Increasing Civil Birth Registrations. A Successful Experience in Mozambique (2023-24)

Maria Castiglioni, Gianpiero Dalla-Zuanna, Chiara Gargiulo, Daniele Girolimetto, Evelina Martelli, Americo Abel Sardiñha

In many developing countries, early birth registration is still very poor (UNICEF, 2022; WHO, 2023). The 2023 DHS survey in Mozambique shows a low proportion of surviving children aged 0-4 years whose births are reported registered (31%). A proportion of children are registered at later ages (e.g. at school enrolment), however a high proportion of Mozambicans are never registered and therefore cannot access some basic rights (e.g. citizenship and vote, education and social assistance, but also protection against human trafficking, early marriage, enlistment as child soldiers; HRC, 2014). Moreover, official birth statistics, although based on a timely and good quality computerised vital registration system, are largely incomplete and not very usable for socio-demographic analyses and policy decision making.

A relatively high and increasing proportion of births in Mozambique take place at health facilities (65% in 2022-23; 44% in 1997 - DHS data). This proportion is even higher in other countries, which share a low birth registration rate. Moreover, many children are brought to health centres in the first months of life for their vaccinations. In order to increase the registration rate, one promising way is therefore to give parents the opportunity to register their child at the health centres (WHO, 2020), without necessarily having to travel to the main civil registration office, which can be tens of kilometres away from home.

The BRAVO! Program has been supporting birth registration in many countries with low registration rates since 2008. It promotes the registration of newborns directly in health centres, supporting numerous secondary civil registration offices managed by trained registrars: 232 in Burkina Faso, 17 in Malawi and 20 in Mozambique before the intervention described here (Martelli et al, 2019).

A new experimentation has been carried out in three provinces of Mozambique, elaborated on the basis of the activities carried out by a consortium of Italian NGOs led by the Community of Sant'Egidio through the E-registo, E-xisto! project, funded by the Italian Agency for Development Cooperation. E-Registo, E-xisto! has a twofold objective: to increase the proportion of children registered in the first six months of life (a period in which registration by law in Mozambique is free of charge), and to encourage registration also for categories of potentially disadvantaged children, such as those living in remote areas or children of less educated parents. Staff recruited for the project also carry out awareness-raising activities on the importance of early registration.

Mozambique is divided into 11 provinces, and each province in turn is divided into districts. In each district there is a main civil registration office (*Conservatoria*) and there may be secondary civil registration offices (*Postos* for civil registration). For each District in the three provinces of Maputo Province (not including the capital city), Gaza and Nampula, a health centre has been identified in which the project provides for the establishment of secondary civil registration offices, with specially trained non-health personnel, in which parents of children aged 0-5 months can carry out all registration procedures free of charge. A total of 48 secondary registration offices were established (9 in Maputo Province, 15 in Gaza, 24 in Nampula).

The objective of this paper is to measure the impact of the first 8 months of the project on the share and characteristics of registered children aged 0-5 months.

Data and methods

For the whole of Mozambique, from 2021 onwards, we use anonymised individual data from the official registration system of persons registered at any age. For the period covered by the project, this database also includes children under 6 months registered at the offices established by the project. In addition, the Ministry of Health has made available since 2022 aggregated monthly data on the number of births that occurred at each health centre in Mozambique. For each month, it is therefore possible to compare the number of registered children with the number of births.

In the period before the project, we know the proportion of early registered births only for each province: we do not know how many children are registered among the births of each health centre. Therefore, to evaluate the impact of the project we extend the results observed in the set of the health centres to the whole province.

We first define the counterfactual situation. By projecting the observed trends over the previous 24 months, using the appropriate time series forecasting methods, we estimate the number of children aged 0-5 months that would have been registered in each of the 11 provinces of Mozambique for the first 8 months

after the start of the project. This estimate therefore represents the monthly number of registrations expected in the absence of the project. For each of the 11 provinces, we compare this figure with the number of actual registrations, noting whether there are any differences between the three provinces involved in the project and the remaining eight. The aim of this first comparison is to show whether, even though the project only opened registration offices in a limited number of health centres, there is a significant increase in registered children aged 0-5 months in the three project provinces.

