

A Competitive Intelligence Model Where Strategic Planning is Not Usual: Surety Sector in Mexico

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Abstract

Nowadays, the importance of the strategy for an enterprise becomes evident by verifying the changes that characterize its environment. Changes in legislation and regulation models and a greater market fragmentation are clear examples of the threats that lead the change. At the same time, the opportunities that the environment offers through the reduction of entrance barriers and a strong possibility of investment extension have increased. In order to be able to survive in an increasingly competitive environment, organizations must adapt their products to the market. For this to happen, it is necessary that the organization develops a retrieval, analysis and information interpretation process with strategic value about the industry and the competitors in it, which is transmitted to those in charge of the organization at the right time. The objective of this study was to develop a competitive intelligence model in an environment where strategic planning is not common and structural conditions are adverse. The research took place in the surety bond industry in Mexico, and the model obtained allows the surety companies with little strategic planning to know and identify their specific information requirements in order to lead competitiveness in a better way and the quality of their products and services at the same time. The outcome of this study demonstrates that competitive intelligence must suit the enterprise's activity thus overcoming the barriers offered to this practice by the environment.

Keywords: competitive intelligence, surety bond industry, strategy, surety provider

1. Introduction

Currently, in any type of enterprise, one of its most important activities is decision making. In the face of the current competitiveness conditions, information has become an important resource for enterprises, in such a way that uncertainty and risk at the moment of interpreting and making decisions about the competitive environment can be reduced (Broll & Eckwert, 2008). According to Cyert and March (1992), the information about an organization's competitive environment is not accessible if resources are not enough to obtain it and analyze it. In other words, the organization must be prepared to identify the environment's events in such a way that it can convert them into data and organize them adequately in information which, once interpreted and analyzed in the right context, becomes knowledge (Wang & Wang, 2008).

Senior management must have a mechanism that allows it to locate relevant information and analyze it in a constant, timely, and organized way before making a decision. In this context, Biere (2011) mentions that Competitive Intelligence (CI) allows for information's structuring in order to facilitate and improve the quality of decision making, in such a way that the enterprise can upgrade its competitive position. CI is an activity that depends on the context's conditions, since it can facilitate or present unfavorable structural conditions that guarantee a good performance of the activities related to this practice (Álvarez, 2005). A singular context is the one experienced in emergent economies, where the lack of information providers, public and private, does not allow an appropriate CI operation.

A unique context is the one experienced by the surety bond industry in Mexico, as it presents an opportunity to incorporate CI practices in strategic processes of the enterprises that are a part of it. Not because of the fact of

having information and that it just needs to be analyzed, but because the operation processes of surety providers call for significant amounts of information to evaluate, not only their products and the market they are intended for, but they also need information to value each and every one of the businesses held with third parties.

An important factor to consider in this industry is the high concentration of information, which limits the information sources to consult. However, employees and managers usually rely on a large experience in the industry and a wider vision of problems in the organizations. Another problem in the surety bond industry has to do with the association inside the guild which does not cluster the total number of enterprises in the industry; besides, its main purpose is to disseminate regulatory information and not to inform about the industry or the economic environment of the sectors to which they render their services. In this context, starting from the importance of incorporating CI in enterprises' practices in an environment where collecting information has the greatest risk of falling into deception or ethical deficiencies (Swaka, 2001), the goal of this research is to develop a heuristic CI model that takes into account the context and an enterprise's needs for information in an environment where strategic planning is not common.

In order to achieve the objective established for this research, the document is presented in the following manner: after the introduction, a theoretical framework is developed in which the main concepts and models that lead the research are presented. In a following paragraph, the methodology used is shown, describing the different stages that took place during the research. Later, the main results of the research are presented in such a way that results and main conclusions are discussed in the last paragraph.

2. Theoretical Framework

2.1 Business Intelligence

According to Tarraf and Molz (2006), CI is a relatively new and incipient field in literature about management. Miller (2002) mentions that, since it is a new field of knowledge, a solid theory does not exist, and therefore, nor the existence of various concepts. In this sense, Turban (2011) proposes considering CI from the economic and strategic perspectives, since both highlight the importance of information and knowledge in the market as resources and sources of competitive advantage. A simpler approach is the one by Cates, Gill and Zeituni (2007), who consider that CI must analyze the information to the extent that a decision can be made.

On the other hand, Burwell (2000) says that CI uses the public information that is available about the market and competitors, in order to help an enterprise to make strategic decisions, reaching advantages in the business line in which it competes. He avers that CI about competitors includes, among others, collecting information about financial activity, productivity and market positioning of a group of active enterprises in the same field. In this sense, collecting information is not an isolated event that generates intelligence and knowledge by itself, but it is a continuous process of transformation towards a product of intelligence (Williams & Williams, 2007). Besides, this process must be systematized according to the organization's own objectives and needs (Turban, 2011).

