Economic and Social Commission for Asia and the Pacific
Second Ministerial Conference on Civil Registration and Vital Statistics in Asia and the Pacific

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Review of the progress and existing challenges in accelerating the implementation of the Regional Action Framework on Civil Registration and Vital Statistics in Asia and the Pacific

The importance of civil registration and vital statistics and legal identity for all to accelerate progress on the 2030 Agenda

Economic costs and benefits of civil registration and vital statistics systems**

Summary

The present information document presents a conceptual framework to guide the development of an economic case for stronger civil registration and vital statistics systems by demonstrating how they can maximize social and economic benefits. While there is a substantial body of knowledge examining the benefits of well-functioning civil registration and vital statistics systems, a gap remains in terms of empirical evidence on the costs and benefits of investing in civil registration and vital statistics systems. The framework, which has been developed by the Swiss Tropical and Public Health Institute, proposes six different methodological approaches to estimate the monetary value of six benefits of civil registration and vital statistics. A case study from Ghana is presented to demonstrate the application of the first methodological approach which focuses on the costs and benefits of using civil registration and vital statistics data to monitor progress towards the Sustainable Development Goals. The framework addresses an important information gap, specifically on the economics of civil registration and vital statistics systems and presents a useful tool that may also be applied to countries in Asia and the Pacific to produce valuable evidence to support increased investment in civil registration and vital statistics.

* ESCAP/MCCRVS/2021/L.1.
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I. **Background**

1. Civil registration and vital statistics lay the foundation for a well-governed, modern economy. It plays a key role in upholding rights, as well as the efficient and effective delivery of public services.¹

2. During the First Ministerial Conference on Civil Registration and Vital Statistics in Asia and the Pacific in 2014, governments and development partners committed to improve their national civil registration and vital statistics systems by endorsing the Regional Action Framework on Civil Registration and Vital Statistics in Asia and the Pacific. Since this conference, countries have adapted the Regional Action Framework into comprehensive and multisectoral national civil registration and vital statistics system strategies.

3. Despite some positive examples of rapid improvements in the performance of civil registration and vital statistics systems,² specifically encouraging trends related to the increase of birth registration completeness in Asia and the Pacific,³ a substantial increase in international and domestic investment is still needed for accelerated progress.⁴ Such investment relies on the global civil registration and vital statistics community to demonstrate how a functional civil registration and vital statistics system can benefit individuals, societies and governments.

4. Conceptually, the benefits of a robust and reliable civil registration and vital statistics system are well documented and have been discussed in two formal documents of the Second Ministerial Conference on Civil Registration and Vital Statistics in Asia and the Pacific.⁵

5. Although there is an increasing body of evidence around the benefits of well-functioning civil registration and vital statistics systems, the economic case for civil registration and vital statistics has not yet been thoroughly analysed, in terms of the potential cost savings and return on investment. This evidence is essential for reinforcing the social and rights-based arguments for prioritizing investments in civil registration and vital statistics systems.

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³ *Getting Every One in the Picture: A Snapshot of Progress Midway through the Asia and Pacific Civil Registration and Vital Statistics Decade* (United Nations publication, 2021).


⁵ See ESCAP/MCCRVS/2021/4 and ESCAP/MCCRVS/2021/5.
6. To date, there have been only a few attempts to estimate the costs of civil registration and vital statistics systems\(^6\) and even fewer studies comparing their efficiency with other data collection methods for producing vital statistics. Resources allocated to civil registration and vital statistics systems are usually based on historical budgets and are often spread across several ministries and agencies. Although there have been a few recent efforts to estimate the costs of civil registration and vital statistics operations using examples from Asia and the Pacific,\(^7\) evidence is still lacking, making it difficult to synthesise findings and draw conclusions.

