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Identified benefits of Business Process Management (BPM) tools in Brazilian insurance companies.

Francischini, Paulino Graciano

Sao Paulo University, 128, Prof. Almeida Prado Av., University Campus

Zip Code 05508-080, Sao Paulo, Brazil

e-mail: pgfranci@usp.br, phone +55 11 3091 5363 ext 437

Mello, Paulo Ivan de

Sao Paulo University, 128, Prof. Almeida Prado Av., University Campus

Zip Code 05508-080, Sao Paulo, Brazil

e-mail: pimello@gvmail.br, phone +55 11 8112-5000

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Abstract:

The adoption of Business Process Management (BPM) tools has increased significantly in organizations around the world with promises to reduce cost, improve productivity and quality and it is not different in Brazil. As the insurance market is one of the fastest-growing segments in the country, improvement in their processes and operations is mandatory to remain competitive in a globalized market. Based on the research of multiple case studies, with the largest insurance companies in Brazil, this assesses if the main benefits provided by the use of Business Process Management tools implementation were identified in these organizations. The results were positive and consistent in all insurance companies that participated in this research.

Key-words: Business Process Management, Insurance, Improvement, Brazil

1. Introduction

Business Process has being discussed since the 1980's, MELAN (1985), and KANE (1986) presented some basic structures of business process. During the 1990's, *Reengineering* was considered the main concept of business process when articles such as DAVENPORT (1993), RUMMLER AND BRACHE (1994) and HAMMER AND CHAMPY (1994) were published. In the next decade, it was possible to detect the

second wave of business process in articles written by GROVER AND KETTINGERS (2000), SMITH AND FINGAR (2003), DAVENPORT (2000, 2005), ROSEMANN E BRUIN (2005), AURORA (2005), HAMMER E CHAMPY (2007), presented many of the benefits from process standardizations, improved information flow, reduction of costs and cycle time, improved productivity amongst other important points.

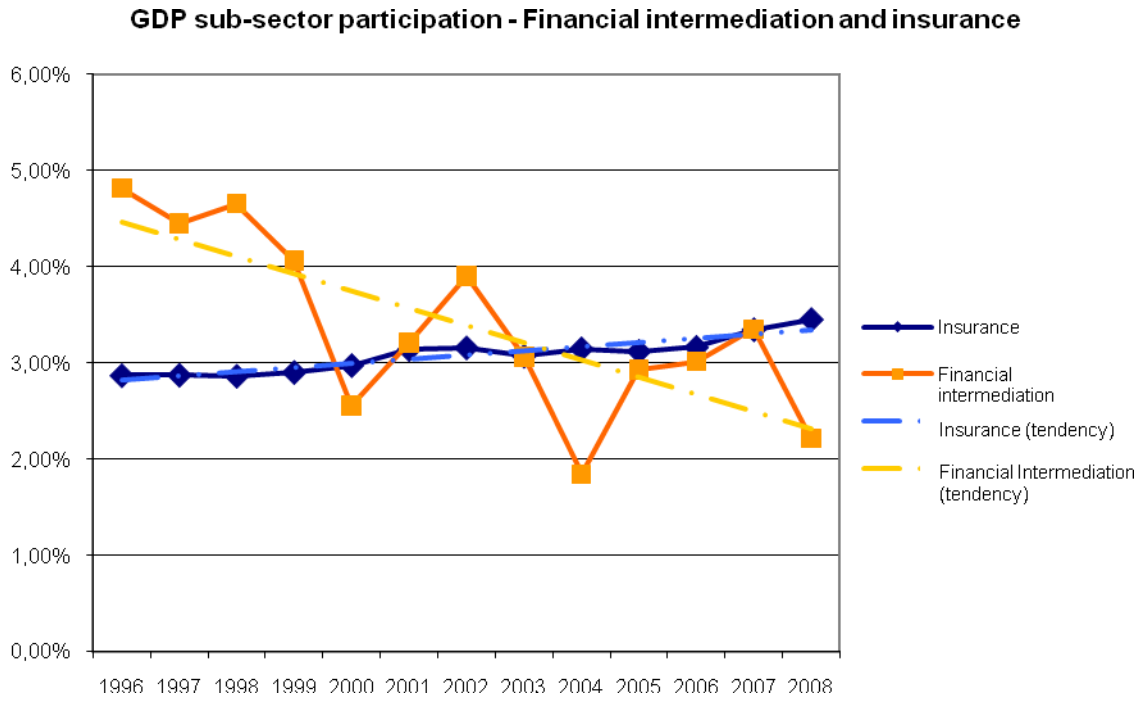
Information presented in figure 1 is based on a HARMON AND WOLF (2010) survey with 264 participants from September to December of 2009, in which survey participants were asked to estimate how much money their organizations were spending on business process work, compared to the results from 2005 and 2007 surveys.

