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Analysis of forecast statements of own revenues and their achievement: Case of the general reference hospital of Kabondo from 2020 to 2022

Obed Kasereka Kaniki *, Gabriel Omari Asaka, Désiré Isetcha Tawiti and Raymond Assani Ramazani

Health Organization Management Department of the Higher Institute of Medical Techniques of Kisangani, DR Congo.

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Abstract

Introduction: For a hospital, self-financing is ensured by its own revenues produced by the sale of medicines, printed materials and medical services, that is to say the services offered to patients. The study specifically aimed to determine the evolution of own revenues generated by the Kabondo General Reference Hospital from 2020 to 2022, and to analyze how the planned own revenues are achieved during the study period.

Methodology: We have opted for the inductive method, which starts from particular facts to global facts. Its starting point is the observation and experimentation of facts; Documentary analysis allowed us to collect the data. Expected revenues (forecasts) constitute the independent variable, also called endogenous variable (X), while realized revenues constitute the dependent or exogenous variable (Y). Finally, we looked for the linear correlation coefficient in order to establish the relationship between the forecasts and the achievements of own revenues.

Results: The forecast revenue statements recorded a total amount of US\$452,719.00 and the hospital had generated its own revenue of around US\$478,056.40. The overall gap between realized revenue and forecast revenue was positive, i.e. US\$25,337.40. The correlation coefficient between forecasts and actual revenues was -0.75. The GRH/Kabondo was probably performing well for the simple reason that the revenues generated evolved in saw tooth patterns, thus generating a positive difference with a fatal free fall during the 2022 financial year, ultimately causing a total lack of correlation between the forecasts and the achievements of GRH/Kabondo's own revenues from 2020 to 2022.

Conclusion: The self-financing policy is encouraged in the sense that it makes the hospital autonomous from the outside and allows the organization to enjoy all its profits; therefore, to decide its allocation with complete freedom.

Keywords: Analysis; Forecast; Own revenue; Achievement; Self-financing

1. Introduction

Every business is obliged to use planning to achieve its objectives. This planning consists of an estimate of the means of action, that is to say forecasts quantified in revenue and expenditure; including a "budget": which is a detailed act expressed in qualitative terms and covering various aspects of the activity of a given entity for a clearly defined period [1].

Around the world, hospitals are generally financed by the State, by health organizations (for-profit or non-profit), by health insurance where it exists or with the help of charities including through charitable donations. The institutions responsible for financing include social protection organizations, such as security, mutual societies, social assistance, and private insurance and provident institutions [2].

* Corresponding author: Obed Kasereka Kaniki

In Africa, as soon as we talk about the health situation in general, the functioning of health systems is not lacking: the absence of medicines, equipment out of use, unmotivated staff; Users complain about these non-functional health structures. It is now common knowledge that the situation of widespread economic recession on the African continent, accompanied by the constraints imposed by international financial institutions. However, reductions in public funding would not hinder development, quite the contrary [3][4].

Public health establishments are a response from the State to the challenge posed by covering the needs of the population in terms of public health. To function, the hospital, like the company, is made up of a certain number of functions including: the supply function, the production function, the technical function, the administration function, the financial function, etc. The main role recognized by the latter is the search for the necessary funds and the optimal allocation of these, with a view to better profitability, both economic and social [5]. Thus, in seeking these funds, the company can resort to two types of resources: internal resources and external resources. In most cases, company managers opt for internal resources, especially since external resources also constitute a burden for the company through their remuneration [6].

In China, after forcing hospitals to self-finance, the government must re-inject public money to treat the less fortunate. Since the end of the 1980s, the State's participation in the financing of hospitals has, in fact, fallen from 100 to 15%. Up to 50% of the hospital's income is now provided by the sale of medicines. This quasi-privatization of the public hospital opened the door to abuse and corruption: over-equipment, over-consumption of examinations and medications, creation of so-called "luxury" beds, etc. [7].

In Senegal, the government had established so-called alternative public health financing mechanisms which were introduced into the financing system of public and Para public structures. These mechanisms relied on institutions such as the IMI (Institute of Medical Insurance), mutual health insurance companies and health committees. This additive and palliative financing reflected the growing difficulties of the State in supporting the cost of health of the populations and initiated the system of participation of the populations. However, these mechanisms were unable to achieve the expected goal, for reasons such as the low income of part of the population. Likewise, dysfunctions were noted especially with regard to health committees [8].

