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Article

Activity-Based Costing System Design Implementation at People's Saving Bank Branches

Diseño de un sistema de costos basado en actividades para sucursales del Banco Popular de Ahorro

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ABSTRACT

Aim: To design an activity-based cost system for every process, product, and service performed by People's Savings Bank branches.

Main results: The diagnostic of the evaluation, control, and decision-making system in the branches of the People's Savings Bank, by means of which the absence of tools that provide relevant information in terms of decision-making, could be determined, seeking comprehensive evaluation of bank processes. The theoretical background was presented to achieve information used to evaluate the economic efficiency of products and services. Then, a methodology of the system of activity costs was designed to determine the cost of processes, products, and services, by means of cost management following analysis of activity cost effectiveness.

Methods: A dialectical method based on theoretical and empirical methods used to gather information for the design was used. Among the theoretical methods are the historical-logical method to characterize the object of work, and analysis and synthesis; the empirical methods were topic discussions in working sessions, scientific observation, interview to technicians, directors, and others. The statistical method was used to check the correlation between cost inductors and the costs induced by them. **Conclusions:** Cost calculation and analysis through an activity-based system will contribute to improvements in banking processes.

Key words: ABC/ABM; efficiency; banking management; activity-based costing system.

RESUMEN

Objetivo: Diseñar un sistema de costos basado en actividades, para los procesos, productos y servicios de las sucursales del Banco Popular de Ahorro.

Principales resultados: El diagnóstico del sistema de evaluación, control y toma de decisiones de las sucursales del Banco Popular de Ahorro, mediante el cual se determinó la inexistencia de instrumentos que proveyeran información relevante para la toma de decisiones enfocada hacia la evaluación integral de los procesos del banco. Con el propósito de obtener dicha información que permitiera evaluar la eficiencia económica de los productos y servicios, se fundamentó la teoría y diseñó la metodología del sistema de costos por actividades, para determinar el costo de los procesos, productos y servicios, gestionando los costos a través de un análisis de rentabilidad de sus actividades.

Métodos: Se empleó un método con fundamento dialéctico. Este se basa en métodos teóricos y empíricos destinados a obtener la información para el referido diseño; dentro de los teóricos, el histórico lógico para caracterizar el objeto de trabajo y el análisis y la síntesis; dentro de los empíricos, las discusiones temáticas en sesiones de trabajo, la observación científica, entrevistas a técnicos, directivos y otros. Se utilizó el método estadístico para comprobar la correlación de los inductores de costos con los gastos que estos inducen.

Conclusiones: El proceso de cálculo y análisis de los costos por medio de un sistema basado en las actividades, propiciará el mejoramiento de los procesos bancarios.
Palabras clave: ABC/ABM; eficiencia; gestión bancaria; sistema de costos basado en actividades.

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INTRODUCTION

These days are marked by deep economic, political, and social changes. Both the business sector and the institutional system in Cuba are experiencing numerous variabilities and transformations, which are necessary to re-adjust the Cuban economic model.

The People's Savings Bank (BPA), as part of the Central Bank of Cuba (BCC) is also engaged in these changes. BPA needs to adjust the direction of the economy by implementing policies for better activity funding, which contributes to the creation of new jobs, new income sources, added value, and generation of benefits to the population.

To sustain the criterion on the issue to be addressed, the technique known as working sessions was used with executives and technicians from two BPA branches, professors of Granma University, and the National Association of Cuban Economists, in which the causes of incidences that demand improvements in the efficiency of processes and activities of BPA branches were evaluated. Brain storming was used to gather information and achieve consensus. Once a list of problems was made, Pareto analysis was used to reduce the items, through filter questions. Then, a set of problems was listed, as follows:

1. The current scenario demands the Cuban banking system, especially BPA, to redesign processes to improve productivity and reduce costs, and achieve higher

quality in terms of customer satisfaction. It implies the supply of new products and services at the least possible cost.

2. The information and control systems of BPA do not respond to the demands of a decision-making system. Statistics fail to offer information in relation to the costs of products, services, operations or tasks, thus creating difficulties in relation to engaging more competitive markets.