2.2 The Purpose of CI in the Organization

The use of CI in an organization may have different purposes, not only to improve its competitive status within the business sector. In a first approximation, strategic planning implies making decisions about the organization's long term goals and strategies and, in that sense, CI becomes an intrinsic part of the planning process (Turban, 2011). Decision making is an inherent activity in strategic planning; that is why Simon and Kenneth (1990) establish in their practical rationality that management is a synonym of decision making and that this will be relevant as long as it can be effective and deliver results.

In the decision making process, an adequate position for a situation in which there is a series of uncertain events must be found. Once the situation faced is determined, it is necessary to elaborate alternative actions and to evaluate possible outcomes considering the uncertainty of each one of them. In this way, decision making becomes a key element to accomplish organizational objectives given the management's need to know relevant elements for the enterprise. There lies another purpose of CI in the organization (Viitanen & Pirttimaki, 2006). The benefits of CI do not only focus on the competitor, but also on other activities from the organization, such as better control, safety, information flow, among others (Liebowitz, 2006).

2.3 CI's Practices in Mexico

According to Álvarez (2005) and Rodríguez (2005), CI in Mexico is an emergent practice that, although it is taking place in the public sector as well as in the private one, there is still a long way to go as far as government policies that enhance its development, as well as the infrastructure and creation of entities to support this activity. Some Mexican companies have incorporated CI practices in their business management methodologies reaching significant outcomes such as: anticipation to future changes in their participation sectors, innovations of high

impact in the market, strategic partners' identification, entrance to new market niches and development of more efficient supply chains (Rodríguez, 2005).

On the other hand, Álvarez (2005) pleads that one of the most significant problems for the CI practice in Latin America is that the majority of enterprises do not list in the stock market, therefore, public information is scarce; the accounting principles generally accepted in countries within the region usually do not require a break down of information per business unit, so that secondary information cannot be obtained in a quick and easy manner. Finally, the wide conglomerate of small and medium size organizations is reluctant to publish its data, hence the absence of independent publications, reliable and perennial, as well as the lack of databases about enterprises and market.

An important fact that has become relevant and that influences CI's adoption, is information technology (Venkatesh, Morris, Davis, & Davis, 2003). In Mexico there are government programs that aim to support the incorporation in information technology enterprises. On top of that, different state organizations that strategically support enterprises in developing Human Resources on CI, as well as in monitoring and analyzing the competitive environment have been developed. On the other hand, there are sectors that are much closed to information, due to the nature of their operations, which makes the practice of CI even scarcer, such is the case of the surety bonds in Mexico.

3. Methodology

3.1 Diagnosis

During the first phase of the research, a diagnosis with the Mexican surety bond industry took place. Given the conditions of access to information, the unit of analysis considered were the specialists in surety bonds, who know the decision making processes inherent to the subscription and keeping of a bail. The sample of surety bonds specialists was formed from the information available to the public from the National Insurances and Surety Bonds Commission. To ensure the simple representativeness two selection methods were used. For the first one, experts working directly in a bonding company were selected, and for the second method, a systematic random sampling was done to select surety bonds agents.

Information collection was done with a measurement instrument which was exclusively designed for this research. For the design of the instrument, a qualitative exploratory study was considered through semi-structured interviews with experts in the surety bond industry. The Delphi method was used in order to find coincidences. By the end of this process a questionnaire of 22 items with closed questions was obtained, using a 5-point Likert scale. Once the instrument was finished, it underwent tests to evaluate if it had the properties that ensured its measurement capacity. It was submitted to a pilot test with 9 experts, selected from a convenience sample to determine the instrument's initial reliability and validity through a stability measurement (test-retest reliability). For this procedure, the measurement instrument was used twice on the same group of experts.

Once the initial reliability and validity of the instrument was determined, electronic surveys were applied to the identified sample. The methodology used for the application of the survey was a combination of survey self-administration techniques. First, group self-administration by groups was posed, and later self-administration through email, attaching the website where the questionnaire was hosted. Sample precision methods were implemented as well as sensibility analysis to control the no response slant. Once the data was collected and the questionnaires were completed, the inverted items were codified and identified to transform the scoring obtained from them, in such a way that they had the same meaning and the same direction of the obtained scoring in the rest of the items.

3.2 Statistical Analysis

Using the database properly constructed, an instrument reliability analysis was performed through the computation of Cronbach's alpha coefficient. Besides, a second reliability test was performed using the split-half reliability method, in which the total items set is divided in two equivalent parts and their scores are compared to determine how large the correlation in both halves is. The final validity was determined through the validity construct, for which a factorial analysis was performed. With this statistical technique the internal measurement unit was examined to determine if the indicators had something in common.

