XBRL in public administration as a way to evince and scale the use of information.

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Abstract - This study aimed at demonstrating why public organizations need to standardize and flexibilize their way to release accounting information to provide administrators with improved quality, timeliness, reliability, and, above all, a reduction in their costs to evince financial information. In this sense, we analyzed a standard formatting language called e*Xtensible Business Report Language* (XBRL), with the purpose of verifying its applicability to evince and scale information in public administration. It is qualitatively confirmed that XBRL is a formatting language capable of standardizing and flexibilizing information for its users, and also of providing a series of management analyses when combined with *Business Intelligence*.

I. INTRODUCTION.

The public sector has its limitations in providing information for citizens and regulatory agencies, which causes duplicate and unnecessary work, due to different sources of data and to the time consumed of accounting and management personnel. Based on this reflection, we studied the formatting language XBRL (*eXtensible Business Report Language*), with the objective of verifying how it could be used to scale and evince accounting information in the public sector. To support this proposal, we analyzed the case of the Municipality of Coqueiros do Sul, in the State of Rio Grande do Sul, which adopts a **S**pecific **S**ocial **S**ecurity **R**egime (**SSSR**, -Regime Próprio de Previdência Social -, in Portuguese), and has to distribute information to several agencies and entities to comply with legal provisions concerning transparency and accountability.

To achieve our objective, we analyzed the legislation that regulates the public sector activity to identify which are the reports and information that must be frequently released by municipalities, and what characterizes accountability, transparency, and possibility of scaling information in public administration, through the *Business Intelligence* (BI) system.

II. EXTENSIBLE BUSINESS REPORT LANGUAGE (XBRL).

XBRL is a standard formatting language to release financial statements on the Internet. It is also a free tool to standardize, flexibilize, and make released information more transparent and broadly accessible to all users, either for managerial or legal purposes (MOREIRA, 2005 and IFAC, 2002). Ward (2004) says that **IFAC** (International Federation of Accountants) considers XBRL as an ideal tool to make information easier, faster, more transparent and accessible. Thus, financial information would also be more reliable along the whole information chain in organizations.

For Ray (2001, p. 3), a markup language can be defined as a "set of symbols that can be included in the text of a document to mark and label its parts". It is an evolution of the markup languages produced by studies carried out in the 1960s, and its main differential feature is that data are independent and standardized in all formats (DEBRECENY and GRAY, 2004), which allows programs to interact. Consequently, users can obtain the information they need without having to ask for customized or re-typed reports. According to Riccio, Sakata and Moreira (2005), XBRL has a significant presence in the world, mainly in Germany, Australia, Belgium, Canada, Korea, Denmark, Spain, United States, France, Netherlands, England, Ireland, Japan, New Zealand, and Sweden.

Lack of standardization in information published on the Internet makes it difficult for users to access and interact with it. This is the reason why many have mentioned XBRL as one of the alternatives to standardize and flexibilize information, and to reduce its cost. XBRL has already been approved by major regulatory agencies, so it is enough to promote it and check how it will be accepted by different countries and

accountable agencies, as well as by the public companies and agencies that release their information. To prove this assertion, we cite Ward (2004), who states that IFAC's mission is to serve the public interest. For this reason, this author supports the use of XBRL, it serves the public interest because it is market-oriented and makes more accurate and rapid information available for decision making, besides reducing the associated costs.

This is possible because the XBRL was conceived with a structure that gives flexibility to the information. Its structure and functionality are based on the Inter-relationship of three components: the Taxonomy, *the Instance Document* and *the Style Sheet*, being that this last one is considered a complement of the two first ones.

- *The Taxonomy*: basically is the study of the principles of scientific classification. According to MOREIRA 2005, p. 28, taxonomy is "as a dictionary, built from its structure of hierarchies, to supply standard definitions to the information of the financial reports".
- *The Instance Document:* in a definitive moment it will be informed to the application which are the value these elements possess. From the reading and interpretation of these two elements (taxonomy and *instance document*), the XBRL application will generate, in a XML file format, the information about the financial reports, MOREIRA (2005, p. 26).
- *Style Sheet:* basically is a sheet that summarizes editorial guidelines relating to and used when preparing text for publication. According to MOREIRA 2005, p. 27, style sheet makes possible to format the visualization of the reports results from arising from the two first components. Its function allows to transform the information for any desired format, such as the files format: XML, PDF, HTML, printed etc.