Direct observation of other BPA branches demonstrated that the same problems were occurring.

Analysis of managed information showed the absence of sufficient elements to measure the efficiency of products and services. Expenditures can be globally accessed through the statement of income, and model 11-8, a budget approved for each period, which does not contribute to in-depth and thorough analysis of cost-benefit of operations associated to products and services. This scenario has encouraged executives to investigate and acquire knowledge about new managing systems being used today, which respond to the needs of information for decision-making.

Under the current setting, it is important to have control tools, and the power of analysis, to meet the demands of contexts, and provide information for decision-making. All this will help assess products and services in relation to the real consumption of resources, apart from the possibility of detecting inefficiencies, and improving the implementation of banking service processes.

The above is critical in a moment in which organizational management requires a system of rapid and efficient information looking at relevant information for decision-making processes with a scenario-based approach, since achieving the tactical goals of an organization is not enough. It is important to advance into the future with a solid economy based on strategies.

Accordingly, the aim of this paper is to design an activity-based costing system, from now on ABC, for processes, products and services of BPA branches, which can contribute with information on improvements in their economic efficiency.

A dialectically based method was used to address this problem, and fulfill the aim of the study, which was determined by system approach of all the elements required for the

desired solution. It is based on several theoretical and empirical methods that permit access to necessary information to fit the set design. Among the theoretical methods is the historical-logical, to characterize the object of the study, in addition to analysis and synthesis. The empirical methods included topic discussions in working sessions, observation, interviews to technicians, executives, and others. The statistical method was used to check the correlation of cost inductors and the costs induced by them.

DEVELOPMENT

Theoretical and methodological rationale

In this section, the background and trends of ABC costing system application are analyzed, as a necessary aspect for the Cuban banking sector, and its contextualized application in BPA branch processes, in order to improve efficiency product and service processes. The criteria from several authors on this topic were considered to provide the rationale for necessary aspects to demonstrate the existence of a problem.

The most commonly used theory today (Kaplan and Cooper, 1999) says,

> ABC costing systems provide more accurate information about company processes and activities, as well as services and customers which are served by these processes. ABC systems are focused on organizational activities as a rationale to analyze the behavior of costs, relating resource costs of the organization to company activities and processes done through those resources. The inductors of activity costs assign these costs to products, services, and customers that create a demand of the organization's activities. (p.132)

The above can be applied to BPA, since it permits knowing the total cost of each activity, products and services, as well as the results provided to the general economy of the branch.

ABC is a system of costs that focuses on the analysis of activities, which are defined as a set of interrelated tasks or actions of a group of people, a person or a machine, which are performed in any entity process. In a BPA branch, commercial activities that involve

opening new bank accounts, credits, loans, leasing, factoring, discounts, and transference services, are performed. All use resources like salary, machines, and equipment.

Activity-based costing systems are considered useful cost analysis and activity follow-up tools, relevant factors for development, and bank financial performance results.

The Valencian Research Team of Strategic Cost Analysis, in Spain, considers: “ABC activity-based costing system was created with the purpose of improving cost calculations; it relies on the hypothesis that activities consume resources, and that products or services consume activities” (University of Valencia, 2003, p.5).

BPA conducts commercial operations that can be adapted to this particular cost system, since it considers that of all the existing systems, ABC allows branch executives to perform detailed, more accurate analyses by process, as to the supply of services or products, provided that they are designed according to their characteristics within a commercial bank, and contextualized to the characteristics of BPA.

The new activity-based organization becomes speedy and oriented to gaining efficiency of processes, which makes them more competitive. The most commonly set goals of this kind of system are summarized as follows: 1) to measure resource costs by developing activities; 2) to implement conceptual development showing the extent of management accounting; 3) to be a measurement of performance that allows for improvements of objectives, planning, profit determination, and strategic decision-making.

The Council of State (2018, p. 3) issued Decree-Law No. 362 on institutions of the banking and financial system that notes that the People’s Savings Bank is part of the universal banks. In the Third Section, Article 10.1, it states:

> Universal banks are Cuban banking institutions that perform operations of financial intermediation and related services, with individuals and entities, as established in Provision No. 2. It includes investment banking, with no further limitations other than the ones foreseen in this decree-law.

