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**Recovery of Overdue Credits in Low Income Areas in São Paulo City: The
Public Sanitation Sector Case**

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ABSTRACT: The overdue credits recovery is a challenge for all service providers. The collection tasks should be properly structured, aiming high productivity and effective financial recovery. In the public sanitation sector, the search for solutions and innovative alternatives in the process of credits recovery has been based on information systems. The companies work in projects that reach two relevant results: the management for recovery of overdue credits and the expansion/maintenance of customer base, moreover the customer in default is a former customer, but when resolves the financial debts can become again active customer. The control of revenue evasion and indebtedness is a key factor for economic and financial balance of any organization. However, it is necessary to develop sustainable processes together with the society. In this context, the aim of this paper is to demonstrate that the change of the conventional recovery processes, especially in low income areas.

Keywords: overdue credit recovery; low income areas; process improvement; sanitation.

1. Introduction

Brazil is the country with the greater availability of water source in the world, but the São Paulo State, which holds 2.4% of the country area, about 20% of the Brazilian population and is responsible for more than a third part of the Brazilian GDP, has few reserves of water, only 1.6%. For this reason, take care of water resources is a great challenge [1].

The sanitation situation in Brazil is alarming. Only 44% of the population has access to the sewage system and 78.6% have access to safe drinking water. Just 29.4% of the total sewage generated is treated. More than 107 million of Brazilians have no access to the sewage system, 134 million do not have the treated sewage of their houses, 40 million have no access to safe drinking water and 8 million do not even have toilets in home [2].

Another determinant factor for the sanitation sector in São Paulo is the water loss, because the high loss rates are the result of a poor quality physical infrastructure and also faulty in the management systems. There are two types of losses: (i) apparent: those caused by errors of measurement of volumes, fraud and commercial errors; in this case the losses are financial, since there is no consumption and revenues, and (ii) real: those resulting from pipe leaks. [1]

The apparent loss in a Water Supply System is the organization's inability to account for the water available to the users. Among the factors that cause this incapacity highlights the fails in the system for billing and collection [3].

Strictly related to the loss issue is the concept of sustainability, which currently is in the day-by-day of the small or large companies. Tornar um empreendimento sustentável significa diminuir o impacto de uma companhia de uma maneira economicamente viável, utilizando abordagens preventivas em conjunto com princípios de melhoria contínua [4]. Highlights three dimensions where companies should focus on: social, environmental and economic, which complement the previous concept [5].

Regarding the apparent losses related to billing and collection are highlighted that default has been shown with a chronic problem of public companies, because the mechanisms for recovery are limited to what the law allows. Moreover, the government

agencies are large debtors, which impede to create a credit recovery standard procedure [6].

In many cases, the granting of discounts or other negotiation facilities are eventually classified as a probable revenue waiver, preventing more effective policies are adopted, in contrast to what occurs in the private sector, where there is large autonomy from the lender. With this scenario there is only the creative use of legal mechanisms, so that we can reconcile the pressures for efficiency in the collection originated from the controllers with the legal requirements of regulatory agencies [6].

The control of revenue evasion and defaulting is a determining factor for economic and financial balance of any organization [7]. Is more difficult to charge and recover debts in low income areas, owing to the poor survival of the families who live there.

Innovative solutions in the process of collection and recovery of credit have been based on high performance projects must achieve two very important results: the management and recovery of overdue loans and the expansion and/or maintaining the client portfolio. The defaulter is a former customer, which when resolve their financial pending may return to be a costumer and thereby increase the company revenues.

In this scenario, this paper analyzes and discusses how the innovation and changes in the conventional processes for collection of defaults customers in low income areas can achieve significant results.

Besides the introduction, this paper is organized as follow: section 2 the literature review through which to seek subsidies and basement necessary to expand the understanding of the subject, at the section 3 presents the methodology, in section 4 is presented the case study and at section 5 the results are described. The last section 6 concludes the work with final remarks.