In the Democratic Republic of Congo, health financing is based on three sources: the state budget, external financing and user payments usually called "community financing". This is in fact payment for care by households. But the historical evolution of the mechanisms has led to a worrying specificity in relation to the mission devolved to any health system with regard to its population. This situation acutely raises the issue of effectiveness, efficiency and equity in health financing in this country [9].

Currently the hospital is no longer able to fulfill its mission for various reasons including poor governance, underfunding of the health system as a whole and of the hospital in particular, weaknesses in the development of human resources, living conditions from the patient to the hospital, the dilapidated infrastructure, equipment and medical and non-medical materials as well as the inaccessibility to good quality medicines [10].

To improve health care, the priority is not to purchase the best medicines, but to establish an adequate health system followed by its management, hence good channeling and use of recipes. Locally, the General Reference Hospital of Kabondo only operates for social reasons and of general interest for the population living in or outside the city of Kisangani. Its mode of allocation of revenue can only be measured by contribution to the way in which the latter meets its obligations, its rights and duties with regard to the inflow and outflow of revenue.

A study carried out at the General Reference Hospital of Kabondo by Kitoko [11] in 2019 demonstrated that the own revenues generated by this health establishment amounted to \$691,463.51, among which revenues linked to medical services made it possible to collect a total of \$505,885.47, or 73.2%.

With particular regard to the health sector in the Democratic Republic of Congo; we observe a total neglect which causes its degradation, even though its role is significant for the well-being of every human being. Flying on their own, to maintain themselves, public health establishments are setting up certain survival mechanisms. Among these mechanisms, there is on the one hand, the constitution of internal financing (self-financing) and the recourse to other sources of external financing (loan, donation, etc.) on the other hand. Among these sources there is one that is not expensive for the hospital, that of financing itself.

Self-financing is an essential means of financing a hospital. The hospital must in fact use all its mechanisms to further maximize its own revenues for its operations in order to achieve its objectives, before relying on external financing. Thus, the General Reference Hospital of Kabondo is made up of services producing revenue and incurring expenses.

By conducting this study, our objectives are to determine the evolution of own revenues generated by the General Reference Hospital of Kabondo from 2020 to 2022 and to assess the way in which these planned revenues are achieved during the study period.

2. Methodology

2.1. Presentation of the study environment

This study is carried out at the General Reference Hospital of Kabondo. It is located in the Kabondo Health Zone and is located in the Makiso commune, located on Avenue Mabrouk, in the Artisanal district in Kisangani, capital of the Tshopo province.

Considering the geographical location, the General Reference Hospital of Kabondo is limited by Avenue Mabrouck on the main road which connects the commune of Kisangani and the commune of Kabondo, to the West by the concession of the Marist Brothers, the land of Mwangaza Primary School and the road which leads to Saint Camille Parish, to the North by Kalindula Primary School and to the South by the Kalindula Institute and the main road which leads to Bangboka International Airport.

2.2. Study population

Based on the objectives to which we have set ourselves, our population is made up of all the revenue and expenditure forecasts recorded in all the forecast statements prepared by the General Reference Hospital of Kabondo from 2020 to 2022.

2.3. Sample

As far as we are concerned, the sample consisted of all forecasts of own revenues (self-financing) and all revenues generated by the GRH/Kabondo during the study period and which justified their allocation.

2.4. Type of study

As part of this study, we opted for the inductive method, which starts from particular facts to global facts. Its starting point is the observation and experimentation of facts.

The inductive method is the one which starts from the specific, that is to say the sources of financing of the Hospital, to arrive at the general, that is to say the forecast statements prepared by the hospital for a period well determined. It consists of analyzing before synthesizing. It requires a serious and respectful examination of the text, before initiating commentary, reflection, discussion on its understanding, and leading to a commitment to practice what has been understood [12].

We also used the comparative method, which helped us to compare the own revenue forecasts with the revenue realizations and all these methods will be supported by the techniques.

2.5. Data collection process

For this study, we used documentary analysis. This technique allowed us to consult the accounting documents within the hospital financial department; we also consulted various documents, literary journals, dissertations relating to management control and budgetary management.

At the same time, we consulted the forecast statements on which the own revenues of the General Reference Hospital of Kabondo are recorded during the period of our study, but also the way in which these forecast revenues were achieved.