Article 10.2 includes the following: “a) Capture, receive, and maintain cash in demand accounts, such as current accounts, sight deposits, savings or term deposits, b) Receive or grant loans or other crediting or funding forms”. Council of State (2018, p. 5).

Accordingly, its purpose is to grow, survive, and make profits through intelligent decisions made by planning, organizing, and controlling short and long-term operations.

Banks perform active and passive operations. Operations to obtain resources are termed passive operations, and are materialized through deposits from customers or savings accounts. Active operations consists of granting funds to help money circulate to favor the economy. In other words, they grant funds using part of the resources obtained from individuals and entities, from unclaimed temporarily free or active resources, which are granted as credit, loans, leasing, factoring, discounts, etc., through which they receive interests, and commissions, thanks to different operations generated by this activity.

In the banking sector, quite a few products and services are offered to both entities and individuals; its philosophy is to provide support to the ever-growing customer needs. Analysis to adopt planning and controlling decisions are often, regardless of the information of costs as a fundamental tool of the process, since it requires higher executive or specialist training or because of the lack of a costing system in charge of determining the cost of products or offering services, which is included in the problem to be addressed.

Banking, as many other activities in the country, does not conduct cost studies by virtue of accomplishing goals that lead to favorable results in terms of greater competitive levels. Authors like Shank Govindarajan (1998, p. 21) consider that “(...) cost analysis is the process performed to estimate the financial impact that managing decisions can have. Therefore, based on the information provided by cost data, strategies can be implemented to search for sustainable competitive advantages in the current competitive scenario.

The Central Bank of Cuba (2012, p.2) notes that “(...) appeals for a change of mind, which is a prerequisite of success, not only implies a different way of looking at things, but also a different way of understanding them through economic science.

The above calls for a change in the way of acting and using advanced economic techniques implemented in the Cuban banking system, which demands efficiency to accomplish the set goals. This idea requires optimization of accounting systems in banking to achieve a unique purpose: efficiency. Hence, it is important to use techniques that provide relevant information to management, so decisions that stimulate competitiveness can be made.

BCC is undergoing a readjustment process, seeking economic efficiency, efficacy, and effectiveness, as one of the strategic goals of integrated development. Resulting from new potentialities, this optimization is in the last stage, and it will later be implemented in the universal banks, including BPA.

Another research study consulted states the advantages of the analyses of activities. It says that “(...) efficiency of every activity associated to products and services offers the possibility of sound changes in services, which will benefit the organization in the short run” (University of the Americas Puebla, 2019, p.4). Branches need these benefits to enhance capitalization and general processes.

Managements in the twenty-first century should study methods in order to reach a balance between the desired scenario and the potential one, through new models and techniques that permit coping with current decisions. By virtue of the above, banking organizations are considered to require a change of attitude by executives, in relation to administrative service processes, and management, to deal with the dynamics of ruling changes in different scenarios, depending on the market conditions. BPA is not exempt from this position, it needs new accounting mechanisms, and the implementation of a system of costs that respond to the requirements of an ever-competitive scenario.

According to Osorio and Agudelo (2015, p.17) managing techniques are characterized by “(...) taking into account aspects such as efficiency, efficacy, and effectiveness, on which organizations are focused“. Therefore, financial institutions are compelled to use proper techniques in their activities, to become part of an ever-competitive and changing world.

Quite a few authors have studied the development of such techniques, in order to enhance the traditionally used methods, and deal with shortcomings that have emerged

through the years in manufacturing companies. They have contributed to the theory, using empirical applications to accounting and managing systems, and ABC systems. Regarding financial institutions, such as commercial banks, knowing how much a product or service costs, and the most efficient mix, is critical.