7. With the aim of supporting low- and middle-income countries to build an economic case for civil registration and vital statistics and to overcome the challenges during the process, a framework was created to guide the development of an economic case. This framework and the present document were developed by the Swiss Tropical and Public Health Institute. The framework uses different analyses to provide actionable and relevant economic arguments to advocate for increased investments in civil registration and vital statistics systems. Rather than building a single economic case to evaluate the overall costs and benefits of civil registration and vital statistics systems, the framework identifies several different domains that can be used to build an economic case. This document focuses on one methodological approach of this framework which estimates the differential cost of data from civil registration and vital statistics systems versus other data sources to measure progress towards the Sustainable Development Goals. Considering the limited number of economic assessments of civil registration and vital statistics systems conducted in Asia and the Pacific, a case study from Ghana is presented as an example application of the first methodological approach of this framework. The approach can be applied to countries in Asia and the Pacific to determine the main costs and benefits of investing in a civil registration and vital statistics system.

II. Framework for economic analysis of civil registration and vital statistics systems

8. The evidence to support an economic case for civil registration and vital statistics is quite limited. Most research efforts thus far have focused on interventions to improve the performance of civil registration and vital statistics systems, with a focus on intermediate outcomes (e.g. increase in birth or death registration, removal of barriers to registration, etc.). The effects of having a functioning system on individuals or societies, as well as the


mechanisms that underpin their impact, have not yet been evaluated with empirical evidence in most settings.

9. Consequently, applying an economic lens to assess the impact of civil registration and vital statistics systems poses some challenges when aiming to produce a single framework or simple analysis. Given the multifaceted nature of the potential benefits of functioning civil registration and vital statistics systems, as well as the need for clear messaging to inform policy dialogue and resource allocation discussions, the following framework was developed, incorporating a set of six methodological approaches to build an economic case for civil registration and vital statistics in low- and middle-income countries.

10. The “framework for the economic analysis of civil registration and vital statistics systems” synthesizes the evidence available and highlights six new methodological approaches (see figure). The objective of the framework is to estimate the monetary value of six selected benefits of civil registration and vital statistics systems, which in turn, may support improvements in their efficiency and reduce operational costs.

11. The framework is accessible to a variety of users, including those without an economics background, and compiles the best available evidence, tools and resources in one single package. It provides decision makers, stakeholders and researchers with a set of methodologies for evidence-based and transparent decision-making. The framework seeks to support an interactive policy development process between research and decision makers through an extended set of costs, benefits, economic impact and equity effects analysis.

12. The six methodological approaches for developing an economic case for civil registration and vital statistics systems can be applied by countries to their specific context. A summary of the rationale for the six methodological approaches is provided below, focusing on the practical application of each.

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8 The CRVS Economic Analysis Tool can currently be accessed at http://costing.vatools.net/home. A suite of resources including the description of the framework, user guides and the case study in Ghana will be published soon by the International Development Research Centre.
Framework to build an economic case for civil registration and vital statistics

A. Methodological approach 1: differential cost of monitoring progress towards the Sustainable Development Goals with civil registration and vital statistics vs other data sources

13. This methodological approach provides a comparative economic evaluation framework to examine the costs of using civil registration and vital statistics systems to supplement or replace other sources of data to monitor country progress towards the Sustainable Development Goals. The aim of the approach is to evaluate the cost implications of using civil registration and vital statistics systems to measure the Sustainable Development Goal indicators. The approach compares the cost of using data from a functioning civil registration and vital statistics system to data from other sources, such as household surveys or a national population census. It provides basic cost data to predict and model the cost of implementing civil registration and vital statistics systems under varied implementation models.

B. Methodological approach 2: cost of developing a voter registration list

14. This methodological approach assesses the cost of developing high quality voter registration systems, comparing use of fully digitized civil registration and vital statistics systems to other data sources such as population and housing censuses.

15. The overall aim of this methodological approach is to evaluate the economic implications of using civil registration and vital statistics systems to support “electoral votes” and to compare these costs with data from other sources (United Nations Development Programme approach: “Getting to the CORE: the cost of registration and elections”).\(^9\) This evidence can be used to

inform investment decisions in countries aiming to improve the quality of their electoral systems.

C. **Methodological approach 3: improving the efficiency of civil registration and vital statistics operations through digitization**

16. This methodological approach focuses on how countries can assess the costs and potential of improving the speed, accuracy and completeness of civil registration systems through digitization of existing systems.