III. TRANSPARENCY IN PUBLIC ADMINISTRATION AND THE EXCESS OF REPORTS.

The **F**ederal **C**ouncil of **A**ccountants (**FCC**, - Conselho Federal de Contabilidade-, in Portuguese) (2003) points out that accountants are made publicly liable when they are requested to release accounting statements that will inform decision making by several information users, such as the society – represented by taxpayers –, the Department of Justice, the **S**ecretariat of the **N**ational **T**reasury (**SNT**, Secretaria do Tesouro Nacional – in Portuguese), the government of a State, the Federal Ministries, the **N**ational **I**nstitute of **S**ocial

Security (**NISS**, - Instituto Nacional de Seguridade Social, - in Portuguese), etc.

To ensure transparent and effectively controlled public activities and a reliable rendering of accounts, several laws were implemented to set standards for transparency, among them we point out: (1) Federal Law 9.755/98, also called Public Accounts Law; (2) Supplementary Law 101/2000, known as **F**iscal **R**esponsibility **L**aw (**FRL**, - Lei de Responsabilidade Fiscal -, in Portuguese). Both make it mandatory the publication of a series of reports and fiscal statements in media for broad public access, including the Internet. Moreover, the FRL pursues an accountable fiscal management, supported by Federal Law 10.028/2000, which alters the Brazilian Penal Code and defines the crimes against public finances, and the punishment for such crimes and for the infringement of the FRL.

The Public Accounts Law disposes of the creation of homepages on the Internet and affects all agencies and entities belonging to the three spheres of government, with the purpose of making available on their websites data and information related to public accounts.

As for the Specific Social Security Regime (SSSR), it represents a social security fund, with or without its own legal entity. It applies, exclusively, to incumbent civil servants of the Union, the States, the Federal District, and the Municipalities, active and inactive, and pensioners. The SSSR must guarantee to civil servants, at least, the benefits of retirement and pension, as established in the article 40 of the Federal Constitution; its implementation depends on a law that disposes explicitly of such benefits (LIMA, 2005). According to this author, the **S**ecretariat of **S**ocial **S**ecurity (**SSS**, - Secretaria da Previdência Social-, in Portuguese), an agency of the Ministry of Social Security, is responsible for formulating the social security policy, for supervising the programs and actions of associated entities, and for proposing general rules to organize and maintain the SSSR. For this reason, it needs bimonthly reports with information to follow up the collection and correct investment of funds regularly.

The FRL defined as instruments for transparency in fiscal management:

➢ The **S**ummary **B**udget **E**xecution **R**eport (**SBER**, -Relatório Resumido da Execução-, in Portuguese), established by article 52, which must be released within thirty days after the end of each bimonthly period.

➢ The **F**iscal **M**anagement **R**eport (**FMR**, - Relatório de Gestão Fiscal-, in Portuguese), established by article 54, which must be released within thirty days after the end of each four-month

period, or each six-month period for municipalities with less than 50,000 inhabitants.

Prado and Loureiro (2005) point out that the statements required by the FRL and the Public Accounts Law, concerning information quality and intelligibility, must follow a pattern already determined in the mentioned legislation. They also state that the information required by both laws is repeated over and over, that is, the information is basically the same, but report formats and titles are different. Aware of this fact, we think that it is worth emphasizing the usefulness of XBRL to release information on public accounts, aiming at complying with both laws and providing the transparency they require. Based on the concepts presented previously, we understand that XBRL is flexible enough to allow users to retrieve the desired information from the database.

Analyzing the content of the laws mentioned, we concluded that there is an excess of reports and information to be released by municipal accounting departments, aiming at complying with several laws and rules established by several different entities, which are eventually looking for the same information, and this is being released in different formats. The SNT and the **A**udit **C**ourt of the **S**tate of Rio Grande do Sul (**ACS**/RS, -Tribunal de Contas do Estado do Rio Grande do Sul-, in Portuguese) require the same reports (SBER and FMR), at the same intervals, but in different formats and from different databases. Therefore, reports have to be re-typed, which consumes time and resources that could be allocated to other tasks. Using XBRL, both entities would be able to retrieve the desired reports and find the information they need without requiring rework from municipal accountants, allowing them to use their time for managerial accounting.