With the structured data and the final validations tested, a quantitative data study was performed through the correlational analysis of the items and an analysis based on the internal consistency criteria. Additionally, descriptive statistics were used to sort and classify data obtained from the questionnaires, which allowed for the simplification of the complexity of the data intervening in the distribution. Likewise, some statistical parameters were estimated, which characterize the frequency distributions. This frequency distributions were in some cases

absolute frequencies, which delivered the number of individuals that present a determined value of the variable, or of the relative frequencies, which delivered the percentage of the population that presents a determined character. At times, accumulated frequency was also useful, in which the accumulated value of the pertaining data smaller than it was observed.

3.3 Generation and Validation of the Proposed Model

The proposed model was designed taking the results of the diagnosis administered to enterprises of the Mexican surety bond industry through the empirical method and was complemented taking as reference strategic planning model (Dimitri & Rodriguez, 2005), competitive intelligence model (Jaworski, Macinnis, & Kohli, 2002), and strategic aligning model (Henderson & Venkatraman, 1999).

To determine the proposed model's viability and effectiveness, a concept test was performed following the established parameters and steps to trace, obtain and provide useful information, capable of becoming CI to evaluate decision alternatives. The concept test was performed in a controlled environment using ten solvency files from trustees provided by the surety provider, as well as the selected software tools for this activity. The process followed is mentioned immediately: 1) Defining intelligence questions for each file along with the surety bond expert; 2) Defining the search patterns; 3) Recovering the documents identified in an unstructured text database; 4) Importing the unstructured base documents to a native XML database; 5) Executing text mining on the documents stored in the XML database; 6) Presenting the information to the expert for feedback; and 7) CI report's elaboration.

The goal of the test was to obtain as much information related to the trustee as possible for each solvency file using test architecture. The issues evaluated were the amount of identified and collected information, the information's validity as well as the relevancy and pertinency of the information gathered. The search and recovery of information was performed using software tools which have the capacity of using different sources of information with several search engines simultaneously. The information cluster was done with the aid of text software techniques and tools to identify the adequate information context and, finally, the information was analyzed to determine whether or not it was relevant.

4. Results

Based on the structured analysis of the information obtained from the semi-structured interviews with experts, 6 dimensions or relevancy areas for the respondents were previously identified, which can be observed in Figure 1. To corroborate that the dimensions identified by the experts agreed with the respondents' latent behavior issues, a factorial analysis was performed.

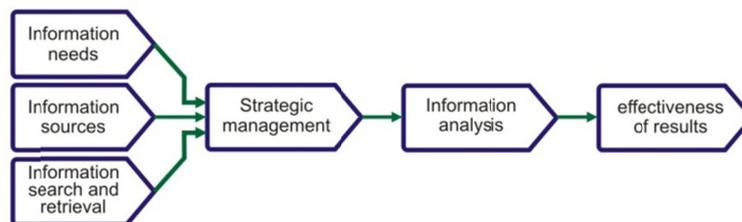


Figure 1. Dimensions previously identified by experts

4.1 Statistical Analysis

Once validated that the measurement variables had the adequate intercorrelation degree (significance) to apply the factorial analysis, the analysis was performed and the following results were obtained: the first element obtained, is the components matrix. The matrix helps to interpret the factorial weights. For these to be clearer, a factor rotation was performed using the Varimax with Kaiser rotation by normalization method (Kline, 1994) and the extraction method was performed through an analysis of the key factors in order to extract the factors according to their relevance in such a way that the first factor explains most of the variance and the next factors progressively explain a lower percentage of the variance (Thompson & Daniel, 1996). In order to understand the dimensions of each one of the extracted factors the description was assigned to the factor according to the variables that integrate it with the same characteristics, which can be observed in Table 1.

Table 1. Dimensions definition according to factors extracted

Factor	Items	Component			
		1	2	3	4
Information collection	P11	0.890			
	P21	0.870			
	P20	0.869			
	P18	0.858			
	P15	0.851			
	P27	0.846			
	P10	0.742			
Information needs	P7		0.924		
	P6		0.921		
	P9		0.888		
	P12		0.847		
Information sources	P26			0.946	
	P25			0.254	
	P16			0.243	
Information analysis	P8				0.426