Resolution 935, by the Ministry of Finance and Prices (2018), Specific Accounting Standard No. 12, related to Management Accounting, says,

> System of Cost: it is a set of methods, standards, and procedures that rule planning, determination, and cost analysis, as well as a process of recording costs of one or several productive activities of an entity, interrelated with subsystems that guarantee the control of production and material, labor, and financial resources.
>
> This system should provide informational requirements for proper running of the entity, as well as intermediate and higher levels of management.
>
> This system should be flexible and dynamic to allow entities to introduce informational and analytical requirements, as a way of enabling proper decision-making. Accordingly, they must device them, and adjust them to their needs, considering the organizational aspects, and specific technological processes. (pp.13-14)

This criterion is similar to the need of organizations to acquire information about the cost of products and the focus of their activities, to gain more control over them, and make decisions about the most appropriate actions oriented to meeting the set goals.

In this paper, costing systems are defined as a set of procedures, techniques, records, and reports structured according to principles whose purposes are budgeting, determination, and analysis of costs of products and services, as well as other operations performed. This can be adapted to BPA, since the standard accepts that every institution adjusts costing systems to their characteristics and needs, which is a feature and an advantage of ABC costing systems.

The level of development and application of costing systems has been poorly implemented in Cuba. Few specialists have made proper use of cost information, and

most executives are only interested in coping with production plans and the indicators required by the higher levels.

Johnson and Kaplan (1988) reviewed the traditional systems of cost accounting, and drew the interest from scholars in costing and managing control systems, both in industrial companies and financial entities; today, this has extended to small and mid-sized companies. Hence, world financial entities have shown great interest in cost and managing knowledge, in order to achieve a unique goal: be cost-effective and competitive.

Nowadays, the design of the new cost system of a banking entity should address two major problems: a) Cost reduction and b) Reduction of financial margins. This must be done in keeping with the characteristics of the surrounding scenario.

Hurtado (2017, p. 1) said that "(...) Financial institutions direct their efforts to meeting the needs of a very dynamic and competitive market, which requires Managing and Control Models for optimization". This criterion is assumed because it offers the advantage of a system that provides relevant information about businesses and innovation.

Biedermann (2012, p.10) said that "(...) it will be important for banks to access relevant information for decision-making in relation to credit operations. The most efficient entities deal with lower information costs, since they hold on to a known portfolio of customers".

Customer demands are growing with the emergence of self-employed workers, non-agricultural and agricultural cooperatives, and other companies. The potential of BPA is high, as to the creation of new products and services. It will be another way to enhance income and reduce costs, and improve their competitiveness.

Today, the change in company and institution needs has directed banking activities to services that meet their needs, by providing funding, as the main source of income.

In short, it is important to design a system of costs for BPA branches that adapt to the current situation, at times when the Cuban economic model is being readjusted. This will permit assessment of products and services to contribute to real resource use, which helps detect deficiencies, and make proper and timely decisions.

Methodology of the cost system to be implemented in BPA branches

The purpose of this section is to support the theory, and design a methodology based on ABC costing system, which can be applied in the branches of BPA to determine the cost of processes, products, and services, by managing costs through an analysis of cost-effectiveness of all the activities performed, which contributes to the process of business optimization in banking.

The concepts used in this research were adapted to the ones approved by the Specific Accounting Standards No. 12, Managing Accounting (NEC No. 12), whose appendix is part of Section II of the Manual of Cuban Standards of Financial Information (Ministry of Finance and Prices, 2018). This standard should be implemented by all entities that offer products or services, including financial banking and non-banking institutions, as well as insurance institutions.

One of the fundamental elements of this section is to explain the main organizational characteristics of BPA and branches. On May 18, 1983, the Council of State of the Republic of Cuba enacted Decree-Law No. 69 to create the People's Savings Bank (Council of State, 1983).

Mission: it consists in offering quality financial services, obtaining and allocating monetary resources through the banks, to meet people's needs.

It relies on a computerized system whose technical support is an internal network made of a server and several working stations. The branches, savings banks, and related areas are part of the structure of the People's Savings Bank, which are directly subordinated to the Provincial Office. The branch is the main link of BPA, it performs all the services rendered by the bank; it controls savings and associated areas, which are subordinated, and in charge of accounting and statistics.