In the municipal sphere, a mayor must render consolidated accounts (from the executive, the legislative, and the indirect administration) to the ACS, which will give its opinion and publicize it widely. Besides the ACS, the system of internal control and the municipal legislative body are also responsible for inspecting the municipality's budget, finance, and property management, directly or with the aid of the ACS.

4. XBRL AND INFORMATION IN PUBLIC ADMINISTRATION

XBRL fits perfectly with the needs of the public sector, since today Brazilian municipalities such as Coqueiros do Sul are required to release their financial statements; for example, the SBER bimonthly, and the FMR every six months. These reports must be sent to the SNT, the ACS, the municipal legislative, published in electronic media, newspapers etc. As a consequence, several reports containing the same information are sent to several users, but in different formats, without following standard language and contents. This requires retyping, conference, and reconfiguration of the integrated management system, generating unnecessary costs and consuming time.

By adopting the concepts recommended in this study, public accountants would release accounting information in XBRL, and the user would be able to retrieve what he wanted in the desired format, without reworks, since data are independent of the application in which they are created, allowing multiple users to retrieve information directly from the Internet and format it according to their needs. For Moreira (2005), XBRL – through the three elements that compose it: taxonomy, instance document and style sheet – allows information to be retrieved by other programs that will process it later or, even, configure it to be viewed in any desired format (PDF, XLS, DOC, HTML and others).

Analyzing the previous information and relating it to the public administration context, we perceive that XBRL is custom-made to suit the needs of the public service. This instrument is appropriate to release information in compliance with legal requirements and to fulfill the economicity principle in the public service, since there will be considerable time and effort savings in the collection, formatting, and consolidation of data to generate reports for different entities.

With the use of XBRL, information will be released based on the accounting system employed by the municipality and will be retrieved from the datawarehouse in a predefined format, observing the mandatory taxonomy. Through XBRL style sheet, the information becomes independent and every user can import it and convert it into the most appropriate reading format (PDF, Word, Excel etc.), which saves time and reduce costs considerably in the activities of analysts. Later, it is also possible to gather information from other public entities and make comparisons. And, to make things even easier, it is possible to use BI for economic and financial analyses. Ideally, in according to Balloni (2006), could also be possible utilizing the BAM – Business Activity Monitoring -, a tool that provides real time access to the critical indicators of any business performance. In broader level, the BAM proposal deals, in real time, with the operational convergence from BI and Enterprise Application Integration (EAI), guided for the business objective.

Another issue that deserves to be highlighted is that all users of public information, such as SNT, ACS, NISS and the States, must also forward or distribute the information they obtained, besides releasing analyses of such information or creating and publishing new

information for other users. Consequently, XBRL will be used again in the same circumstances, and this is possible only because any software can use it, through applications that import and export data automatically. The figure 1 presents the process for evidencing the accounting information with the XBRL. Based on Watson (2005).
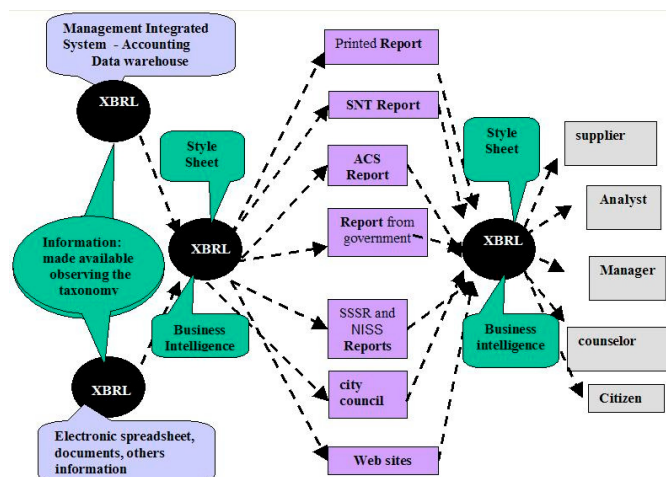
Figure 1 – shows as the use of the XBRL is important in the public area. This language makes possible a direct interaction with the information between the diverse supervisory agencies and users. This prevents waste of time, resources and a better dynamics between supervisors and users regarding the information itself.

