Ex post evaluation – Indonesia

Sector: Medical services / 12191
Programme/Project: Dr Wahidin Sudirohusodo Hospital, Makassar, BMZ No: 2004 66 383* and 2004 70 609 (CM)
Implementing agency: Indonesian Ministry of Health

Ex post evaluation report: 2015

		Project ** (Planned)	Project ** (Actual)
Investment costs (total)	EUR million	12.57	12.39
Counterpart contribution	EUR million	2.57	2.57
Funding	EUR million	10.00	9.82
of which BMZ budget funds	EUR million	10.00	9.82

*) Random sample 2015
**) Including complementary measure (CM) 2004 70 609 amounting to EUR 0.99 million

Summary: The project comprised measures to renovate or construct hospital buildings, rehabilitate or construct infrastructure (water supply, electricity, disposal), procure, install and maintain medical equipment as well as advisory services to improve management (HR management, financial and maintenance management, hospital information system) at the state-run Dr. Wahidin Sudirohusodo Hospital in Makassar. This is the only tertiary care hospital in the South Sulawesi region.

Objectives: The aim of the FC measures was to improve the quantity and quality of service and thereby use of the supported public hospital at the highest level of care (maximum care) in order to help improve the health of the population in South Sulawesi (overarching development objective).

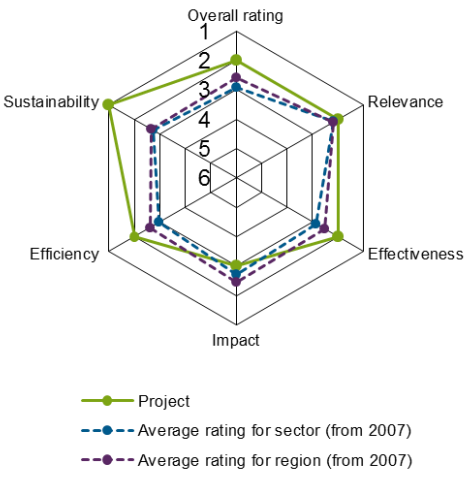
Target group: The target group was the roughly 8 million inhabitants of South Sulawesi. Furthermore, the hospital functions as a maximum care hub for eastern Indonesia. The aim was to ensure that the poorer population benefit from the FC measures as well.

Overall rating: 2

Rationale: The project tackled the limitations in tertiary care (good relevance) and stood out particularly because of appropriate technology, which resulted in high efficiency and sustainability. The effect in terms of development policy (impact) is plausible, but cannot be empirically proven. The effectiveness meets expectations and even surpasses them in cases.

Highlights: National health insurance has broadened access to health services significantly, particularly for poor people, meaning that the high standard of service offered by the maximum-care hospital can be enjoyed by this segment of the population in full too.

A good balance between striving for excellence and integration into the reference system, i.e. the investments were consistently made to an appropriate standard, which enabled the tertiary care hospital to function and ensured a balanced relationship with other hospitals in the project region.



Rating according to DAC criteria

Overall rating: 2

Relevance

The project started on the assumption that the quality of service provided by the Dr. Wahidin Sudirohusodo Hospital is the primary bottleneck in effective health care provision. Increasing quality would lead to rising utilisation and thus to improved public health, which is a fundamental value of both international development cooperation and the Indonesian government. At the same time, the Dr. Wahidin Sudirohusodo Hospital is a teaching hospital, and so this function is also of relevance to the goal of comprehensive health care provision in eastern Indonesia and in South Sulawesi in particular.

Since the appraisal report, evidence in literature pointing to the fact that these assumptions are basically correct has increased significantly[1]. A healthy and productive population requires reliable, accessible and affordable health services with good quality at all levels. The main barriers are the patient's ability to pay (financial barrier), poor management (quality, human resources, and facility management, including maintenance), low structural quality (number and qualification of personnel; buildings and equipment) and inadequate process quality (standards, documentation). From a systemic point of view, the dysfunctionality of the reference system is also a barrier to good health care for the population. Consequently, the relevance of the approach is very high.

Furthermore, the project places a (non-exclusive, but significant) focus on the target group of the poor population, who cannot afford more than basic care in (mainly private) hospitals from their own resources. This aim also coincides with the priorities of the Indonesian government and of development policy. Since the Dr. Wahidin Sudirohusodo Hospital is the only tertiary hospital in eastern Indonesia, there is no doubt there is sufficient demand for the hospital's services. The relevance of the construction of the private clinic area is based solely on its ability to generate contribution margins for subsidising services for poor groups. The hospital is able to substantiate these margins on the basis of a (comparatively rudimentary) profit and loss account. No further relevance of the private clinic can be found for the care of the population or for the development policy objectives.