2.6. Study variables

The variables sought by this study are the forecasts of own revenues (self-financing) as well as the own revenues achieved.

For this study, revenue forecasts constitute the independent variable, also called endogenous variable (X), while realized revenues constitute the dependent or exogenous variable (Y).

2.7. Data processing technique

The information provided by the different forecast statements and the data collected at various stages are put into a usable form. The numerical data that we collected were grouped into tables for their statistical analysis.

The aim here is to determine the relationship between revenue forecasts and revenues achieved by GRH/Kabondo during the study period from 2020 to 2022. The correlation between these two variables can be represented graphically by a correlation diagram or point cloud. On the ordinate, Y, we carry the value of the dependent variable (forecast revenue), and on the abscissa, X, we carry the corresponding value of the independent variable or characteristic (forecast revenue). If there is an association, changes in Y will coincide with changes in X.

This relationship can also be expressed by determining a correlation coefficient “r”, which is a measure of the degree of inter-variability of the dependent variable with the independent variable. This correlation coefficient is between +1 and -1.

The correlation method is carried out based on the least squares technique using the following formulas:

$$Y = \alpha x + b$$

$$a = \frac{\sum XY}{\sum X^2}$$

$$b = \bar{y} - a\bar{x}$$

Finally, we will identify the correlation between forecasts and actual revenues and expenditures by determining the correlation coefficient:

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \cdot \sum y^2}}$$

With :

- **r** = Correlation coefficient;
- $\sum XY$ = Sum of X and Y ;
- $\sum X^2$ = Sum of X² ;
- $\sum Y^2$ = Sum of Y².

3. Results

3.1. Revenue Forecast

Table 1 Evolution of revenue forecasts (in US dollars) from 2020 to 2022

Types of revenue	2020	2021	2022	Total
Medical benefits	99,530.50	90,500.00	110,000.50	300,031.00
Sale of medicines	42,950.00	50,750.50	55,300.50	149,001.00
Sale of prints	1,536.50	1,275.00	875.50	3,687.00
Total	144,017.00	142,525.50	166,176.50	452,719.00

The data shown in table no. 1 shows that the General Reference Hospital of Kabondo had planned to generate its own revenue (self-financing), during the period from 2020 to 2022, amounting in total to \$452,719.00 US whose medical services occupy first place with US\$300,031.00, followed by the sale of medicines or US\$149,001.00 and printed matter

or US\$3,687.00. It should also be noted that the year 2022 comes out on top with a total of US\$166,176.50 and that the year 2021 has planned less own revenue, i.e. US\$142,525.50.

3.2. Realized revenue

Table 2 Evolution of revenue generated (in US dollars) from 2020 to 2022

Types de revenue	2020	2021	2022	Total
Medical benefits	109,401.41	111,213.63	94,666.79	315,281.83
Sale of medicines	47,693.81	53,487.13	59,433.73	160,614.67
Sale of prints	736.5	767.41	655.99	2,159.90
Total	157,831.72	165,468.7	154,756.51	478,056.40

By analyzing the content of table no. 2, it appears that the General Reference Hospital of Kabondo had generated revenues for a total of US\$ 478,056.40 for which medical services had generated a total of US\$ 315,281.83, followed respectively from the sale of medicines and printed matter, i.e. US\$ 160,614.67 and US\$ 2,159.90.

Contrary to forecasts, it was noted that it was the year 2021 which forecast significant revenues, i.e. US\$ 165,468.17, followed respectively by the years 2020 and 2022, i.e. US\$ 157,831.72 and US\$ 154,756.51

3.3. Budget Control

Table 3 Calculation of differences between realized revenue and forecast revenue

Types of revenue	2020			2021			2022		
	Forecasts	Realized	Deviations	Forecasts	Realized	Deviations	Forecasts	Realized	Deviations
Medical benefits	99,530.50	109,401.41	9,870.91	90,500.00	111,213.63	20,713.63	110,000.50	94,666.79	-15,333.71
Sale of medicines	42,950.00	47,693.81	4,743.81	50,750.50	53,487.13	2,736.63	55,300.50	59,433.73	4,133.23
Sale of prints	1,536.50	736.50	-800.00	1,275.00	767.41	-507.59	875.50	655.99	-219.51
Total	144,017.00	157,831.72	13,814.72	142,525.50	165,468.17	22,942.67	166,176.50	154,756.51	-11,419.99

It appears clearly by observing this table that the differences between the actual revenues and the forecast revenues amounted to US\$22,942.67 during the year 2021 and US\$13,814.72 in 2020, while it was negative during the year 2022, i.e. US\$ -11,419.99.