17. The overall aim of this methodological approach is to assess the efficiency gains in the use of technology or other improvements to the system.

D. **Methodological approach 4: measuring increase in tax revenue as a consequence of a functioning civil registration and vital statistics system**

18. This methodological approach provides a framework for conducting a multi-country panel regression to estimate the association between improvements in civil registration and vital statistics systems and increases in tax revenue. This approach will contribute to estimating net costs of investing in civil registration and vital statistics systems.

19. The overall aim of this analysis will be to assess estimates of the marginal effect of civil registration and vital statistics completeness on tax revenue, adjusted for gross domestic product.

E. **Methodological approach 5: modelling the economic outcomes of civil registration and vital statistics systems**

20. Similar to methodological approach four, this methodological approach presents a framework for a multi-country assessment of the association between improvements in civil registration and vital statistics systems and gross domestic product and gross domestic product growth. The motivation for this methodological approach is to contribute to the estimation of the economic return on investments in civil registration and vital statistics systems.

21. The overall aim of this analysis will be to analyse the economic impact of civil registration and vital statistics systems.

F. **Methodological approach 6: modelling the cost of investing in civil registration and vital statistics on improvements in civil registration completeness**

22. This final methodological approach intends to broaden understanding of the production function leading to increased completeness in civil registration and vital statistics systems (i.e. the relationship between investment in civil registration and vital statistics systems and their completeness). This information is critical for planning civil registration and vital statistics investments and understanding the likely returns in terms of performance. Therefore, it estimates the cost of the scale-up process, modelling the scenarios for different investments and opportunity costs for countries.

23. To demonstrate the application of one of these methodological approaches in a country context, the next section presents a case study of methodological approach one which examines the differential cost of monitoring progress towards the Sustainable Development Goals. It compares
the cost of using data from a functional civil registration and vital statistics system, versus other data sources such as household surveys or a national population census.

III. Example application of methodological approach 1: differential cost of monitoring progress towards the Sustainable Development Goals in Ghana: civil registration and vital statistics versus other data sources

24. This case study presents an application of methodological approach one, which makes the economic case for a functioning civil registration and vital statistics system to measure progress towards the Sustainable Development Goals. Due to the limited number of economic assessments of civil registration and vital statistics systems conducted in Asia and the Pacific, a case study from Ghana is presented. However, the approach may be applied to countries in Asia and the Pacific.

25. The lack of a well-functioning civil registration and vital statistics system in Ghana has created a gap in the production of reliable and continuous vital statistics, which has subsequently impacted its ability to monitor progress towards the Sustainable Development Goals. In the World Bank’s global scaling up investment plan for civil registration and vital statistics 2015–2024, Ghana was categorized as having basic civil registration and vital statistics infrastructure and moderate birth registration coverage, comparable to multiple countries in Asia and the Pacific. This report also estimated that the civil registration and vital statistics system in Ghana would require significant investment to reach its full potential. Around the same time, the national strategic plan for improving civil registration and vital statistics in Ghana (2016–2020) was developed, with the aim of improving the performance of the system and to leave no one behind, requiring an investment of more than 100 million dollars.

26. In 2017, Ghana produced data on 62 of the Sustainable Development Goal indicators, of which 33 per cent came from the national population census and household surveys, 57 per cent from administrative data sources and the remaining 10 per cent from a combination of them. Finding the right balance among different sources of data to monitor progress towards the Sustainable Development Goals remains a challenge for many low- and middle-income countries, including Ghana. Household surveys, whilst invaluable for providing information on a population that is not collected through other data sources, can be time intensive, logistically challenging and financially burdensome. A well-functioning civil registration and vital statistics system on the other hand, can provide a continuous, real-time source of data for measuring progress towards selected indicators of the Sustainable Development Goals. However, the civil registration and vital statistics system in Ghana requires strengthening to be able to produce accurate and timely vital statistics that are representative of the population. Therefore, the overall aim of this case study was to support evidenced-based decision-making for

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countries seeking to improve their data sources for monitoring progress towards the Sustainable Development Goals.