In the same three provinces, we also repeat this counterfactual estimation procedure for the registrations of persons older than 6 months, to check whether there is any increase in the total number of registrations due to factors outside the project.

For the three provinces of Maputo Province, Gaza and Nampula, we estimate the rate of early registration as the ratio between the number of registrations at age 0-5 months and the number of births in health centres: before the project (indicator 9 in table 1), in the months after the project assuming no project (counterfactual - indicator 11); in the months after the project assuming the project is activated in all health centres in each of the three provinces and had the same performance as observed in the centres of the project (indicator 10). The comparison of indicators (10) and (11) defines the impact due to the project.

Finally, to understand whether the project also involved disadvantaged families, we compare the age and education distributions of the mothers in four different populations: early registered children in the 48 health centres involved in the project; early registered children in the three project provinces; early registered children throughout Mozambique; and mothers of children aged 0-2 years interviewed at the Mozambique DHS 2022/23.

Results

A significant increase in the number of registered children is only observed for ages 0-5 months in the three provinces involved in the project (Figure 1). In Nampula, the increase is particularly pronounced throughout the observation period, while in Maputo Province, the increase, strong at the beginning, subsides in the following months.

Even without the project, in the three provinces the early registration rate would have increased slightly (Table 1, compare Indicators 9 and 11). However, the results obtained in the health centers of the project show that the registration rate in the three provinces would have been much higher, 6-7 times higher than the counterfactual (Indicator 10, between 50% and 65%).

Finally, the distributions by age and education of mothers who registered their children early in the centres opened by the project are very similar to those of the DHS 2022/23, with a notable recovery of young and poorly educated mothers (Table 2).
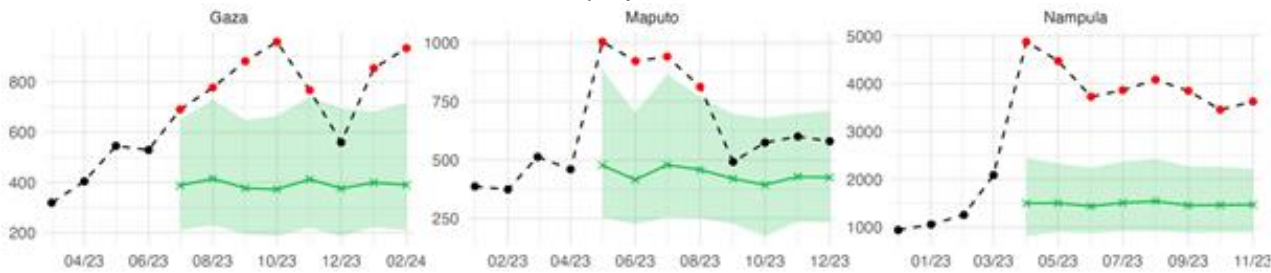
The impact of the 'E-registo, E-xisto!' project therefore goes in the desired direction. A more widespread and targeted distribution of secondary registration centres with trained assigned personnel makes it possible to significantly increase the number of early registrations, including marginal and disadvantaged groups.
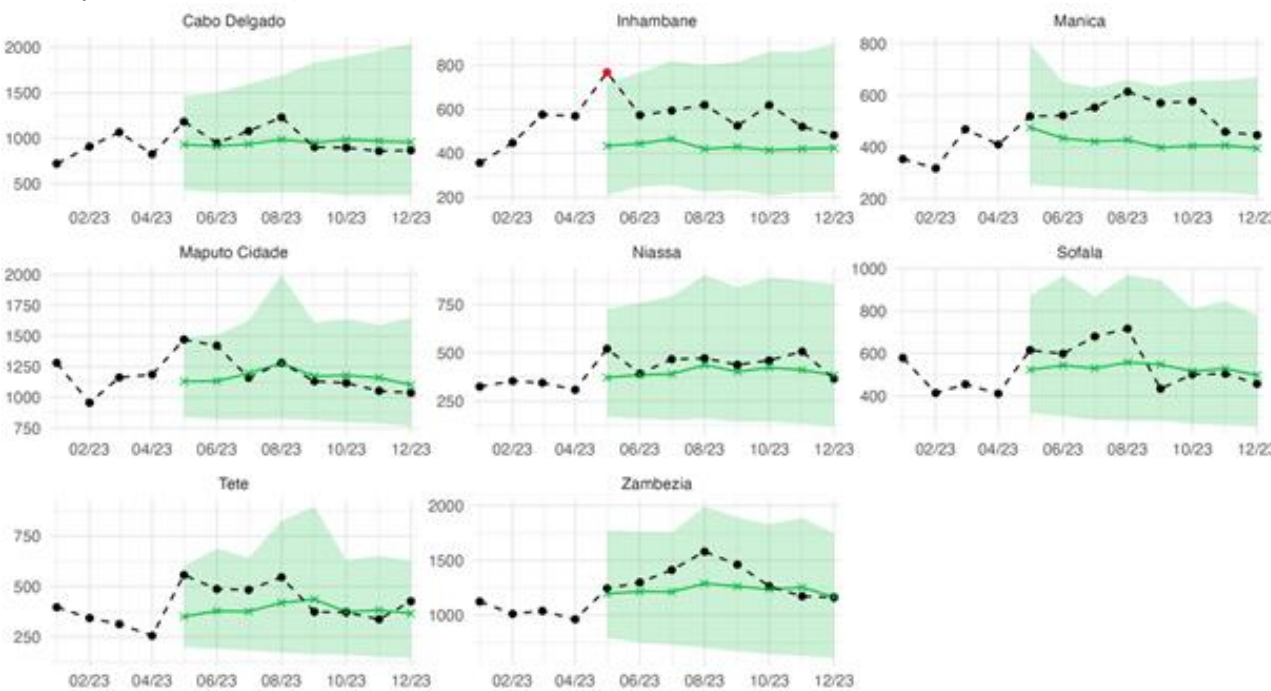
References