How much would you estimate your organization spent on business process analysis, process management, monitoring, redesign and improvement in 2005? Include BPM management, Lean Six Sigma, process automation and overhead staff. DO NOT include outsourcing						
	2005		**2007**		**2009**	
$0-$500,000	185	57%	136	51%	136	54%
$500,000 to $999,999	50	16%	42	16%	38	15%
$1 million $5 million	63	19%	55	21%	52	21%
$5 million to $10 million	10	3%	10	4%	9	4%
Over $10 million	16	5%	18	7%	11	4%
Over $50 million			5	2%	7	3%
Total	324	100%	266	100%	253	100%

Figure 1 - How much organizations are spending on BPM

According to IBGE (2009), the Brazilian government statistician department, first place in the sub-sector rank based on Gross Domestic Product (GDP) growth was financial intermediation and insurance. Second place was construction and the third was internal wholesale trade. In the sub-sector of financial intermediation and insurance, insurance growth went from less than 3% in 1995 to almost 3.5% in 2008.

Actually, Brazil is ranked as 9th in global GDP, but only as 19th in the insurance sub-sector GDP rank. Based on stabilized economies, Brazil has a potential to increase this insurance participation, assuring the importance of this market domestically.



Graphic 1 – GDP sub-sector participation

The insurance industry is as an excellent candidate to seek participating firms (NELSON, 2010). The insurance industry has been identified as a leading adopter in business process management technologies due to the intense competition, increased legislation and multi-channel management strategies based on business rules technologies.

Based on this proposition, this study focused on Business Process Management and the Insurance market, which could be resumed in figure 2.

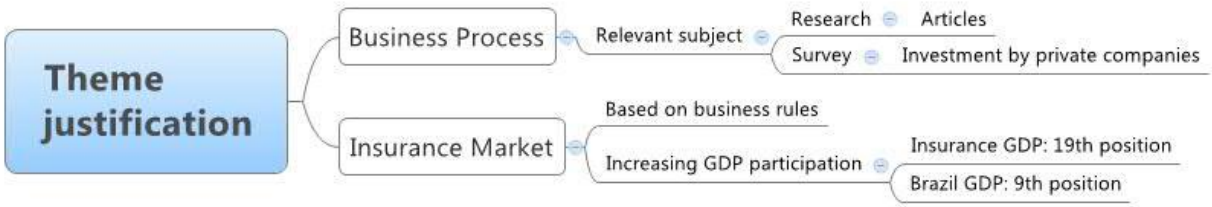


Figure 2 – Theme justification

2. Literature Review

According to SILVA (2006), after the stabilization of the Brazilian economy in 1994, the drastic reduction of inflation and the reforms initiated in security, the assets of these entities began to grow exponentially over the past years. To support this expected growth, innovation through the development of business processes were expected. According to VARVAKIS et al (2008), the relationship between business process management and value stream becomes evident when the processes are seen as value streams, taking into account the knowledge involved in the innovative processes to be improved. Due to the characteristics of ongoing development in business processes, innovation supporting the application of new ideas becomes crucial in this dynamic cycle. Thus, innovations in processes can develop improved capabilities in organizations, allowing accelerated product development and improving its quality and competitiveness in different organizations.

Some authors of Business Process pointed out the benefits that support Business Process implementation based on their experience. This study builds a comparison table with the twelve main benefits observed by different authors of business process. As a result, we detected that there is a common sense of the benefits in table 1.

Presented Benefits	Salerno (1999)	Vernadat (1996)	Grover & Kettinger (2000)	Galbraith et al. (2002)	Smith & Finger (2003)
Transform unstructured process into routinized transactions	√	√	√	√	√
Improve information flow by business process modeling	√	√	√		√
Information flow automated	√	√	√		√
Business Process Standardization	√	√	√	√	√
Increase knowledge level of concepts of Business Process	√		√	√	√
Cost and time reduction of process execution		√	√	√	
Reduction of new products time to market			√		√
Improve customer satisfaction		√	√	√	√
Increase productivity		√		√	
Defects and fails reduction	√		√	√	
Alignment of Business and technology of information		√	√		√

Table 1: Benefits of business process

According to PAIM et at (2009) observation business process management, there are changes in organizational structure and other elements of organizational design in order to prioritize the process management as an axis of greater importance than the functional axis, as changes are larger than simply emphasizing processes as opposed to hierarchy and placing special emphasis on results and customers.

3. Methodology

YIN (1984, 2002) draws a distinction between case studies based upon a single entity and those based on multiple entities. This distinction is considered important with respect to both research design and research analysis. This author explains further that each type of design is appropriate in specific circumstances, and argues that should circumstances change then, where possible, the study should start with a new design. Based on Yin's principles, Figure 3 below provides a perspective of the different possible approaches to case study design.