Labor organization within a branch using SABIC.NEF system is based on the main principles that state that employees can work in different posts, without defining areas or departments, and that all types of operations can be processed in each station, according to the configuration of the system.

Depending on the operational characteristics of BPA branches based on the elements provided in the related bibliography, and considering the features that enable the utilization of activity-based systems is arranged as follows: a) existence of a variety of

products and services; b) existence of different back up and principal activities in all the chain of value in the branches; c) indirect costs are highly significant; d) existence of a sufficient number of computers; e) sufficient technical and professional experience to assimilate change.

Branch No. 7592 is considered a large entity, due to its structure and area covered. The internal auditor, prevention officer, and various managers of the Commercial, Cash Management, Recovery, and Accounting areas, are directly subordinated to the director, who is the main authority of the bank.

Steps to implement ABC costing system

Depending on their features, the organization allows for analysis of ideal indicators, such as cost, and others associated to banks, of small and mid-sized companies, without high investment in software and hardware, which can offer speedy, safe, and accurate information, as has been previously done in other, more complex companies in Cuba, using ABC.

There are activities, object costs, cost inductors, and activity centers which can be helpful in defining an ABC costing system of SMEs, which is characterized as follows: 1) It pools the activities of a company in activity centers; 2) it accumulates costs which are not directly related to the objectives of costs in activity centers; and 3) it distributes accumulated costs in indirect activity centers, as back up, or in other product and service primary activity centers produced by an institution, using certain inducers. The main principle of ABC is that resources are consumed by activities, and the latter are consumed by products and services produced by the institution.

Many authors have designed methods and ways of how to implement an ABC costing system in several SMEs, where they have established the sequence for design and implementation. However, keeping the concept of cost center is considered to limit one element of ABC: the concept of activity as a new type of responsibility area, which is part, as a particular case submitted to a principle or standard from the original theory, an essential element in the new perspective of adapting ABC to the characteristics of Cuban companies, which is essential for this type of system, regardless of the object in which it is used. Then it can be considered a problem of form, not of essence.

Developing a methodology for ABC costing system adapted to a BPA branch requires these steps:

1- To design the chain of value of the branch.
2 To identify relevant activities, and arrange them through Activity Centers.
3- To build the account classifier.
4- To identify cost inductors.
5- To establish the structure of cost flow.
6- To design cost sheets by activity of the total of the branch, and its analysis.
7- To design the budget of activity costs, and total costs of the branch.

Each step is analyzed in the corresponding figures and tables, to synthesize the work.
Porter (1990), noted that

> One of the elements to consider for the design of an activity-based cost system relies on the design of the Chain of Value: it is the analysis of competitive advantage sources, where the chain of value is the basic tool, (...) the Chain of Value breaks down into relevant strategic activities in order to understand cost behavior and the sources of existing and potential differentiations. It provides identification of activities with an advantageous potential, on which institutional strategies should be focused. (pp. 32-43).

As can be seen, it is important to build a chain of value for BPA branches, to design the ABC costing system.
The first of seven steps is shown in Fig. 1, chain of value, which shows the relevant activities that create value. This is a fundamental stage, since, apart from making the full list of activities, these are classified according to the codifications adopted for accounting and the chain of value. It provides necessary information to the process of inductor selection, to reaffirm the organization and type of system of cost accumulation that should be implemented, and to determine the sources of competitive advantages, which are a fundamental element within the objectives of financial activity.