Consequently, it can be stated that the project has tackled the right issues. Coordination with other development policy measures was not necessary as, with the exception of a purely medical USAID measure (completed), there is no link to other measures. It can thus be concluded that the project has addressed the right health issues, and resulted in the development of a consistent impact model and the selection of appropriate measures.

Relevance rating: 2

Effectiveness

The project objective, as defined at the project appraisal, is to improve the quantity and quality of the hospital's health services and their utilisation. Developments within the Indonesian health sector have tended to underline and reinforce the significance and usefulness of the project:

- Epidemiological transition: The importance of chronic degenerative diseases is steadily increasing in Indonesia. This requires an even stronger focus on quality as the primary output dimension. These diseases often require long-term and intensive treatment, in which reliable standards are essential..
- National health insurance: The introduction of the national social health insurance system significantly reduced the financial barrier, particularly for poorer sections of the population. At a national level, this led to an increase in demand for health-care services. The primary barrier, which has since remained, is service quality.

[1] Cf. "Gesundheit und Entwicklung" [Health and Development] in Flessa, S. (2013). Internationales Gesundheitsmanagement. Munich, Oldenbourg.

– Accreditation: From 2016, hospitals must be accredited if they wish to claim against the social health insurance system. For many hospitals, this represents a major challenge. The Dr. Wahidin Sudirohusodo Hospital is certified both by KARS (Indonesian Commission for Accreditation of Hospitals) and by Joint Commission International (JCI) – one of the few institutions in Indonesia to meet this standard. It has been stressed several times, and it is plausible, that this success is partly down to the basis of the project.

Using the objective indicators defined at the project appraisal, the achievement of the objectives is measured as follows:

Indicator	Target*	Status 2005	Status 2014	Change
(1) Number of outpatient treatments (no./year)	+25 %	148,539	185,686	+25 %
(2) Number of inpatients (no./year)	+15 %	27,104	35,097	+29 %
(3) Number of operations (no./year)	+100 %	5,228	8,942	+71 %
(4) Number of emergency cases (no./year)	+20 %	21,337	26,543	+24 %
(5) Emergency reaction time (min)	< 7	7	4	-43 %
(6) Caesarean section rate (%)	+50 %	22	56	+154 %

*) After project implementation - planned: September 2010; actual: January 2012.

The Dr. Wahidin Sudirohusodo Hospital is a tertiary hospital, i.e. the key criteria for measuring the achievement of objectives are case quantity, case complexity and case quality. Indicators (1), (2) and (4) show that the quantitative performance has increased significantly (and in some cases exceeded expectations), while indicators (3) and (6) are proxies for case complexity. For a tertiary hospital, it is important above all that serious cases (e.g. high proportion of caesarean sections; high proportion of operations) are treated. Indicator (5) is a proxy for the process quality. With the exception of the number of operations (3), the objectives of all the indicators were fully met; the caesarean rate was documented by the evaluator with a target value. In summary, it can be concluded that the project was successful.

Effectiveness rating: 2

Efficiency

Efficiency compares the input with the results of the project and queries whether the investment funds could have been used in a more productive way. The efficiency can be assessed as relatively high. The equipment (according to the procurement lists and in the spot check) was procured at a level appropriate to the stage of development, the buildings (renovation of Accident and Emergency Department, among others; construction of new MCH) meet the standard of a tertiary hospital within the health system of eastern Indonesia. The technology used in both cases can be described as appropriate. Equipment and buildings are used extensively, and trained staff members are still located at the same workstations (with few exceptions). Maintenance and integration into the quality management process are regulated (please also refer to “Sustainability”). It can thus be concluded that investments in equipment and buildings were

appropriate measures for overcoming the hospital's central bottlenecks at the time of project planning. The majority are still in use today, and make a significant contribution to quality improvement.

The complementary measure was implemented to a high standard. It remains questionable whether it was really necessary to employ foreigners for many tasks, given the high level of training in Indonesia. It is, however, unclear whether the use of local trainers would have led to a reduction in costs and thus to an increase in efficiency.

The project was planned for a period of four years and required an eight-month extension. This extension was not associated with additional costs and there is no indication that it has had a negative impact on efficiency.

A few inefficiencies did occur (e.g. waste incinerator too small, lack of language skills of the trainers, non-application of clinical pathways), but these were relatively small in number and low in significance.

It is difficult to assess the efficiency of the measure across the whole reference system. After visiting a hospital at secondary level which was not FC-funded (Labuang Baji) it is fair to conclude that this hospital is not equipped as a secondary hospital and does not function at this level. Accordingly, patients to be treated at a secondary level should actually be referred to the tertiary hospital. The accreditation of Labuang Baji is excluded in its current state, as buildings, sewage systems and equipment are in a state which is far below the national standard.