2. Literature Review

2.1. The Sanitation Sector

The sanitation sector of the State of São Paulo includes the production and distribution of water, collection, removal and treatment of sewage.

To take care of this complex sanitation system exist the State of São Paulo Basic Sanitation Company - Sabesp, which is a mixed economic company.

In number of clients, may be considered as one of the largest sanitation companies in the world, 27.2 million people attended, nearly twice the population of Belgium, with 99% fill rate in water supply, 81% fill rate in sewage collection and 75% rate of sewage treatment collected [8].

Like other organizations, Sabesp is also concerned with the theme of Sustainability. In its Sustainability Report, it is noted that people now have more rigor to the environmental aspects. They became the focus of attention and requirements, issues such as universal sanitation and relevant information about the risks of water scarcity. This is an important moment of reflection and establishing strategies to ensure financing and investment capacity to effectively meet the expectations of society and at the same time, pursue constant increase of profitability [9].

The sustainability of sanitation services, would be taken from at least four dimensions: the environment, on the conservation and management of natural resources and improving environmental quality, social, related to the perception of users regarding

the services and their social acceptability, the governance, involving institutional arrangements and political cultures, with the aim of promoting a democratic and participatory management, based on mechanisms of accountability, and economic, which concerns the economic viability of services [10].

In sanitation, the universe of customers, usually consisting of an entire city or state, so this is another damaging factor, since the high volume of defaults customers. The outsourcing process of recovery is faced often with displeasure by the inspectors, the collection turns out to be performed inappropriately [3].

2.2. Credit Recovery in Sanitation Sector

The credit risk is as old as the loans itself, and the defaulting is the main factor that afflicts any for-profit institution [11].

The commercial losses considered unrecoverable bad debt generated by the two groups are related factors. The first refers to the quality of company management and its capability to recover accounts receivable. The second group concerns a set of institutional factors, legal, economic and social which are beyond the control of the management company [12].

Other factors of a juridical-institutional and economic-social also influence significantly the behavior of defaulting as the centers of poverty in many municipalities operated, it is impossible to adopt effective policies to reduce defaults [12].

The Sabesp billing cycle is in the period between the availability of data from properties debtors, execution and completion of recovery actions overdue. There are two methods of collection: Administrative and Judicial.

In low income areas and underserved communities as favelas, none of these modalities is really effective. The enforcement actions such as stopped the supply, take many customers to the irregularity. Since the judicial actions are compromised by the lack of documentation which obliges the customer to the debtor property. Companies to survive and grow, they need to introduce new technologies and organizational throughout their life [13].

In the absence of a theoretical concept of poverty, works with normative notions based on perceptions of desirable standard of living in a society. The classification of individuals and families according to their conditions of life tends to be conducted by way of negation, or, those who are poor, for example, do not have a minimum income necessary for subsistence or have poor care of their basic needs [14].

Recently, joined at the discussion, the concept of social vulnerability of individuals, families or communities. In this sense, vulnerability is a multidimensional concept, as it affects individuals, groups and communities in different planes of their well-being in different forms and intensities [14].

The vulnerability of an individual, family or social group refers to a greater or lower capacity to control the forces that affect their well-being, that is, possession or control of required resources (assets) to take advantage of opportunities offered State, market or society [15].

Developed by the SEADE - State System of Data Analysis Foundation, the Social Paulista Index of Social Vulnerability (IPVS) is one indicator that consists of a type derived from the combination of two dimensions - social, economic and demographic - that classifies the IBGE census tract in six vulnerable social groups, as shown in Table 1 [16].

Table 1: IPVS Groups

Groups	Dimensions		IPVS
	Socioeconomic	Family Life Cycle	
1	Very High	Young Families, Adults or Older	None of Vulnerability
2	Medium or High	Older Families	Very Low Vulnerability
3	High Medium	Adults Families	Low Vulnerability
4	Medium	Young Families	Medium Vulnerability
5	Low	Adult Families or Older	High Vulnerability
6	Low	Young Families	Very High Vulnerability

This indicator combined with internal information organization and population data from the Brazilian Institute of Geography and Statistics - IBGE, subsidizes the decision-making in relation to the creation of innovative projects in the recovery of overdue loans in low-income centers.