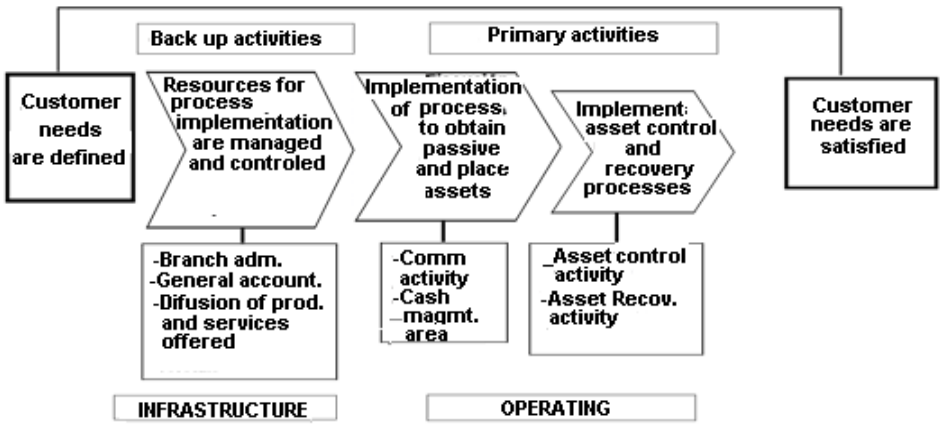

Fig.1. Chain of Value at BPA branch No. 7592

Source: Made by the authors.

In the second step, relevant activities are identified and defined; they are arranged by activity center, besides linking them to the type of generic category of the value chain, as shown in Table 1

Table 1 Identification of relevant activities and their link to the chain of value

Category			Name	Code	Type	Generic category
BRANCH LEVEL						
Back up activities						
01	Administration of the branch	Administration	General Management	01	Back up	Infrastructure
02	Dissemination of services and products offered	Administration	General Management	02	Back up	Infrastructure
03	General accounting	Administration	Accounting area	03	Back up	Infrastructure
Operating activities						
04	Commercial activities	Eligible act.	Commercial area	04	Primary	Operating
05	Cash management area	Eligible act.	Cash area	05	Primary	Operating
06	Activity to control assets	Eligible act.	Area of control and collection of assets	06	Primary	Operating

07	Asset recovery activity	Eligible act.	Area of control and collection of assets	07	Primary	Operating

Source: Made by the authors.

The account classifier is built in the third step. One essential element to make a record and balanced analysis of costs by accounts, sub-accounts, depending on their variability. It is shown in Table 2.

Table 2 Account classifier

Account	Activity center	Sub-accounts	Accounts
5411			Expenditures in services and products (variables)
	01		Commercial activities
		5410	Expenditures by interests
		5411	Salary
		5412	Materials and different supplies
		5413	Other expenditures
	02		Cash management area (variables)
		5411	Salary
		5412	Materials and different supplies
		5413	Other expenditures
	03		Activity to control assets (variables)
		5411	Salary
		5412	Materials and different supplies
		5413	Other expenditures
	04		Recovery of assets (variables)
		5411	Salary
		5412	Materials and different supplies
		5413	Other expenditures
5421			Administration expenditures
			Back up activity centers (fixed)
	05		Branch administration
	06		General accounting
	07		Promotion activity

Source: Made by the authors.

In the fourth step, cost inductors are identified; they are necessary to determine the link between activities, and the objects of cost, which is made through them, as shown in Table 3. Every activity has the inductor to be used, both for backing up induction to the

operating activities associated to the corresponding cost object, which might be different kinds of funding, activities in the cash management area, and asset control and recovery activities, obtained through analysis of commercial activity.

Regarding cost inductors, the definition used was a factor employed to measure how a cost is made, and/or how to better associate such cost to activities or products. To determine cost inductors, it is important to consult experts in accounting, and others in the commercial area, cash, and others, to know opinions about activity inductors, and those practical ones for allotting resource costs to activities, and their costs in other activities. Upon definition, a correlation analysis is performed to determine the intensity to which the inductors are related with the activities. In this particular case, the level of correlation was 97.7%, on average. Table 3 shows the classification of inducers by activity center, and the classification adopted for every inductor.

Table 3 Determination of cost inductors by activity, and classification

Activity center	Inductors	Classification
Back up activities		
01 Administration of the branch	Cost of direct labor	Demand
02 Diffusion of services and products offered	Cost of direct labor	Demand
03 General accounting	Cost of direct labor	Demand
Operating activities		
Commercial activity	Amount of passive assets obtained	Specific
05 Cash management area	Number of operations	Demand
06 Activity to control assets	Interests received	Specific
07 Asset recovery activity	Amount of assets recovered	Specific

Source: Made by the authors.