27. The case study compared the costs of operating a well-functioning civil registration and vital statistics system with the cost of other household surveys and a national population census for estimating the Sustainable Development Goal indicators. The Civil Registration and Vital Statistics Economic Analysis Tool (CEAT Tool)\(^{13}\) was used for both the collection of data and to conduct a comparative analysis. The methodological approach is explained in more detail in an upcoming technical paper.\(^{14}\)

28. The key findings of this study confirmed that the cost per year of establishing and operating a civil registration and vital statistics system is comparatively lower than the combined cost of implementing several household surveys or a national population census. When assessing the unit cost per person years, the cost of a civil registration and vital statistics system remained significantly lower than the cost of a running a national population census but was approximately equal to the cost of a household survey such as a Demographic and Health Survey or a Multiple Indicator Cluster Survey. When examining the cost per Sustainable Development Goal indicator per year, data from a civil registration and vital statistics system was associated with lower costs, compared with a national population census or individual household survey. The full results of this study are to be published in an upcoming technical paper.\(^{15}\)

29. The evidence from Ghana demonstrates the economic potential of a well-functioning civil registration and vital statistics system for monitoring progress towards the Sustainable Development Goals, when compared to other data sources. Furthermore, civil registration and vital statistics systems boast additional advantages over other data sources. Firstly, a universal and well-maintained civil registration and vital statistics system can provide direct and proxy data for a greater number of Sustainable Development Goal indicators (62 indicators), compared to a national population census (30 indicators) or a Demographic and Health Survey (28 indicators). Secondly, data from civil registration and vital statistics systems do not suffer from restrictions of limited sample sizes as household surveys may do, offering greater potential for disaggregation. Although this study was based on the scenario of a well-functioning civil registration and vital statistics system, it provides evidence to support increased investment for strengthening an existing civil registration and vital statistics system to provide timely and accurate data for monitoring national development.

\(^{13}\) The CEAT Tool was developed by the Swiss Tropical and Public Health Institute in collaboration with the Centre of Excellence for Civil Registration and Vital Statistics from the International Development Research Centre and Ideas Ltd. Available at http://costing.vatools.net/home.

\(^{14}\) Swiss Tropical and Public Health Institute, “Case study: differential cost of measuring the sustainable development goals in Ghana- Technical note”, (forthcoming).

\(^{15}\) Ibid.
IV. Conclusion

30. Universal and well-maintained civil registration and vital statistics systems have multiple benefits for societies. The proof of legal identity provided by civil registration is critical for individuals to exercise their rights and access services, while the use of vital statistics based on civil registration are essential for planning activities of the government. The framework presented in this paper provides six different methodological approaches to build an economic case for civil registration and vital statistics, one of which is demonstrated through the case study of Ghana. It addresses an information gap, specifically on the economics of civil registration and vital statistics systems and presents a useful framework that may also be applied to countries in Asia and the Pacific.

31. Achieving the Sustainable Development Goals by 2030 requires the availability and use of high-quality, disaggregated data to monitor progress, highlight areas where accelerated efforts are needed and to inform evidence-based decision-making. Civil registration and vital statistics systems provide the best source of continuous and up to date information on births, deaths and other vital events which can be used in a wide range of population-based indicators for the Sustainable Development Goals. The coronavirus disease pandemic has further highlighted the essential role of civil registration and vital statistics systems for producing complete mortality estimates and estimates of excess mortality due to all causes, to inform public health policymaking and emergency responses. Although other sources of data such as household surveys and national population censuses remain invaluable for monitoring progress towards the Sustainable Development Goals, the case study from Ghana demonstrates the potential cost efficiency of using data from a well-functioning civil registration and vital statistics system for many of the population-based indicators.

32. As countries in the Asia-Pacific region look towards the second half of the Decade, producing evidence on the costs and benefits of civil registration and vital statistics, may prove critical for increasing investment in system strengthening of civil registration and vital statistics. The framework presented in this document provides useful guidance for countries to start building a case for stronger civil registration and vital statistics systems.