3. Methodology

The methodology that supports this paper was based and developed through literature review of the themes: credit recovery; low income areas, process improvement and sanitation. It was performed a case study to analyze the impact of change of the recovery credit procedure in low incomes areas.

The selected area for this pilot is Jardim Keralux, located in the eastern of the São Paulo city. The selection of this location is given based on information collected in the commercial and financial systems of the company which formed the basis for this study. Data were collected on the stock of existing debts before and after the performance of the differential collection action, measuring, among other variables, the satisfaction of clients.

This case study evaluates the negotiation of outstanding debts of the company's customers on site, that is, in the customer home, with review of debts, installment under the conditions of the customers.

4. The Case Study

The Jardim Keralux is part of District City Hall of Ermelino Matarazzo, attended by the Sabesp East Business Unit (BU) and it is a land division that is irregular in the process of regularization with the Municipality of São Paulo.

Although the occupant be the purchaser, does not have guaranteed of the ownership of the building. Added to this irregularity the self-constructed and the low levels of

income families. In the city of São Paulo, these lots amount to 92.64 km² - approximately 6.14% of the city [17].

A company called Keralux S/A Ceramic Coating, deactivated in 1978, owned approximately 90% of the land on which structure the Jardim Keralux since 1996. It is estimated that there are about 1400 lots divided into five irregular tracts [17].

The São Paulo Index of Social Vulnerability (IPVS) of the average area (group 4 - with a strong presence of young leaders and children) [17], a fact which confirms the need for a different action for recovery debts in the locality.

The east region of the São Paulo city have high default rates with the Sabesp, currently at 35% per month, and a significant revenue evasion, around 9% per year.

In April 2010 the Business Unit East of Sabesp, through its team of collection, implemented a pilot project for negotiation on site with a focus on reduction of revenue evasion, changing the culture of people who live in low income areas.

In this action is performed the confirmation of the customer's financial situation, with photographic evidence, it offers proposed solution to the outstanding debts according with the conditions of the customer, all of this without the customer need to leave theirs home to go to the Utility.

The main purpose of negotiation on site for Jardim Keralux is to provide conditions for the customer to negotiate their debts and decrease the default rate in the region, making the customer defaulting, reducing losses and approaching Sabesp of the society.

In the initial survey, conducted in February 2010 for planning of actions were identified 1.868 properties with debts and 8,155 accounts representing R\$ 469.337,00 in historical values and R\$ 646.822,00 in today's values, which were part of the debt stock of the East BU Sabesp.

The organization needs to identify at what level is in relation to their customers and markets. At a second stage, need to know the needs and expectations of its customers and potential customers, as well as its former clients [18]. Thus, after the initial survey was performed work in a field of knowledge and presentation area of the employee (negotiator) to the local community leader.

The project started with a visit door to door in order to talk with the customer, raising their socioeconomic situation and negotiate the debts.

Among properties with debts for the negotiation activities on site, those who had been selected were the clients were the number of bills were greater than or equal to three. There were 464 properties, which represented R\$ 409.838,00 in historical values and R\$ 571.054,00 in today's values, with an estimated project implementation in five months.

During the collection actions, many customers initially had not been selected for negotiation visit, the team appealed to execute installment agreements to meet their needs. This fact meant that the total time to increase activities in the locality in a month, amounting to six months in total.

The costs involved in the project summarized in a workforce of a negotiator (technical level), a technician for analysis and preparation of proposals for reduction / negotiation and execution of installment agreements; print material of the agreement of installments and the first part, and an automotive vehicle to travel to the customer's home.

4.1. Operationalization of the Activity

For the operationalization of the activity the sheet of Socioeconomic Survey (LSE) is issued along with registration information (billing history and it in current values, from

the corporate Sabesp information system), with which the negotiator go to on site it to research for the real situation and negotiate the debts with the customers.