Table 4 Presentation of differences in percentage terms

Types of recipes	2020			2021			2022		
	Forecasts	Realized	Deviations (%)	Forecasts	Realized	Deviations (%)	Forecasts	Realized	Deviations (%)
Medical benefits	99,530.50	109,401.41	9.92	90,500.00	111,213.63	22.89	110,000.50	94,666.79	-16.20
Sale of medicines	42,950.00	47,693.81	11.04	50,750.50	53,487.13	5.39	55,300.50	59,433.73	6.95
Sale of prints	1,536.50	736.50	-52.07	1,275.00	767.41	-39.81	875.50	655.99	-33.46
Total	144,017.00	157,831.72	9.59	142,525.50	165,468.17	16.10	166,176.50	154,756.51	-7.38

As we noted in the data shown in the table above, the gap between realized revenues and forecast revenues was higher during the year 2021, i.e. a positive gap of 16.10%, while it was positive by 9.59% in 2020 and it was negative by -7.38% during the year 2022.

3.4. Economic analysis of the results

The economic analysis consists of determining the endogenous variable and the exogenous variable by calculating the correlation coefficient which is based on the ordinary least squares method. As we indicated above, the endogenous variable represents the revenues achieved (Y) and the exogenous variable represents the revenues forecast (X) by the General Reference Hospital of Kabondo during the period from 2020 to 2022:

Table 5 Determination of the correlation coefficient (r) by the ordinary least square method

x	y	X	Y	XY	X ²	Y ²
144,017.00	157,831.72	- 6,889.33	- 1,520.41	10,474,634.26	47,462,913.78	2,311,656.70
142,525.50	165,468.17	- 8,380.83	6,116.04	-51,257,483.96	70,238,367.36	37,405,904.51
166,176.50	154,756.51	15,270.17	- 4,595.62	-70,175,934.24	233,177,990.00	21,119,753.82
Σ= 452,719.00	478,056.40	0	0	-110,958,783.94	350,879,271.17	60,837,315.03

$$\bar{X} = \frac{452719,00}{3} = 150,906.33$$

$$\bar{Y} = \frac{478056,40}{3} = 159,352.13$$

The parameters a and b are obtained by the formulas below:

$$a = \frac{\sum XY}{\sum X^2} = - 0.316$$

$$b = \bar{y} - a\bar{x} = 207,038.53$$

Having found the values of a and b, we can easily determine the correlation coefficient by the formula below:

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \times \sum Y^2}} = - 0,75$$

The correlation coefficient is negative according to our calculations. The negativity of the correlation coefficient in this study could be explained by the fact that the actual revenues did not evolve upwards compared to the forecasted revenues which, in turn, had also evolved unevenly. It should also be noted that during the 2022 financial year, the Kabondo General Reference Hospital recorded a negative gap between forecasts and actual revenues.

We represent in the graph below the regression curve mentioning on the one hand the revenue forecasts and the actual revenues recorded by the General Reference Hospital of Kabondo on the other hand, considering the function:

$$Y = -0,316 x + 207038,53.$$

$$\text{For } X = 144,017.00 \text{ so } Y = -0.316(144,017.00) + 207,038.53 = 161,529.158$$

$$\text{For } X = 142,525.50 \text{ so } Y = -0.316(142,525.50) + 207,038.53 = 162,000.472$$

$$\text{For } X = 166,176.50 \text{ so } Y = -0.316(166,176.50) + 207,038.53 = 154,526.756$$

