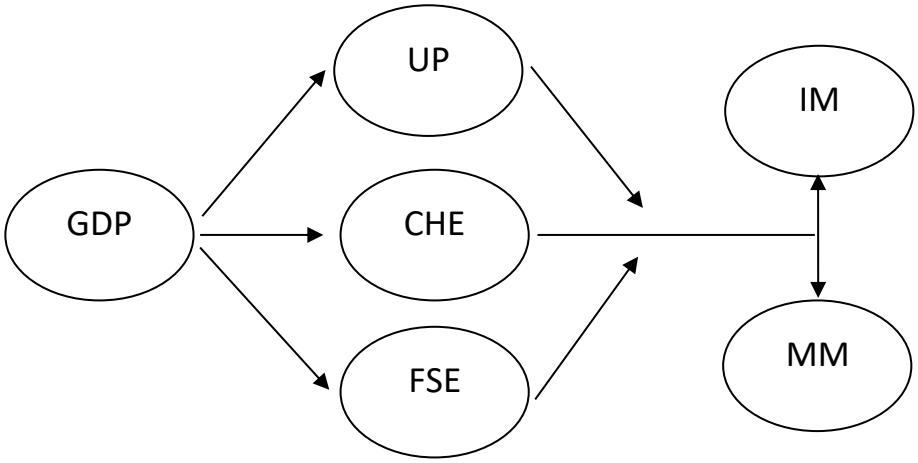

Figure 5: Framework for the Future Study

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Appendix

Data from https://data.worldbank.org/

Year	Mortality Maternal	Mortality Infant	Urban Population	Female School Enrolment	GDP	CHE (%of GDP)	CHE (USD)
2000	128	33.16007827	36.59029525	57.47623825	$17,34,67,43,77,491.78	3.952387724	$ 68,56,10,57,140.36
2001	124	31.45905485	37.61990023	57.68432999	$18,47,47,51,62,353.55	3.849763086	$ 71,12,34,16,821.47
2002	121	29.6331186	38.72881947	58.51359177	$20,44,35,77,18,067.13	3.912686893	$ 79,98,93,16,484.61
2003	111	27.82394185	39.84955904	60.57640076	$23,11,82,75,07,782.56	3.980002266	$ 92,01,07,87,200.66
2004	116	26.40502617	40.98102038	63.20870972	$26,82,43,24,20,161.91	3.888047697	$ 1,04,29,42,51,929.65
2005	111	24.47302643	42.11643496	65.2843399	$31,06,98,85,66,419.54	3.878163066	$ 1,20,49,40,83,041.35
2006	105	23.00433905	43.22729091	68.76644897	$37,40,82,74,21,397.93	3.727095882	$ 1,39,42,42,24,777.05
2007	101	21.70074353	44.32569986	73.68789673	$47,27,90,11,90,261.73	3.554440758	$ 1,68,05,04,46,902.60
2008	98	20.77063217	45.42916858	77.00585175	$59,78,96,10,71,407.11	3.725181071	$ 2,22,72,71,26,072.99
2009	92	19.26766477	46.53284692	80.43821716	$64,84,66,52,14,338.25	4.124090617	$ 2,67,43,34,69,650.83
2010	88	18.26758425	47.63661294	81.68019104	$78,89,50,22,59,288.54	4.016244106	$ 3,16,86,16,69,476.71
2011	90	17.36147202	48.67631418	82.84546661	$96,45,53,41,17,729.76	4.137176661	$ 3,99,05,27,86,369.80
2012	80	16.24811724	49.69091421	83.01454926	$1,07,59,16,69,57,139.00	4.337541668	$ 4,66,68,33,49,924.78
2013	78	15.56843131	50.69952274	83.69841003	$1,18,71,14,01,52,558.30	4.481079507	$ 5,31,95,52,28,572.24

2014	74	14.70472976	51.70547569	83.02390289	$1,27,98,83,45,38,401.60	4.555550395	$ 5,83,05,73,57,345.27
2015	75	14.23997771	52.70615443	83.13684845	$1,33,27,59,06,33,526.20	4.715447209	$ 6,28,45,55,00,542.06
2016	72	13.44694945	53.70204544	82.72405243	$1,36,12,47,08,59,504.00	4.747222451	$ 6,46,21,42,72,805.19
2017	71	12.77930372	54.68962828	83.40158081	$1,48,77,27,79,29,156.40	4.813492399	$ 7,16,11,66,42,274.03
2018	72	12.77205439	55.65273936	84.75431824	$1,66,40,44,47,19,655.70	4.917869972	$ 8,18,35,54,34,136.05
2019	70	12.41994632	56.58830007	86.32750702	$1,72,07,85,57,39,652.50	5.070944863	$ 8,72,60,08,76,617.86
2020	76	12.55445039	57.49557346	87.63981628	$1,74,86,91,66,29,390.60	5.360719999	$ 9,37,42,46,35,427.17