If possible address the customer needs immediately, the negotiator returns with the information been agreed to negotiation with the client, the agreement effective installment in corporate information system and returns bringing the agreement together with the first installment payment for by the client, of his signature gathering and taking pictures of the documents required for trading debts (ID, Social Security Number and the property documents).

Faced with situations very critical and with high debts, into the impossibility of immediate negotiation, based on information and evidence provided by the negotiator, the team collection analyzes the case, and using the internal procedures of Sabesp (Billing Management, Customer Service and Board's Deliberations), prepares proposals to solve the problem, such as interest and penalty abatement, reduction of debt in the social fare (differential fares for low-income clients representing approximately 30% of normal rate), review of high bills caused by leaks in the building, among other solutions to adapt the debt to the reality of customer.

In this case, are evaluated several situations with the customer, such as quantity of houses supplied by the connection of water; number of people who live in each house; consistency between number of people and the monthly consumption measured; family income; formal and informal work; conditions and availability to pay the installments together with the monthly consumption bills.

The evaluations rise different guidelines passed to customers, such as: techniques to check for internal leaks; rational water use; attention and control for expiration date and payment of installments to avoid breaking agreements and increased debt; need to keep your updated records with the Sabesp; need to update data related to registration of social fare. All this information is provided for the customer remain non-defaulting and keep water supply in their building.

5. Results

In six months of effective work, 464 buildings were visited and 332 of these installment agreements were achieved on site with analysis and review of debts, representing 71.5% of success in negotiation, and the amount of R\$ 582.972,00 current values, reduced of the debt stock.

The stock of debts of the buildings selected for the visit of negotiation, which in the initial survey was R\$ 571.054,00 was reduced about 50% till December 2010, amounting to R\$ 286.803,00 in current values.

The differential in this process of collection is the possibility of installment debts and/or regulate the water connection with the Utility in the customer's door without it ever to leave home. This practice has enchanted the customers.

The process of negotiation on site, has also brought different results beyond financial results, such as customer retention and rehabilitation of inactive customers with Sabesp. Besides promoting higher degree of customer satisfaction for services provided by the company, thus improving its image in the community.

The results of most relevance to the negotiation process on site in centers of low income area were:

- Improved customer and society satisfaction for the solution of their problem with easily and comfort of not leave the house as well as return of dignity by

not having to ask for water borrowed, and have its own connection again (customers words);

- Employee satisfaction with positive results and solution to customer problems;
- Satisfaction of local leaders, as well as city governments and city halls;
- Results relevant to the East BU and Sabesp with higher profitability and positive financial results;
- Positive image of Sabesp.

6. Conclusions

With the change in the process of collection for low income centers was noted that the initiative of Sabesp, to go to the customer, is really a differential success. Thus, the action may be extended to third parties acting in the segment of collection for the company, and transfer to other areas of Sabesp, which may apply this practice aiming positive results and customer satisfaction.