From the rotated factors matrix the coefficients matrix for the factorial scores was calculated, which determines the weighing that each variable gets. Due to the fact that the extraction of main components method was used for the study, the obtained dimensions are called components instead of factors. By combining each variable with its correspondent coefficients the following four linear equations were built, in which the computation of factorial scores is based:

$$Y1 = .19*(p6) - .24*(p7) + .125*(p8) - .164*(p9) + .088*(p10) + .185*(p11) - .118*(p12) + 0.192*(p15) + .170*(p16) + .189*(p18) + .204*(p20) + .227*(p21) + .055*(p25) - .297*(p26) + .162*(p27) \quad (1)$$

$$Y2 = 0 + .354*(p6) + .389*(p7) - .067*(p8) + .321*(p9) + .054*(p10) - .113*(p11) + .262*(p12) - .066*(p15) - .067*(p16) - .079*(p18) - .094*(p20) - .124*(p21) + .054*(p25) + .075*(p26) - .079*(p27) \quad (2)$$

$$Y3 = +.028*(p6) + .102*(p7) + .001*(p8) + .045*(p9) - .094*(p10) - .031*(p11) + .095*(p12) - .166*(p15) - .035*(p16) - .082*(p18) - .105*(p20) - .114*(p21) + .060*(p25) + 1.116*(p26) + .030*(p27) \quad (3)$$

$$Y4 = +.244*(p6) + .559*(p7) + 1.126*(p8) + .136*(p9) - .015*(p10) + .446*(p11) - .589*(p12) + .122*(p15) - .402*(p16) - .277*(p18) - .201*(p20) - .305*(p21) - .331*(p25) + .347*(p26) - .412*(p27) \quad (4)$$

The factorial scores of each item were obtained by substituting each variable by its corresponding values. Table 2 shows, as an example, the factorial scores list only for the first 10 cases. As one may observe, the scores are in a differential format, so that a “zero” score corresponds to a factorial scoring same as the median, the positive scores are greater than the median and the negative ones are scores smaller to the median.

Table 2. Factorial scores list for the first 10 cases

N	Information collection	Information needs	Information sources	Information analysis
1	- 1.46526	- 0.27597	1.60600	0.39933
2	- 1.46526	- 0.27597	1.60600	0.39933
3	- 1.46526	- 0.27597	1.60600	0.39933

4	- 1.46526	- 0.27597	1.60600	0.39933
5	0.57424	- 0.67739	0.93118	- 2.55062
6	- 0.96705	- 0.40138	- 0.26710	- 0.18356
7	- 1.46526	- 0.27597	1.60600	0.39933
8	0.04531	0.92679	1.13890	1.90136
9	- 1.46526	- 0.27597	1.60600	0.39933
10	0.27545	1.21683	1.22021	0.51619

The model was tested statistically through the adjusted goodness of fit technique, so that the correlations among variables can be deducted or reproduced from the estimated correlations among the variables and factors (Gorsuch, 1983). To be able to observe the adjusted goodness of fit, the reproduced correlation matrix and the residual matrix are offered. If the analysis is appropriate, the majority of the residuals are small. The ideal is that the percentage of residuals greater to 0.05 in absolute value is not greater than 1.86% of the total of the residuals obtained. In this case, just as it can be appreciated in Table 3, a 0.0% existed; therefore, the adjustment was appropriate.

As a complement of the factorial analysis for the diagnosis elaboration, a frequency distribution analysis was performed to identify important characteristics of each group of data. The obtained results indicate that there is a small tendency towards strategic planning among the surety bond industry, since, as observed in the inferential analysis, 71.4% of the interviewed executives displayed a negative attitude towards analyzing the environment or market studies to be able to define the organization's strategy, thus they don't need an organization strategy to define their subscription policies.

Another base to support the lack of planning in the industry corresponds to the organization's external analysis, which allows it to define useful strategies to achieve the organization's goals; in this sense, 74% of the interviewees with a managerial level did not consider the industry's and the environment's systematic follow-up as relevant, which allows them to determine the opportunities and threats found in the environment.

As to the needs for information to make decisions regarding an administrative bail's viability, 100% of the respondents agreed that the information they need to make this decision is generally found outside their organization. Regarding information management, surety providers presented problems for they only use conventional and outdated sources of information, so that 100% of the interviewees agreed that the trustee should not be the only source of information to value the administrative bail's viability.

On bail subscription, the enterprises in the industry have processes to ensure quality in the subscription, considering the client's ability to comply as a base, the backup warranties and the file's assembly. Nevertheless, there are few enterprises that have the sufficient or required technology to ensure and evaluate these considerations, since, in the best scenario, they limit their efforts solely to value the information provided by the client himself.