Human Right Council (HRC), 2014. A/HRC/27/22. Birth registration and the right of everyone to recognition everywhere as a person before the law - report of the Office of the UN High Commissioner for Human Rights. Twenty-seventh session of the Human Rights Council, Geneva, 2014 Jun 17. Available from: http://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session27/Pages/ListReports.aspx.

Martelli E, Castiglioni M, Dalla-Zuanna G, Emberti Gialloreti L, Guiebre C, Medah Dabiret H, Gulotta A, Silvestrini A, Di Domenicantonio F, Gianturco P, Marazzi MC, 2019. Controlled impact evaluation of a birth registration intervention, Burkina Faso. Bull World Health Organ. Apr 1;97(4):259-269. doi: 10.2471/BLT.18.221705. Epub 2019 Feb 25. PMID: 30940983; PMCID: PMC6438249.

UNICEF, 2022. Global databases: birth registration. New York. Available from: https://data.unicef.org/topic/child-protection/birth-registration/ [cited 2024 September 8]

WHO, 2020. Civil registration and vital statistics strategic implementation plan 2021-2025. Geneva: World Health Organization; 2020.

WHO, 2023. Bull World Health Organ., Dec 1;101(12)

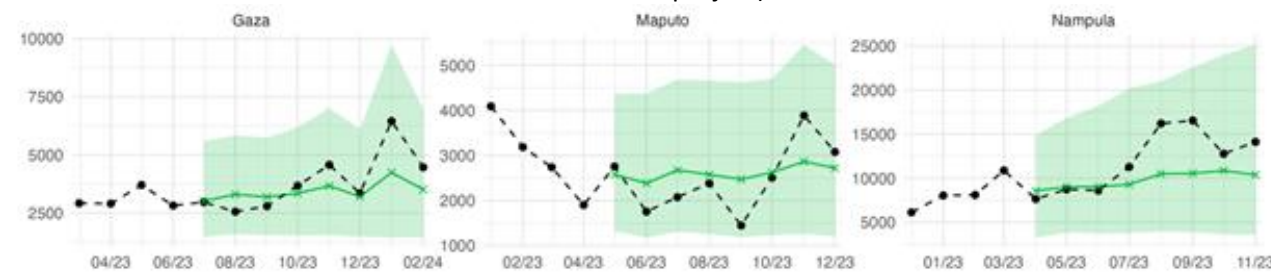Figure 1. Observed and predicted birth registration in Mozambique provinces