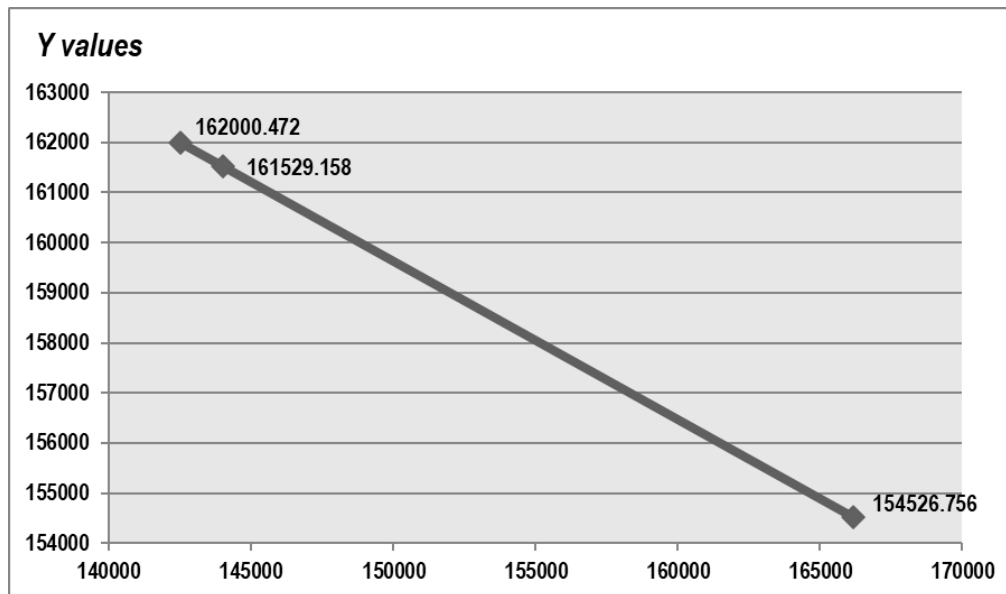


Figure 1 Regression line between forecast and actual revenue

Reading this graph shows us that the regression curve is not ascending, but rather descending and that it is perpendicular to the slope or function $Y = -0.316x + 207038.53$. We deduce in fact that there is no correlation between the forecasts and the achievements of the GRH/Kabondo's own revenues during the study period.

4. Discussion

4.1. Revenue Forecast

According to our analyses, it was demonstrated that the General Reference Hospital of Kabondo had planned to produce its own revenues, during the period from 2020 to 2022, amounting in total to US\$452,719.00 of which medical services took first place with US\$300,031.00, followed by the sale of medicines at US\$149,001.00 and printed matter at US\$3,687.00. It should also be noted that the year 2022 comes out on top with a total of US\$166,176.50 and that the year 2021 has planned less own revenue, i.e. US\$142,525.50.

According to Hounkpati's study [13], the Tokoin University Hospital of Lomé's own revenues are generated by the various hospital activities. In fact, revenue forecasts are made by providing services, such as outpatient consultations, hospitalizations, electro diagnostic, laboratory and especially morgue examinations, in short self-financing, which becomes the only source of income from sick, solvent customers. Own revenues generated by hospitalization costs represent a fairly significant proportion of overall revenues, i.e. 51.37%.

In the same vein, Wasoke [14] found at the Tshopo 1 General Reference Hospital that the total sources of financing for the Tshopo General Reference Hospital from 2018 to 2020 amount to 374,272.82 US\$ and that medical services had produced a high amount, i.e. US\$227,006.47, followed by the sale of medicines, i.e. US\$68,323.03, and operating subsidies, i.e. US\$56,358.40. Still in Kisangani in the Tshopo Province, Kitoko [11], carried out a study at the General Reference Hospital of Kabondo from 2016 to 2018, according to which the forecast statements had recorded a total amount of revenue amounting to 691 \$463.51. These revenues showed an oscillatory movement, with a strong mobilization during the year 2016, i.e. 340,106.28 USD and a weak mobilization in 2017, i.e. 170,231.58 USD. We also point out that these revenues constitute the Hospital's own funds, sources of self-financing because there was an absence of State subsidies during the study period.

Developing forecasts in a healthcare establishment is a much more complex step in the sense that it allows the hospital to have an essential dashboard. We note that the importance of the own revenues generated by the hospital would depend on a high frequency of patients determining the accessibility of the latter during a given period on the one hand, but also by the type of pricing implemented place by the hospital administration which adapts to the purchasing power of the population or users of medical care, on the other hand.

4.2. Creation of recipes

It was observed in this study that the General Reference Hospital of Kabondo had generated a total of US\$478,056.40 for which medical services had generated a total of US\$315,281.83, followed respectively by the sale of medicines and printed materials, respectively US\$160,614.67 and US\$2,159.90. Contrary to forecasts, it was noted that it was the year 2018 which achieved significant revenue, i.e. US\$165,468.17, followed respectively by the year 2017 and the year 2019, i.e. US\$157,831.72 and US\$154,756.51.