Another moment in inductor utilization is shown in Table 4, with the calculation of coefficients for distribution of expenditures on back up activities directed to operating activities, using the inductors determined.

Table 4 Calculation of distribution coefficients for back up activities

Back up activity	Inductor	Quantity	Amount to be	Coefficients

			distributed			
			CUP	CUC	CUP	CUC
Branch administration	Direct labor					
Fixed						
Variables						
Subtotal						
Diffusion of services and products offered	Direct labor					
Fixed						
Variables						
Subtotal						
General accounting	Direct labor					
Fixed						
Variables						
Subtotal						
Total						

Source: Made by the authors.

Table 5 shows the allocation process of expenditures in operating back up activities through inductors, so that the cost sheet (Table 6) shows their costs included in the total cost of operating activities to comply with one principle of ABC, and the cost flow (Fig.2).

Table 5. Allocation of back up operating activity costs

Operating activities			Coefficients		Value to be distributed	
	Name/value of inductor	MU	CUP	CUC	CUP	CUC
Operating activities Commercial activities	Amount of passive assets obtained					
	Name/value of inductor	MU				
Fixed		$				
Variables		$				
Activity total						
Cash management area	Number of operations					
Fixed		One				
Variables		One				
Activity total						
Activity to control assets	Interests received					

Fixed		$
Variables		$
Activity total		
Asset recovery activity	Amount of assets recovered	
Fixed		$
Variables		$
Activity total		
General total		

Source: Made by the authors.

The fifth step establishes the structure of cost flows, as shown in Fig. 2, which describes the way in which costs are re-allocated, until the cost of branch cost objects are determined.

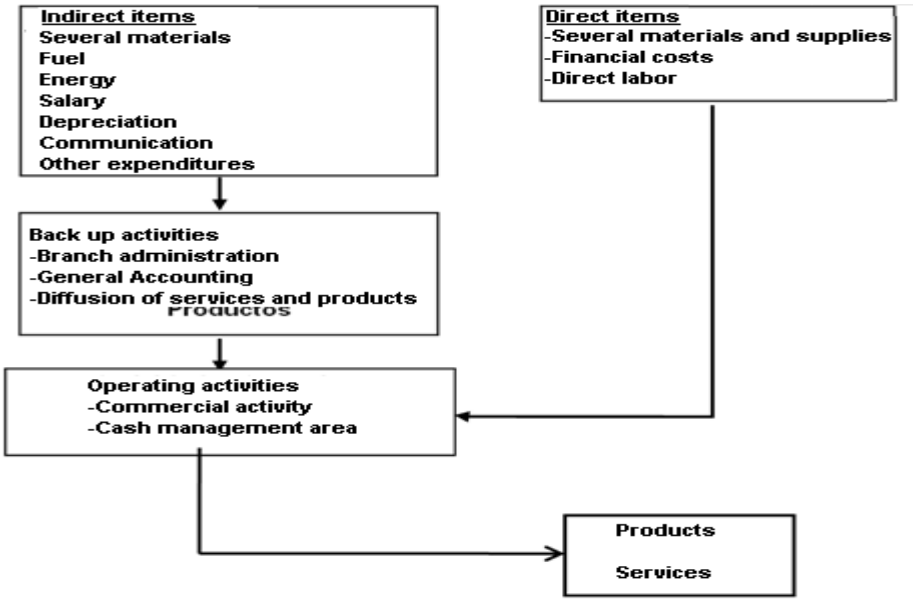

Fig.2. Cost flow of BPA Branch No.7592

Source: made by the authors

In the sixth step, the cost sheets by activity center and the branch are presented (Table 6), along with the determination of deviations from each activity center, and from the bank as a whole, when comparing the deviations per item of the real cost with the budget (Table 7), which provides an analysis of deviations, decision-making, and

adoption of corrective actions to eliminate the inefficiencies of activities performed at different levels of the organization. This analysis goes beyond mere numerical comparison, it should enable quantification of deviations by cost item, with special emphasis on changes in the interest rates paid for received deposits, variations of prices of materials and supplies, amount variations in their consumption, variations in salaries paid in quantity and rates, evaluation of payment per results, and its incidence on costs and expenditures, as well as the economic effectiveness of the branch. Moreover, variations in indirect expenditures should be analyzed only for back up activities, since these are uncontrollable expenses in the operating areas.