7. References

1. GESP, Portal Governo do Estado de São Paulo. Oferta de Água – Saneamento e Energia. Disponível em (<http://www.saopaulo.sp.gov.br/trabalhandoporvoce/saneamento-e-energia-oferta>), acessado em 27 fev. 2011.
2. OLIVEIRA G., MARCATO F.S., SCAZUFCA P., Cenários e Condições para a Universalização do Saneamento no Brasil, Boletim Informações FIPE, 2011 disponível em: http://www.fipe.org.br/publicacoes/downloads/bif/2011/1_18-24-gesn.pdf e http://www.fipe.org.br/publicacoes/downloads/bif/2011/2_11-17-gernetal.pdf , acessado em 27 fev. 2011.
3. MORAES, H. T. N., GOMES, A. S., JEROZOLIMSKI, T. Perdas Aparentes em Sistemas de Abastecimento de Água: Estruturação dos Meios para seu Combate. 24º Congresso Brasileiro de Engenharia Sanitária e Ambiental, 2007.
4. LABODOVA, A. Implementing integrated management systems using a risk analysis based approach. Journal of Cleaner Production, v. 12, p. 571-580, 2004.
5. FRESNER, J. E G. & ENGELHARDT, G. Experiences with integrated management systems for two small companies in Austria. Journal of Cleaner Production, v. 12, p. 623-631, 2004
6. ZSCHORNACK , T. MATTIODA, R. A. CARDOSO, R. DA R. Aplicação da Ferramenta MASP para Direcionamento de Ações de Combate à Inadimplência na Companhia Águas de Joinville, XVII SIMPEP, 2010.
7. SANTOS, José Odílio dos. Análise de crédito: empresas e pessoas físicas. 2. ed. São Paulo: Atlas, 2003. 307
8. SABESP, Companhia de Saneamento Básico do Estado de São Paulo. Página de Perfil. 2011. Disponível em <http://site.sabesp.com.br/site/interna/Default.aspx?secaoId=3>, acessado em 04 abr. 2011.

9. SABESP, Companhia de Saneamento Básico do Estado de São Paulo. Relatório de Sustentabilidade, 2010.
10. CIDADES, Ministério das. Plano Nacional de Saneamento Básico – PLANSAB. Secretaria Nacional de Saneamento Ambiental. 2011. Disponível em http://www2.camara.gov.br/atividade-legislativa/comissoes/comissoes-permanentes/cdu/audiencias-publicas/divulgacao-e-debate-da-versao-preliminar-do-plano-nacional-de-saneamento-basico/plano-nacional-de-saneamento-basico-plansab/at_download/file, acessado em 01 jul. 2011.
11. GUIMARÃES, L. R. Previsão de Inadimplência e Redes Neurais Artificiais. Dissertação de Mestrado, Programa de Pós-Graduação em Modelagem Computacional, Rio de Janeiro, RJ, 2006.
12. SABESP, Companhia de Saneamento Básico do Estado de São Paulo. Metodologia para cálculo do reajuste das tarifas – contribuições da Sabesp para a consulta pública ARSESP. 2009. Disponível em http://www.arsesp.sp.gov.br/downloads/secoes/saneamento/consulta/Contrib_Tarifa_s%5BSABESP%5D_CP072009.pdf, acessado em 04 abr. 2011.
13. BARBIERI, J. C.; ÁLVARES, A. C. T. Inovações nas Organizações Empresariais. In BARBIERI, J.C. Organizações Inovadoras: estudos de casos brasileiros. São Paulo: Editora FGV, 2003.
14. FERREIRA, M.P.; DINI, N.P.; FERREIRA, S.P. Espaços e dimensões da pobreza nos municípios do Estado de São Paulo: Índice Paulista de Vulnerabilidade Social – IPVS. São Paulo em Perspectiva, São Paulo, Fundação Seade, v. 20, n. 1, p. 5-17, jan./mar. 2006. Disponível em: <<http://www.seade.gov.br>>; <<http://www.scielo.br>>.
15. KAZTMAN, R.; BECCARIA, L.; FILGUEIRA, F.; GOLBERT, L.; KESSLER, G., Vulnerabilidad, activos y exclusion social en Argentina y Uruguay. Santiago do Chile: OIT/Ford, 1999.
16. SEADE, Fundação Sistema Estadual de Análise de Dados. Índice Paulista de Vulnerabilidade Social – IPVS. 2011. Disponível em <http://www.seade.gov.br/projetos/ipvs/>, acessado em 01 jul. 2011.
17. HABISP, Habitação em São Paulo. Habitação. Prefeitura Municipal de São Paulo. 2011. Disponível em <http://www.habisp.inf.br/>, acessado em 27 fev. 2011.
18. FNQ, Fundação Nacional da Qualidade. Cadernos de excelência: Clientes / Fundação Nacional da Qualidade. – (Série Cadernos de Excelência, n.3.) – São Paulo: Fundação Nacional da Qualidade, 2008.