Table 3. Reproduced correlation matrix

	P6	P7	P8	P9	P10	P11	P12	P15	P16	P18	P20	P21	P25	P26	P27
P6		.972	.567	.956	.815	.581	.914	.698	.680	.682	.667	.618	.790	.079	.647
P7			.592	.952	.802	.583	.885	.688	.652	.659	.646	.594	.766	.085	.619
P8				.590	.808	.931	.519	.880	.802	.834	.849	.823	.767	.386	.805
P9					.836	.619	.924	.727	.723	.722	.707	.662	.823	.140	.695
P10						.856	.849	.904	.906	.913	.906	.876	.930	.319	.896
P11							.617	.915	.893	.912	.918	.900	.855	.463	.902
P12								.732	.799	.781	.757	.724	.891	.281	.784
P15									.911	.926	.927	.904	.898	.349	.908
P16										.958	.950	.935	.950	.489	.968

Residual b	P18											.955	.939	.944	.457	.963	
	P20												.935	.931	.443	.955	
	P21													.908	.456	.943	
	P25														.465	.952	
	P26															.550	
	P27																
	P6		-.001	.000	-.025	-.010	-.006	.000	.007	.004	.002	.004	.004	-.006	.002	.000	
	P7			-.006	-.014	-.011	.012	.001	-.011	-.005	.005	.004	.006	.003	-.002	.001	
	P8				.006	-.010	-.020	.004	-.021	.011	.002	.003	-.004	.002	-.005	.012	
	P9					-.003	-.009	-.008	-.002	.002	-.003	.001	.009	-.007	.001	-.001	
	P10						-.008	-.004	.017	-.008	-.008	-.011	-.012	-.001	.007	-.013	
	P11							.008	-.012	-.004	-.006	-.013	-.002	.010	-.005	.001	
	P12								-.006	-.003	-.004	-.001	-.002	.001	-.003	.005	
	P15									-.005	-.004	-.011	-.014	-.005	.011	-.016	
	P16										.003	-.013	-.026	.001	-.004	.005	
	P18											-.006	-.019	-.004	-.001	.003	
	P20													.009	-.010	.002	-.004
	P21														-.013	.004	-.010
	P25															-.005	.003
	P26																-.006
	P27																

Extraction method: principal component analysis.

^a Reproduced communities.

^b Residuals are computed between observed and reproduced correlations. There are 0 (0%) non redundant residuals with absolute values greater than 0.05.

4.2 Model

The model is assumed by a holistic approach, in which the most important elements are the relationships and the sets formed from them; it also recognizes that the providers in the surety bond industry perform isolated intelligence activities and that one of their main sources of information are the trustees, therefore, this model's implementation keeps these principles and promotes the use of additional techniques and methods that help in the information recovery that will eventually become intelligence.

This proposal underwent valoration of surety analysis and subscription experts, so that they would identify their key elements, the relationships established among them and the factors of various kinds that intervene in their performance. The model was refined using the Delphi method through experts' feedback, just as shown in Figure 2.

Figure 3 shows the model that fulfilled the expectations of 8 experts, which assumes the integration of the elaborated diagnosis by empiric methods as well as the theoretical framework related to the strategic planning, the strategic aligning and the CI model.