It would be understandable to question whether it makes sense to strengthen tertiary hospitals while secondary hospitals are still in a very bad condition. However, the Indonesian government has made the clear decision that there should be a tertiary level. The Dr. Wahidin Sudirohusodo Hospital is the referral hospital for the whole of eastern Indonesia, which means that more than 30 % of patients actually come from outside South Sulawesi. Investments in buildings and equipment were at an appropriate level and resulted not in the creation of a "luxury hospital", but of an attractive provider of high-quality health-care services within the transfer system. Further investments in the secondary level should follow, but this fact does not undermine the credibility of the investment in the Dr. Wahidin Sudirohusodo Hospital.

In addition, the FC-funded hospital serves as a teaching hospital for the local University in Makassar (UNHAS). Each year 200-300 young doctors are trained here, who will make a significant contribution to primary care in particular. The training of doctors would be barely conceivable without the tertiary hospital. Consequently, investment in the tertiary hospital can be described as appropriate from the perspective of public health care. The allocation efficiency is at least acceptable.

Overall, the efficiency of the project is assessed as good.

Efficiency rating: 2

Impact

The developmental objective of the project was to improve the health situation of the population in the catchment area of the Dr. Wahidin Sudirohusodo Hospital. At the project appraisal, it was decided not to define indicators for this ultimate objective. It is plausible; however, that the investment in the funded hospital has a positive effect on the health of the population, though it is not possible to verify the scale of this impact in quantitative terms.

The table below shows some demographic and epidemiological developments in Indonesia (whole country) and South Sulawesi. It appears that the epidemiological parameters of South Sulawesi remain worse than the national average, though they have improved considerably since 2005[2]. It is plausible that the project has made a contribution here, but it is not possible to attribute the development to the project directly.

[2] It should be noted that data from different sources is sometimes contradictory in this regard.

Indicator	Indonesia 2005	Indonesia 2012	South Sulawesi 2005	South Sulawesi 2012
(1) Life expectancy (years)	69	71	68.7	70.4
(2) Infant mortality rate (per 1,000)	34	25	41	31
(3) Child mortality rate (per 1,000)	52	31	46	37
(4) Proportion of the population under the national poverty line (%)	16	12	14	9.8

Source: Provincial Health Department (2015); KNOEMA (2015); World Bank (2014).

At the project appraisal, the following conditions were defined in order to actually support the overarching developmental objective in achieving the project objectives:

1. The autonomous status of the hospital is strengthened and further developed.
2. Central and provincial government continue to promote the hospital to a sufficient extent.
3. The relationship between the hospital and university develops into a mutually beneficial situation.
4. The hospital successfully implements a strategic plan.

From today's perspective, it can be stated that:

Ad 1: The hospital has BLU status[3], i.e. it is relatively independent. Only key management positions are occupied by the Ministry of Health, but even here the hospital seems to have a say. At present, for example, the position of Director is to be filled. This decision will ultimately be taken by the Ministry. Important stakeholders (including UNHAS) will, however, be involved. It is important that the hospital has full autonomy over its revenue. Since this has risen further since the introduction of the social health insurance system, this implies a high degree of autonomy. Because most doctors work on a fee basis ("loaned" from UNHAS), this represents a high freedom of choice.

Ad 2: The provincial government does not provide funding for the hospital, but the input from the central government (Ministry of Health) is significant. This averaged about 25 % of total revenue in recent years (data only available since 2010). By 2013, the share of the revenue coming from the state was stable. With the introduction of the social health insurance system in 2014, this share of income increased in absolute and relative terms, while revenue from the state decreased in absolute and relative terms. This seems quite reasonable, since the state also heavily subsidised social insurance for the poor and thus it is merely the case that another channel was found for the government subsidies. However, government grants must be monitored in the future to ensure that they do not decrease further. At the moment, it appears that the government provides the hospital with sufficient funding.

Ad 3: As already indicated, the relationship between Hasanuddin University, Makassar, and the Dr. Wahidin Sudirohusodo Hospital has improved considerably. Regular meetings, the appointment of a faculty member to the position of Director and the signing of the MoU (2015) have led to a lively exchange of information and better coordination. However, the situation should be monitored in order to ensure that this remains the case in the future. The expansion of the UNHAS Hospital and the possible appointment of an external manager to the position of Director pose a challenge.

Ad 4: The hospital is accredited by both Joint Commission International and KARS. In the case of both these systems, the development of a strategic plan is a criterion for accreditation. Similarly, there exists a master plan for further development (of buildings in particular).

[3] Badan Layanan Umum: semi-autonomous governmental organisation.

It can therefore be concluded that a positive developmental impact is plausible and likely. However, there is no robust evidence regarding what this impact can be attributed to.

Impact rating: 3

Sustainability

The renovated or newly constructed buildings still exist and are in a good structural condition. No renovations (e.g. painting works) have been carried out to date and some cracks and minor problems with the ceiling tiles are visible. This is within acceptable limits, however, four years after the end of construction..