Table 6 shows the cost sheet of different activities, and that of the branch as a whole. In it, cost items and activity centers are analyzed, thus the branch analysis can be conducted in every responsibility center and item, and facilitates more effective decision-making.

Table 6 Branch cost sheet

Organizational level	Period		
Concepts	Total real cost	Predetermined total cost	Cost deviation
Variables			
Materials and different supplies			
Financial costs			
Direct labor			
Indirect labor costs			
Total variables			
Fixed			
Indirect labor costs			
Total fixed			
Total cost of the period			

Source: Made by the authors.

In the last step (Table 7), the cost of budget is shown.

Table 7 Budget by activity

Activity center	Coefficient of inductor	CUP	Foreign currencies	TOTAL
Back up activities				
01 Administration of the branch				
Fixed				
Different materials				
Fuel				
Salary				
Depreciation				
Other expenditures				
Inducer: Direct labor (demand)				
02 Diffusion of services and products offered				
(Analysis similar to the previous)				
03 General accounting				
(Analysis similar to the previous)				
Operating activities				
Commercial activity				
Fixed				
Amount of indirect costs received in the back up areas through the inductor				
Variables				
Financial costs (expenditures in interests)				
Materials and different supplies				
Direct salary				
Inductor: Amount of passive assets obtained				
05 Cash management area				
(Analysis similar to the previous)				
06 Activity to control assets				
(Analysis similar to the previous)				
07 Asset recovery activity				
(Analysis similar to the previous)				
Branch total				
Fixed				
Variables				

Source: Made by the authors.

A budget was established by activity center, which totaled the amount of the branch. This budget, besides showing the amount of budgeted expenditures of every activity center, is broken down into main items of budgeted cost. This permits knowing the amount that can be used for cost analysis by month, quarter, and annual total. Hence, variations can be calculated by items in the cost sheet (Table 6), to obtain the essential aspects that ensure decision making in relation to the behavior of every activity center. It is possible to access relevant information associated to costs, which are cost-effective and which are not, as well as the distribution of responsibilities according to the results of activity centers, which may contribute to the control of internal processes in terms of costs and efficiency. It can be used to calculate the contributions and affectations in every activity center, income, and the influence of every product or service on the results of the branch.

CONCLUSIONS

The design of a cost system suggested for a BPA branch will enable access to more detailed and accurate information, which is a characteristic of ABC costing system, stated by several authors. The existing practical experience corroborates such assertion.

The process of calculation and analysis of costs by means of an activity-based system will bring continuous improvements to banking processes, thus contributing to optimization of the institution, which is stated in the documents of the Seventh Congress of the Communist Party, and in official norms recently approved.

This proposal is considered to offer a new type of elements for this institution, which will contribute to the implementation of its strategic goals.

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Conflicts of interest and conflict of ethics statement

The authors declare that this manuscript is original, and it has not been submitted to another journal. The authors are responsible for the contents of this article, adding that it contains no plagiarism, conflicts of interest or conflicts of ethics. The original sources from which the information of the article is based on has been cited. The theory and procedures used comply with the ethical standards of the editorial board of the institution that supervises research. We reaffirm our responsibility with the information provided above in this paper.

Author contribution statement

Ángel Rafael Pérez Bello (leader). Conceptualization-ideas: formulation or evolution of general goals and aims of research. Research: research process; data gathering and testing. Project management: Responsibility in managing and coordinating planning and implementation of research. Visualization: preparation, creation, and/or presentation of the published work, especially data visualization/presentation.

José Ángel Pérez Fonseca. Research: research process, especially data gathering and testing. Methodology: Development or design of a methodology; creation of models.

Mariana del Rocío Reyes Bermejo. Formal analysis: application of statistical techniques, or other techniques for data synthesis. Methodology: Development or design of a methodology; creation of models.