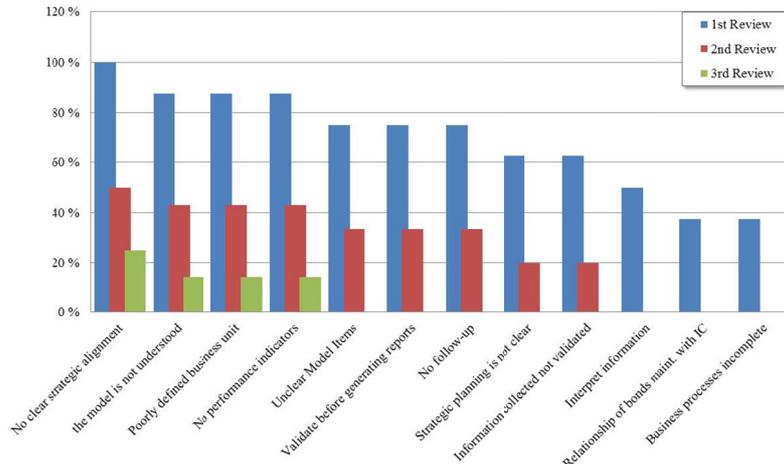


Figure 2. Feedback from experts in the CI model

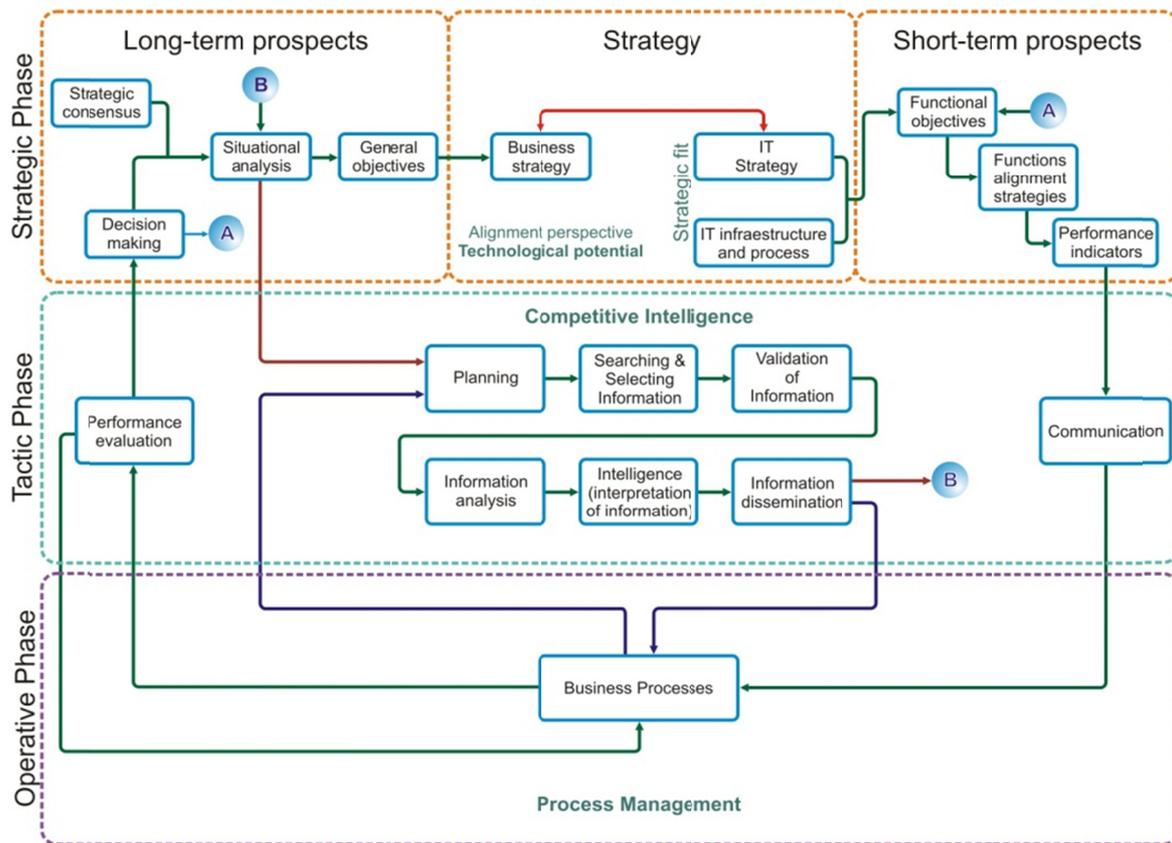


Figura 3. CI generation model

4.2.1 Model Description

The model presents the CI model as integrator between the strategic phase and the operative phase, it also assumes IT involvement from the business strategy formulation, since the later is considered as a bidirectional process in which ITs will support the business and allow for a new business strategy definition. The model allows to use the CI process as a key element in the business strategy, from its conception, using the process to elaborate the situational diagnosis up to the permanent use of the process during the subscription and keeping of the administrative bail, thus allowing to know the competitors' capacities and the customers' needs, substantially

improving the subscription and service quality.

As observed in Figure 3, the model consists of 3 phases. The first one of them, the strategic phase, clusters the analysis functions that define the organization's modes and the surety's operation modes. During this part of the model, the organization works on the defining objectives and its corresponding strategies which will allow it to select the key activities to improve the decision making process and the subscription service and administrative bails' maintenance. The tactic phase of the model considers the actions required for the strategies to be executed. The proposed tactic is the integration and use of a CI process and technological surveillance through an intelligence area that will provide the organization with all the information required for decision making, in a strategic level as well as in an operation level. The last phase, the operative phase, considers the subscribing process as well as the administrative bails' maintenance process.

4.3 Concept Test and Model Evaluation

In order to perform the concept test, the Specific Intelligence Questions (SIQ) were determined from significative events, in such a way that people could disclose more information than that found in the solvency files. The established SIQs for this goal were the following: (1) Have you made any collaboration agreement with any enterprise to launch a project? (2) Do you have formal files or certificates belonging to the trustee (3) Does the trustee or his/her legal representative have any ongoing legal processes? By using the SIQs as context, the search and retrieval for the selected trustees is established. All the documents containing information that can answer the SIQs are sought. The amount of documents retrieved by trustees were the ones shown in Table 4.