Panel A. Early birth registrations (aged 0-5 months) in the three provinces of the project (period from 4 months before to 8 months after the start of the project)

Panel B. Early birth registrations (aged 0-5 months) in the eight provinces without the project (period January-December 2023)

Panel C. Birth registrations of persons aged 6 months or older in the three provinces of the project (period from 4 months before to 8 months after the start of the project)

– – •– –	Registered births
– –•– –	Registered births after the project opened, significantly higher than the expected forecasted registrations
——	Forecasted registered births
▇	95% prediction interval for registered births, after the project opened

Table 1. Early birth registrations (aged 0-5 months) in the three provinces of the project. Impact estimation assuming the project is activated in all health centres in each of the three provinces

	Maputo Province	Gaza	Nampula
Absolute values in the project health centers			
(1) Births in the first 8 months **after** the project[1]	3,919	8,196	44,320
(2) Children registered in the first 8 months **after** the project	2,535	4,204	22,061
Absolute values in the Provinces			
(3) Births in the 8 months **before** the project[2]	37,670	40,023	185,565
(4) Children registered in the 8 months **before** the project	3,118	3,112	10,763
(5) Births in the first 8 months **after** the project	37,499	42,184	197,844
(6) Children registered in the first 8 months **after** the project	5,630	5,955	29,783
(7) Estimate of children registered in the first 8 months **after** the project[3]	24,256	21,638	98,480
(8) Estimate of children who would have been registered in the absence of the project (counterfactual)	3,895	3,635	14,145
The impact of the project (Provinces)			
(9) % registered in the 8 months **before** the project (5)/(4)	8.3%	7.8%	5.8%
(10) % registered estimated assuming the project is activated in all health centres of the Province (7)/(6)[4]	64.7%	51.3%	49.8%
(11) Estimate of the % of children who would have been registered in the absence of the project (counterfactual) (8)/(6)	10.4%	8.6%	7.1%
(10)/(9): Variation before and after the project (without considering the counterfactual)	7.81	6.60	8.58
(10)/(11): Variation before and after the project (considering the counterfactual)	6.23	5.95	6.96

[1] Periods are: Maputo Province: May 2023 – December 2023; Gaza: July 2023 – February 2024; Nampula: April 2023 – November 2023

[2] Periods are: Maputo Province: September 2022 – April 2023; Gaza: November 2022 – June 2023; Nampula: August 2022 – March 2023

[3] Assuming the project is activated in all health centres in each of the three provinces and had the same performance as observed in the centres of the project (2)/(1) x (5)

[4] By assumption, this proportion is the ratio (2)/(1), that is the early registration rate in the health centres

Table 2. Distribution by age and education of mothers of early registered children, and of mothers of children aged 0-2 years, interviewed in the DHS 2022/23 of Mozambique

	Mothers of Registered children < 6 months (4/23 - 3/24)			Mothers of children born in the last 3 years
	Program health centres	3 program provinces	All provinces	DHS 22/23
Mothers' age				
15-19	20%	17%	16%	23%
20-24	32%	30%	29%	29%
25-29	21%	23%	24%	21%
30-34	14%	15%	16%	13%
35-39	8%	9%	10%	9%
40-44	4%	4%	4%	4%
45-49	1%	1%	1%	2%
Mean age	25.8	26.2	26.5	---
Mothers' education				
No education	59%	51%	40%	60%
Primary	31%	33%	33%	34%
Secundary and more	9%	16%	27%	6%