	Single –case designs	**Multiple-case designs**
Holistic **(single unit of analysis)**	Type 1	Type 3
embedded **(multiple unit of analysis)**	Type 2	Type 4

Figure 3 - Types of Case Study Design(Yin, 1984, 2002)

The study of Benefits of Business Process Management contained in this article follows a Type 4 approach. Admittedly this may be deemed less than scientific, and positivist, but the approach is informed by the research objectives and the research circumstances. As Yin (1984, 2002) defines, case study research excels at helping us understand complex issues within its real-life context.

Consistent with this study's objectives, we identified different firms from a single group. Although this approach may limit the generalization of the conclusions, it did permit us to gain a greater depth of understanding while increasing the reliability of the findings though corroborating and synthesizing the results across multiple participants. The particular industry sought was one that is known for its high adoption of Business Process Management concepts and their software solutions.

This study researched insurance companies that had implemented some BPM solution recently and the effects that were observed. According to FELIX et al. (2009), in2008, Brazil operated with 118 insurance companies and in table 2 there is the rank of the biggest companies, ordered by earned premium.

Rank	***Insurance company***	***Earned Premium***
1st	Bradesco	10,509.0
2nd	Sul América	7,562.1
3rd	Porto Seguro	4,144.5
4th	Unibanco	3,987.2
5th	Itaú	3,518.9
6th	Mapfre	3,479.3
7th	Allianz	1,887.8
8th	Liberty Seguros	1,271.0
9th to 118th	Other companies	9,854.2
	TOTAL	**46,214.0**

Table 2: Earned Premium of Brazilian insurance companies at year 2008 – Millions of Reais (Felix et al, 2.009).

Business process specificity is an important factor linked to performance in interfirm relationships (ZAHEER and VENKATRAMAN, 1994). The fieldwork conducted for this study provides an example.

This study was conducted by the authors and invited in the 2009 by the 8 biggest insurance companies in Brazil, but only six of them reported a case to be studied and gave permission to demonstrate it. Based on these answers, this study reduced the insurance companies and used the six case studies as our delimited sample.

4. Case Study

Based on a delimited sample of six Brazilian insurance companies, a field interview was developed with all firms. A questionnaire was constructed to evaluate the implementation of Business Process Management in these organizations and was

divided into three areas: 1. Impacts of adoption; 2. Observed benefits, and 3. Compare governance of the organization before and after implementation. All questions were based on literature research and this article will examine the results of the benefits, which were observed by the consolidation of benefits presented by the authors in table 1.

In this session of the questionnaire, the presented benefits were checked, using a scale of grades as presented in table 3.

Results	Grade
Strong negative influence	-3
Medium negative influence	-2
Weak negative influence	-1
Neither negative or positive influence	0
Weak positive influence	1
Medium positive influence	2
Strong positive influence	3

Table 3: Results grade scale of the BPM implementation

This field research was developed during the 2009 based on a two hour personal interview with graded executives involved in Business Process implementation for each company. To avoid any ethic disruption, this study will not present the company name and will number them case 1 to 6. The results of this research are populated in table 4, comparing the results of each case study.

Presented Benefits	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Mean
Transform unstructured process into routinized transactions	3	3	3	3	3	0	2,5
Improve information flow by business process modeling	0	3	3	3	3	2	2,3
Information flow automated	3	3	2	2	2	1	2,2
Business Process Standardization	3	1	3	3	3	1	2,3
Increase knowledge level of concepts of Business Process	0	1	3	3	3	1	1,8
Cost and time reduction of process execution	3	2	3	3	3	2	2,7

Reduction of new products time to market	3	2	3	3	3	0	2,3
Improve customer satisfaction	3	1	3	3	3	1	2,3
Increase productivity	2	2	3	3	3	1	2,3
Defects and fails reduction	2	3	2	2	2	1	2,0
Alligment of Business and tecnology of information	1	2	2	2	2	1	1,7
Mean	2,1	2,1	2,7	2,7	2,7	1,0	2,2

Table 4: Results of each presented benefits on all studied cases based on the proposed grades.