We conducted a random survey of the FC-funded devices. 12 % could not be found. This does not imply that they have disappeared, but rather that they were not in the location provided on the inventory. 6 % of the devices were not in working order or under repair, while the remainder were functional and in use. For smaller devices, hospital revenue should extend to cover the costs of a replacement. The replacement of major equipment, however, will be a problem. The maintenance is carried out regularly and, in most cases, it seems that this is possible locally. It is worth bearing in mind that around half of the devices will reach the end of their useful lives in the next two years and will have to be replaced.

The maintenance contracts for large devices were not renewed, but the technicians and engineers (including the management) who were trained to carry out the maintenance works in the hospital still work there. The workshop urgently needs improvement. Otherwise, the equipment and buildings give the impression of good maintenance. They are functional. This result, which is not to be found everywhere in comparable projects, is due to the fact that the devices and buildings were acquired or built at a level that is actually manageable in Indonesia. They were not built for “luxury”. Instead, appropriate technology was selected for the buildings and facilities. The definition of what is “luxury” and what is “appropriate” is certainly subjective. The hospital is indeed at a higher level than lower category hospitals (type B), but without doubt this must be the case in order to operate at type A level. Facilities and buildings are functional without unnecessary and expensive luxury, and can predominantly be maintained from the hospital’s own resources.

We also examined the sustainability of the accompanying measures. Most of these supported the accreditation process and were further developed for this purpose. It has been said repeatedly that the “culture of the KfW project” has inspired the entire accreditation process, implying a very high level of sustainability.

The clinical pathways (partial steps of a treatment process) were designed primarily to collect dust and seem to have no significance for clinical decision-making. It was also repeatedly emphasised that training courses provided in English or Malaysian have remained relatively ineffective because the participants have not understood. It cannot be proven whether or not the linguistic or cultural barrier has in fact led to a low level of sustainability, but this seems plausible.

The Dr. Wahidin Sudirohusodo Hospital is the referral hospital for eastern Indonesia. 33 % of outpatients and 37 % of inpatients (2014) come from regions outside of South Sulawesi. Comparative figures for 2005 are not available. We also visited two secondary level (level B) hospitals, one state-owned and one private. In both cases, the Dr. Wahidin Sudirohusodo Hospital was named as the hospital of choice for transfers. In the case of tertiary level services, there is currently no competition with the private sector. This only exists in the case of patients who should not be treated in a maximum care facility. As health centres are no longer able to transfer patients directly to tertiary level hospitals, we decided to forego visiting health centres.

In summary, the sustainability of the project can therefore be assessed as extraordinarily and surprisingly good. In contrast to other projects, after four years the majority of investments are still fully functional and have been further developed. To ensure this in the future as well, the principles of appropriate technology practised here should continue to be taken into consideration in all investments.

Sustainability rating: 1

Notes on the methods used to evaluate project success (project rating)

Projects (and programmes) are evaluated on a six-point scale, the criteria being **relevance, effectiveness, efficiency** and **overarching developmental impact**. The ratings are also used to arrive at a **final assessment** of a project's overall developmental efficacy. The scale is as follows:

Level 1	Very good result that clearly exceeds expectations
Level 2	Good result, fully in line with expectations and without any significant shortcomings
Level 3	Satisfactory result – project falls short of expectations but the positive results dominate
Level 4	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
Level 5	Clearly inadequate result – despite some positive partial results, the negative results clearly dominate
Level 6	The project has no impact or the situation has actually deteriorated

Rating levels 1-3 denote a positive assessment or successful project while rating levels 4-6 denote a negative assessment.

Sustainability is evaluated according to the following four-point scale:

Sustainability level 1 (very good sustainability): The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.

Sustainability level 2 (good sustainability): The developmental efficacy of the project (positive to date) is very likely to decline only minimally but remain positive overall. (This is what can normally be expected).

Sustainability level 3 (satisfactory sustainability): The developmental efficacy of the project (positive to date) is very likely to decline significantly but remain positive overall. This rating is also assigned if the sustainability of a project is considered inadequate up to the time of the ex post evaluation but is very likely to evolve positively so that the project will ultimately achieve positive developmental efficacy.

Sustainability level 4 (inadequate sustainability): The developmental efficacy of the project is inadequate up to the time of the ex post evaluation and is very unlikely to improve. This rating is also assigned if the sustainability that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.

The **overall rating** on the six-point scale is compiled from a weighting of all five individual criteria as appropriate to the project in question. Rating levels 1-3 of the overall rating denote a "successful" project while rating levels 4-6 denote an "unsuccessful" project. It should be noted that a project can generally be considered developmentally "successful" only if the achievement of the project objective ("effectiveness"), the impact on the overall objective ("overarching developmental impact") and the sustainability are rated at least "satisfactory" (level 3).