In his study, Kitoko [11], in the same health establishment, demonstrated that the own revenues generated over three years, from 2016-2018, amounted to USD 691,463.51, including revenues linked to medical services allowed to collect a total of 505,885.47 CDF, or 73.2%. While Shambua [15], in his study at the General Reference Hospital of Makiso, found that the revenue produced by flat-rate pricing amounted to 706,501,460.00 CDF from 2015 to 2017.

Our results match those in Benin by Hounkpati [13], who found that own revenues generated by hospitalization costs represent a fairly large share of overall revenues, i.e. 51.37%. For Aymar Dansou [16], in his study on the budgetary analysis of a public health facility in Benin: case of the Pobè Zone Hospital, the revenue-generating activities of the Hospital is the sale of medicines, medical services and ancillary products.

To generate revenue, the hospital must use forecast data to implement previously established budget lines. We believe that for the General Reference Hospital of Kabondo, self-financing is ensured by revenues produced by the sale of medicines, printed materials and medical services, that is to say the services offered to patients. There is therefore no private financing. The increase in revenue linked to medical services would be justified by the regular and constant supervision of staff assigned to revenue-generating services through the capacity building of the latter supported by a control mechanism to prevent the leakage of financial resources.

The general maximization of revenues through the sale of medicines would depend on the regular supply of the hospital pharmacy to avoid stock shortages of medicines which could push patients to buy medicines elsewhere instead of bringing funds into the hospital cash register. The staff assigned to the pharmacy should also benefit from capacity building to improve their knowledge of managing the medicines made available to them with honesty and loyalty.

4.3. Budget Control

At the end of our analyses, it emerged that the differences between the actual revenue and the forecast revenue amounted to a total of US\$25,337.40, including US\$22,942.67 during the year 2018 and US\$13,814.72 in 2017, while it was negative in 2019 or -US\$11,419.99, translating in percentage terms to 16.10%, while it was positive 9.59% in 2017 and that it was negative -7.38% in 2019. Generally speaking, although the revenues achieved have evolved unevenly, it should be noted that the gap between the revenues achieved and the revenues forecast was positive, or US\$25,337.40. This clearly indicates a good policy of maximizing revenues by this hospital.

For Aymar Dansou [16], it appears from the activity reports from 2006 to 2010 that the average rate of realization of operating resources is 87.27%. As for that of execution of operating costs, it is 79.60%. Finally, the average investment execution rate is 0.14%. On the other hand, in his study at the General Reference Hospital of Makiso, Shambua [15] found that the revenues achieved were slightly lower than the forecasts established during the period from 2015 to 2017, i.e. 75,532,840.00 DFC.

Despite the insufficiency of these resources both from the State and from various partners, it is essential for the hospital to manage them as best as possible in order to be able to cope with the multiple operating costs. Therefore, hospital authorities must have accurate information that is close to reality. This information will then allow them to make an objective analysis of the level of execution of their budget (forecast). Considering the information collected on the evolution of the budget of the General Reference Hospital of Kabondo, it appears that over the entire study period, the hospital mobilizes revenues poorly in view of the current economic realities.

Budgetary control is then the ideal accounting tool to regulate the freedom given to managers and to plan and coordinate the various actions undertaken in the company. It also provides a structure to help managers justify their choices. We therefore believe that the self-financing capacity of the hospital corresponds to all the financial resources generated by the medical service activities carried out by the health establishment and which it could have at its disposal to cover its expenses. It measures the latter's ability to finance the needs linked to its existence, such as investments or debt repayments, from its own resources.

4.4. Diagnosis and criticism

In the economic analysis of the data, it emerged that the correlation coefficient is negative in our study, i.e. -0.75 . The negativity of the correlation coefficient in our study could be explained by the fact that the actual revenues did not evolve upwards compared to the forecasted revenues which, in turn, had evolved unevenly.

In his study, Kitoko [11] found that the correlation coefficient ($r = -0.37\%$), this implies that there was no correlation between the forecasts of revenue constituting the self-financing of the GRH/Kabondo and the expenses incurred which justify the way in which these revenues were used.