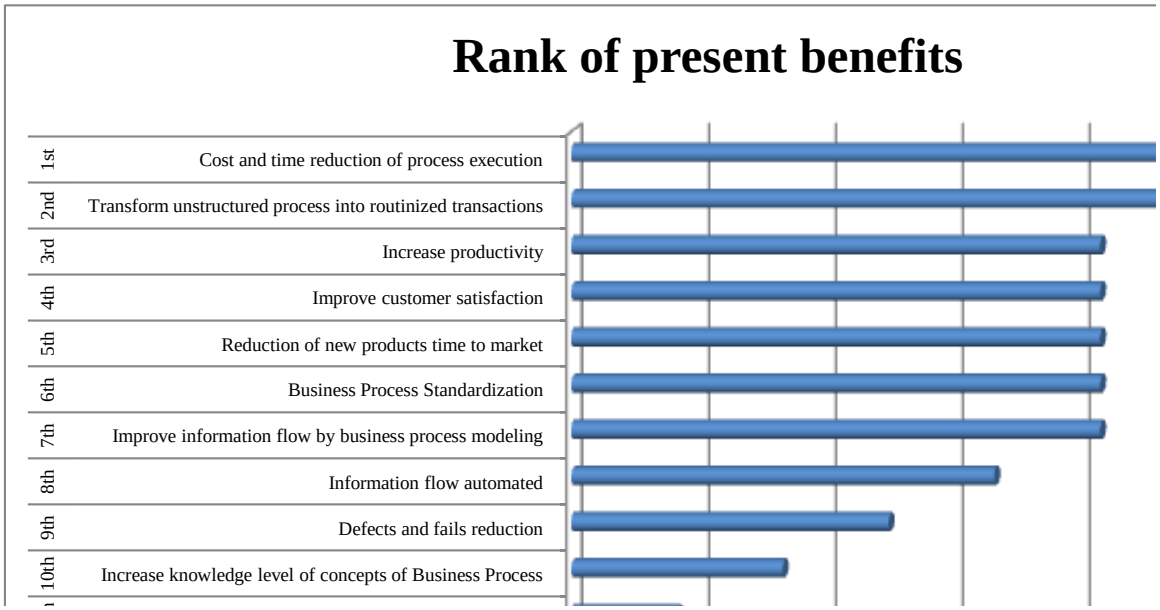
All cases identified benefits in almost all presented topics, and based on grade mean, cases from one to five can be classified between medium positive influence and strong positive influence. Compared with the first five case studies, case six has unpretentious results with grade mean that can be classified as a weak positive influence. This difference could be assigned to partial project implementation in case six and full implementation in other cases.

By the way, it is possible to conclude that presented benefits of business process management software has positive results and they are consistent as all cases are aligned and consistent.

There are notorious result differences presented in some cases in benefits like "Transform unstructured process into routinized transactions" and "Reduction of new products time to market" as cases 1 to 5 got good grades and case 6 didn't. The main reasons were Case 6 didn't formalize their business process by formal documentation and didn't cover end to end steps of the process.

Other relevant differences were detected in "Improve information flow by business process modeling" and "Increase knowledge level of concepts of Business Process", Case 1 got lower grades than the others. It could be justified because they didn't invest as much time training and implementing their project in one business unit and leave other units for the future.

Observing the topic of "Improve customer satisfaction", Case 2 and Case 6 got just grade 1 instead of grade 3 in others cases. It could be justified that for these 2 cases, the benefits weren't an objective and they didn't focus on customer satisfaction.



Graphic 2 – Rank of presented benefits based on mean of six analyzed cases

Graphic 2 presents a classified rank of benefits based on the mean of six analyzed cases. The first place attributed to "Cost and time reduction of process execution" in which all cases got a grade from 2 up to 3. This could be explained because it was the more relevant objective of these projects on all studied cases and it's easy to understand as a tangible factor and easily measurable together with financial project justification to be invested by the company's board of directors.

The second position was "Transform unstructured process into routinized transactions", cases 1 to 5 presented 3 and only case 6 was neutral. This benefit got strong results and certainly the 6th case will get a better grade when adopts end to end process analysis.

The worst rank position was "Alignment of business and technology of information" all cases received a grade of 1 or 2, which shows an aligned tendency. The main reason

that this benefit was detected positively but got a low perception is that there is a gap between business and information technology based on different motivations. The business area is driven by financial results and other business indicators, and the IT area usually is driven by some technical indicators and thinking about "state of art" of technology instead of the business.

5. Reflections on the Literature

Based on the research of the literature, a list of good benefits to justify business process implementation was detected. This list attempted to verify if the real companies are really following this direction and observing the presented benefits of their companies.

It focused on a segment based on business rules and increasing over all sub-sectors in Brazil, to study cases of the biggest insurance companies.

Rooted in six cases, studied during 2009, it was possible to conclude that all cases were implementing business processes in their companies and getting results as presented by the author of the literature.

Derived from this, it is possible to conclude that business process does in fact present benefits and can group companies with or without this strategy. As for future suggestions, study this subject in other markets, like construction, based on strong increases in GDP participation or financial intermediation, based on a complex market. Another important study that could be done, would be to compare Brazilian solutions and results with other countries.

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