Table 4. List of documents retrieved by trustee

Documents	Frequency	Percentage	Valid percentage	Cumulative percentage
A	20	3.6	3.6	3.6
B	110	20.0	20.0	23.6
C	45	8.2	8.2	31.8
D	68	12.3	12.3	44.1
E	59	10.7	10.7	54.8
F	74	13.4	13.4	68.2
G	67	12.2	12.2	80.4
H	45	8.2	8.2	88.6
I	7	1.3	1.3	89.8
J	56	10.2	10.2	100.0
Total	551	100	100	

It was determined that, of all the retrieved documents, 53% of them helped answering the first SIQ defined for each trustee, 47.7% helped answering the third SIQ, and no document that allowed finding an answer for the second SIQ was retrieved. Even when the information search engine had the capacity of grouping documents by context, a manual review by the expert helped determine how many documents were actually relevant regarding the information needs of the defined SIQs. In this sense, it was discovered that only 142 documents, which represent 25.8% of the recovered total, were actually relevant and 74.2% were discarded, either because the context did not fully fulfilled the expert's criteria or because the source of information was not reliable. On Table 5 the document distribution by trustee and the corresponding percentage regarding the total can be observed.

Table 5. Distribution of relevant documents for credit

Credit	Relevant documents	Percentage	Cumulative percentage
A	8	5.6 %	5.6 %
B	30	21.1 %	26.8 %
C	11	7.7 %	34.5 %

D	14	9.9 %	44.4 %
E	23	16.2 %	60.6 %
F	17	12.0 %	72.5 %
G	12	8.5 %	81.0 %
H	9	6.3 %	87.3 %
I	3	2.1 %	89.4 %
J	15	10.6 %	100.0 %

The determining documents and the amount of documents related for the retrieval of documents were the ones used on Table 6.

Table 6. Context used for retrieval of relevant documents

Context	Frequency	Percentage	Valid percentage	Cumulative percentage
Material procurement	3	2.0	2.0	2.0
Obligations fulfillment	37	26.0	26.0	27.9
Award of work,	69	48.8	48.8	76.8
Execution of work	29	20.5	20.5	97.3
Breach of contract	2	1.6	1.6	98.9
Legal risks (criminal or civil)	2	1.1	1.1	100.0

Once the relevant documents to answer the SIQs were identified, they were attached to each trustee's solvency file and were delivered to the surety bond expert to value the viability of each bail considering the new documentation.

The retrieved information for trustees A, B, E, I, and G had no impact regarding the surety bond expert's opinion, that is, with or without this information, the decision of granting the bail will have been the same. Nevertheless, trustees J, H, F, C, and D did present interesting scenarios regarding what was decided with the original sureties at the moment. The surety bond expert's feedback and the context of 2 cases is presented below.

In the case of the bail associated to trustee D, it was originally granted and was claimed due to contract's breach, the surety provider enterprise paid a percentage of the claiming due to an extrajudicial settlement. Unfortunately, the surety provider could not recover 100% of the payment due to the fact that the guarantees could not be enforced completely because of different judiciary problems, according to the surety provider. With additional information to the one on the solvency file of trustee D, the surety bond expert performed the analysis observed on Table 7.

Table 7. Solvency analysis

	Credit D	Credit C
Solvency file context:	<ul style="list-style-type: none"> The surety only provided 65% of the documents specified as a requirement. 	<ul style="list-style-type: none"> The surety only provided 41% of the documents specified as a requirement.
Observations on credit file:	<ul style="list-style-type: none"> Bail was claimed for contract breach. Bail's claim was paid Guarantees were taken but did not cover the amount of the claim 	<ul style="list-style-type: none"> Bail cancelled for obligations fulfillment
Information source of retrieved documents:	<ul style="list-style-type: none"> Distrito Federal Superior court of justice 	<ul style="list-style-type: none"> Attorney General's Office Oaxaca's local newspaper. EL DESPERTAR.

Relevant context:	<ul style="list-style-type: none"> • Does not meet the technical, economic and financial requirements. • It does guarantee compliance with all respective obligations 	<ul style="list-style-type: none"> • Complaint made against the guarantor's legal representative • Allocation of work by the communal Commissariat. The municipal president does not support this work execution.
Feedback from a surety bond expert with the information collected:	<ul style="list-style-type: none"> • It would have made a more exhaustive analysis to determine guarantor's economic and financial capacity. • Would have been good request references from similar projects. • It would have placed before the subscription committee. The subscriber would not have the power to authorize directly. 	<ul style="list-style-type: none"> • It would have placed before the subscription committee. The subscriber would not have the power to authorize directly.

The following case is the one of trustee C. The bail linked to this trustee apparently presents a regular behavior, since it was granted and cancelled because he fulfilled the obligations linked to the contract. However, it is worth mentioning that this trustee was the one who presented the least amount of documents in his solvency file, barely reaching 41% of the specified as required and that in the retrieved documentation two important situations are faced. The first one indicates that the guarantor's legal representative is involved in a very serious legal problem. The second one presents the guarantor executing a work by direct allocation even when the municipal government did not agree with the work wanted to be performed. Without making any judgement regarding the situation, the surety provider may have reconsidered granting the bail if it had had that information when it was required. With the additional information to the one on the solvency file of guarantor C, the surety bond expert performed the analysis shown in the last column on Table 7.