Therefore, what must be pointed out is the efficiency and ease in transmitting information by electronic means, which bring to an end incessant reworks to: 1) compile a report for the ACS; 2) recompile the same report as it is required by the SNT; 3) release a series of reports on the Internet, opting for one of these two (ACS or SNT), which results in the same information in different formats and even with different values; 4) forward financial information from SSSR to NISS; 5) send reports to the municipal legislative etc. We emphasize that each phase of the retyping process can invite errors that distort the information. With XBRL, information will be accurate, since it will be released only once, allowing much more time for conferences and analyses to confirm its reliability and to eliminate reworks. Thus, XBRL can reduce the cost of information, accelerate and improve its flow, and all people involved in this information chain will be able to carry out interpretations and comparisons easily, as a result of its flexibility.

Moreover, the article 51 of the FRL determines that the Union promotes, nationally and in each sphere of government, the consolidation of the accounts of public entities related to the previous fiscal period and publishes it, even in electronic means for broad public access, up to June 30. For this purpose, States and Municipalities must send accounts consolidated with SSSR to the Union, up to May 30 and April 30, respectively.

As we can observe, in all these aspects, the accurate, reliable, and agile information is the basis for compliance with legal provisions and for efficiency in the administration. In this new scenario imposed by legislators, information must cross several spheres of government, serving as a basis for new reports and statements that seek to inform the society of its administrators' performance.

5. PLANNED AND EFFICIENT ACTION BASED ON THE SCALABILITY OF INFORMATION.

The enactment of the FRL has culminated in the need to introduce a new form of public administration that leads to efficiency, efficacy, productivity, and that translate into effective and concrete results and benefits for the society. In this sense, it must also observe the principle of economicity, which aims to reduce public costs continually. As a way of motivating public administrators to change their old habits of governing, the Federal Law 10.028 was formulated. It altered the Brazilian Penal Code and defined the crimes against public finances, so that now it is possible to render accountable those administrators who make decisions against legal principles and to punish them.

In this context, it is necessary to develop methods to evaluate administrators' performance and control it more strictly to measure the efficiency of public administration. Thus, one of the fundamentals of public administration is the use of available information about administrators' performance to develop an evaluation process based on the comparison of a public entity with different entities in different places.

Government accounting has had to proceed from a legalist accounting to one turned to organization management. It also had to stop concerning solely with complying with legal rules to start concerning with the generation of information for decision making, aiming at the efficiency, efficacy, and economicity of the public service, and at managerial actions that encourage results that place an entity within the limits and norms of the FRL.
This scenario will definitely require the use of XBRL, which will be essential to produce timely, accurate and cost-effective information for decision making, with the

objective of providing for opportune inspection and a national consolidation to be carried out by the SNT. However, understanding how to make information available to administrators should necessarily include adequacy to their ways of making decisions. This is the reason why information must also be scalable, that is, final users should be able to structure their own reports or query screens by means of different searches provided by the datawarehouse (DW), a large non volatile (i.e., that can be stored) collection of data organized by subject, integrated and parameterized by date, to support decision making processes (INMON, 1997). The DW can be manipulated by BI systems in which the administrator finds relationships that are not offered by traditional information management systems and their extremely structured reports.

6. CONCLUSIONS.

Many professionals, mainly in the public sector, need to turn away from releasing the same information in different formats and for different purposes, because it simply means reworks that can be avoided. XBRL serves to ease this inconvenient situation, since its use allows for the release of information on the Internet only once. After that, users would be able to extract information in the format they want, according to their needs. Therefore, in management terms, information becomes more reliable, timely and flexible. Users can, through XBRL, interact with information in any format (Word, Excel, PDF etc.), as well as use BI to perform financial and economic analyses of one or several institutions.

This interaction will bring a considerable reduction of costs to produce and distribute information, because it avoids wasting time and resources in repetitions. It will provide a reduction in the structures of production of information or their better use in management, where XBRL allows for a true "dive" in the database and the possibility of extracting, analyzing, and comparing information. The trend is that XBRL will be supported and accepted by corporations and regulatory agencies in most countries, since at the moment it seems to be one of the best solutions for problems related to the lack of standardization in the information they have to release. However, it is worth considering the exception made by Hannon (2006), that one of our concerns should be the risk for corporations of raising their costs above the benefits obtained from this migration to XBRL. For this reason, the regulatory agencies of the public sector have to conduct new research to formulate taxonomy for an effective use of XBRL in Brazilian public organizations, and also to study different ways of using it in management.

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