We can justify the absence of correlation between the forecasts and the actual revenues of the General Reference Hospital of Kabondo by the presence of negative differences between the two, observed particularly during the year 2022 on the one hand, but also by the non-constant nature of the revenues achieved (achieved in a jagged pattern) during the period of our study, on the other hand.

Management control (MC) is a function which aims to answer questions from managers to implement the organization's strategy. The achievement of objectives must be obtained by maximizing the efficiency of the resources employed. It is therefore a management system allowing both to achieve objectives (finalized system), to measure actual performance (incentive system) and to make actions converge towards the set goals (coercive system).

The questions of the coherence of the management control system and the definition of the performance criteria of an organization are dependent on its culture, the purposes it pursues, its history, and therefore all the referents structuring its identity.

5. Conclusion

For the General Reference Hospital of Kabondo, we believe that self-financing is ensured by revenues generated by the sale of medicines, printed materials and medical services, that is to say the services offered to patients. There is therefore no external funding.

We deduce that the General Reference Hospital of Kabondo was neither efficient nor less efficient for the simple reason that the revenues generated evolved in saw tooth patterns, thus producing a positive difference with a fatal free fall during the 2022 financial year, ultimately causing the absence total correlation between forecasts and actual revenues of this health establishment.

Ultimately, the financial situation of the hospital must be the subject of constant attention on the part of the Managing Administrator. Both revenue and expenditure require the keeping of regulatory documents; these documents record the inflows and outflows of funds. Finally, the hospital must put in place a good financial management policy allowing it to cover all planned expenses according to the objectives and the action plan initially established.

Compliance with ethical standards

Disclosure of conflict of interest

The authors believe that there are no conflicts of interest in the conduct of this study.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

- [1] Ministry of Budget, Circular n°001/CAB/MINBUDGET/2009 of January 26, 2009
- [2] Callewaert et al (2008): The financing and organization of hospitals. *Info Sheet, Appendix to MC-Information.*
- [3] Cabiedes and Guillén (2009): The introduction to self-financing in the health systems of southern European countries, *Revue Française des Affaires Sociales*, Vol. 5.

- [4] Holcman (2015). The statement of revenue and expenditure forecasts (EPRD). In Hospital Management, pages 503 to 526.
- [5] Madialé Birima Niang (2009): The finances of public health establishments. Master's Thesis in Public Health, Cheikh Anta Diop University of Dakar.
- [6] Debeaupuis (2004): Hospital financing: renewed general control but unresolved training and research issues. Les Tribunes de la santé 2004/2 (n°3).
- [7] Chen Bo Wen and Lemay (2002): Financing of health establishments in China. A challenge to be taken up by the Chinese government. Organization Editions. Paris.
- [8] Tine Mandé (2004): Alternative institutional financing mechanisms for health: IPMs, health committees, mutual health insurance; DEA thesis in health law, UCAD-FSJP, Dakar.
- [9] Makamba et al (2004): The problem of health financing in DR Congo. Report of the Round Table of Partners, Ministry of Health, Kinshasa.
- [10] Ministry of Public Health/DRC (2010): Strategic plan for hospital reform, Kinshasa.
- [11] Kitoko (2019): Evaluation of a health establishment applying self-financing for its operation. Case of the General Reference Hospital of Kabondo from 2016 to 2018. TFC (unpublished) in Management of Health Institutions, ISTM/Kisangani.
- [12] Thibault (2007): Microeconomic analysis, Maison des Sciences Economiques, Paris.
- [13] Hounkpati (2007): Self-financing of a healthcare structure (exploratory study of the implementation of a social reinsurance initiative in Togo). Ed. HAL Id. Claude Bernard University – Lyon.
- [14] Wasoke (2021). analysis of the sources of financing of a public health establishment. It was carried out at the Tshopo General Reference Hospital from 2018 to 2020. TFC (unpublished), Management of Health Institutions – ISTM/Kisangani, DR Congo.
- [15] Shambua (2018): Comparative study between flat-rate pricing and pricing per procedure in hospital establishments. Cases of the General Reference Hospitals of Mangobo and Makiso from 2015 to 2017. Unprecedented TFC in Management of Health Institutions. ISTM/Kisangani, DR Congo.
- [16] Aymar Dansou (2011): Budgetary analysis of a public health facility in Benin: case of the Pobè Zone Hospital. University of Parakou Benin - Master's degree in Management Sciences. Cotonou.