5. Discussion and Conclusions

The research's relevancy lies in the fact that it will allow surety providers with strategic planning work to know and identify their specific needs of information in order to better lead competitiveness and, at the same time, the quality of its products or services. The work that can be performed to implement a CI process works as a base to establish a plan, the obtained planning-oriented working method. To this purpose, two basic axis are considered: on one hand, a situational diagnosis of the surety provider regarding its need for information and its isolated practices for decision making and, on the other hand, the systematization and automatization of the CI process.

Despite the fact that there is a structural problem to implement CI processes in Mexico because of the lack of adequate secondary information sources, the model obtained in this research helps reduce the inconsistencies or gaps in secondary information through a systematic research process and in accordance to the enterprises's nature, in such a way that it serves as a benchmark for those who make decision inside the organization.

In a global perspective, the empirical evidence shows that, in order to perform the surety provider's situational diagnosis regarding their information needs and the use of it, it is observed that a group of them shows a positive attitude towards CI's key factors, which could be because of the management group's executive profile, due to the fact that surety providers with CI values lower than the median, present a management team high in strategic planning tasks, even when this practice is not formalized inside the surety providers. Likewise, the empiric evidence shows that surety provider operation processes have 3 out of the 5 proposed CI factors in the theory. In this case, the diagnosis results are consistent with the operative regulations in the industry where it is stated that in order to grant a bail it is necessary to retrieve all the available information so as to evaluate the guarantor's economic and moral solvency.

Moreover, the results show that the information's management in the surety providers is reason for controversy, being that a group of them use information with a strategic approach, while the others use it with a tactical approach in their decision making processes, so they manage information differently. While the first type of information is retrieved and used through electronic media, the second type is retrieved on paper and it is occasionally digitalized; nevertheless, the usual for this type of information is keeping the documents physically in a solvency file organized by guarantor for its later reference. Anyway, the optics of this group of surety providers is

the same, according to the evidence, the information is analyzed just once and with this, a credit line is defined which helps as to grant bails. The information and the credit line are updated until the later is exceeded with a bail, nevertheless, with time, the information is not updated in a systemic manner; therefore, the credit line's objectivity can be compromised even when it is not exceeded by the bail number it supports. Likewise, each information's update is still done in physical documents, whereby there is no data repository that can respond to the surety provider's future information needs.

Regarding the concept tests, evidence was presented regarding the amount of information that can be found for a guarantor using the adequate search context and patterns to answer the SIQs. Not all the retrieved information was useful, nevertheless, that considered relevant for the surety provider helped to change the surety bond experts' analysis perspective either in favor of the guarantor's interests or, in some cases, against them. Therefore, the intelligence information did not define a precise course for the analyst, but it provided him with a scene that was hidden for him and when it emerged it provided enough information for the decision making.

This research's input for the surety bond industry presents two aristas. On one hand, a CI model is proposed to describe the best way to seek, retrieve, and analyze information to turn it into intelligence about different organizational levels. At a strategic level, the variables of the surety bond industry's competitive environment are valued, and at a competitive level, the competitive environment of the guarantors who request a bail is evaluated. On the other hand, the three essential components are established for its implementation in the organization: the process structure, made up of all the necessary actors and resources for its execution; the functions, aligned with the organizational goals and the process, and, last, the strategy, oriented in two fundamental moments of the process, such as planning and design, and the implementation of the identified actions for the competitive improvement as a consequence of the business intelligence.

5.1 Limitations and Future Research Lines

The results of this research should be considered in the light of its limitations. The model arises due to the analysis performed to the financial service industry, due to the fact that the access to information is crucial for a work of this character and Mexico, as a country, has structural deficiencies that restrict the CI practice. Future research documents may consider the possibility of making the model a more including one, in such a way that it could verify the degree of modification the model may go through by including companies that were not surety providers, but that belonged to the financial industry.

This research highly leaned on opinions from surety bond experts, by providing their judgements and valorations, from which subjectivity cannot be completely eliminated. Even yet, as results show, bails were granted when the information analysis may indicate the convenience of not granting them. En essence, the surety bond industry, object of the analysis of this research, can strongly lean on the person's subjectivity, which can go in detriment of the CI objectives. Future models must overcome this characteristic, in such a way that the decision making will mainly be based on the information analysis and not on the individual perception.

Finally, the context imposed limitations to this research, since the lack of information of other means was practically null, nevertheless, that same fact highlights the importance of the result obtained in this research. A comparative study of countries with similar characteristics to the ones of Mexico, may help identify the external agents that impact the practice of CI and, as a consequence, identify patterns that help overcome limitations or hindrances for this practice.

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