

Internal Communication, Intellectual Capital and job Satisfaction: A Structural Model Applied to a Credit Union

Carmem Leal¹, Carlos Marques¹, Carla Marques¹ and Elizomar Braga-Filho²

¹Universidade de Trás-os-Montes e Alto Douro (UTAD), CETRAD, Vila Real, Portugal

²UNICRED João Pessoa – Paraíba, Brasil

cleal@utad.pt

cmarques@utad.pt

smarques@utad.pt

elizomarfilho@live.com

Abstract: Given the current scenario of marketplace instability and uncertainty, the way companies conduct and manage their intellectual capital is crucial. Numerous studies have highlighted the role of intellectual capital as a key driver of organisational performance due to its importance as an asset in the value creation process, yet few have analysed the relationships between internal communication, intellectual capital and job satisfaction. Considering the relevance of knowledge management and intellectual capital in the service sector, namely in the banking system (Curado 2008; Starbuck 2002), this study aims to assess the structure of intellectual capital in a Brazilian Credit Union, and how it relates to internal communication and job satisfaction. To accomplish this objective, a structural model, based on Longo and Mura (2011), was developed and tested on a sample of 109 employees from a particular branch of the union. Results confirm the three-dimensionality of the Intellectual Capital construct and that job satisfaction, as well as internal communication, are constructs separate from intellectual capital and should not be confused. In fact, internal communication may be considered as an antecedent of intellectual capital, whereas job satisfaction is a consequence. Furthermore, results suggest that intellectual capital plays a mediation role in the relationship between internal communication and job satisfaction. Nevertheless, the framework presented in this paper is not without limitations. Firstly, the sample size and the fact that it is a case study requires caution regarding extrapolation of conclusions. A second limitation has to do with the measurement of Relational Capital, as items employed have shown to be problematic in terms of convergent validity. Nevertheless, this study holds great potential for the strategic management of human resources in banking, in particular credit unions, which is a prime concern for bank administrations, bank branch collaborators, and society at large. To the best of our knowledge, this is the first study to model the interrelationships between internal communication, intellectual capital and job satisfaction in a credit union, an organisation with particular structural and strategic features resulting from its external customers being members and owners.

Keywords: internal communication, intellectual capital, job satisfaction, credit unions

1. Introduction

In our time, markets have been living moments of pronounced uncertainty. In order to stay ahead of their competitors, companies need to create and develop proactive strategies which emphasise on differentiation; however, without shifting the focus from the satisfaction of customers' needs. A new paradigm has thus emerged, marked by the transition from an industrial society to a knowledge society. Fixed assets, easily quantifiable and valued for accounting, are no longer the main source of creating competitive advantage (Huang, Luther and Tayles, 2007) as the replication of the conditions of production became relatively easy to attain due to the evolution of technology (Iltner and Larcker, 1998).

Assets such as brand loyalty, organisational culture, or staff motivation and commitment are difficult or almost impossible to replicate and represent an increasing share of companies' value. Among these intangibles, knowledge, in its broadest sense, appears as a catalyst for seeking to achieve sustainability of the company's competitive advantage (Anand, Kant, Patel and Singh, 2012). In this sense, the management of knowledge is considered a key factor for the competitive growth of any organisation (Anand et al., 2012). These intangible assets, already mentioned, are usually represented by the construct Intellectual Capital, which expressed by three distinct components: human, structural and relational (Bontis, 1998).

Given the current relevance of intellectual capital in service organisations, particularly in the banking system (Curado, 2008), this paper aims at contributing to the understanding of its role in a Brazilian Credit Union, responding to three related research questions: i) does the three-dimensional model of capital hold in the union? ii) does job satisfaction depend on intellectual capital? iii) is internal communication an antecedent of both intellectual capital and job satisfaction?

This paper is structured as follows: in the next section some literature on internal communication, intellectual capital and job satisfaction will be briefly reviewed; subsequently, and after presenting the research model, the methodological procedure adopted will be explained and the results of its empirical validation described; finally, we will present the findings, implications and limitations of this research.

2. Literature review and research model

2.1 Intellectual capital

Intellectual Capital may be defined as a set of techniques, skills and areas of knowledge possessed by organisations (Kaplan and Norton 2004). This conceptualisation began as a concern of the business sector to explain the difference between market value and book value of a listed company, a difference that may be explained by the value that investors attach to intangible assets (Edvinsson and Malone 1997; Ittner and Larcker 1998). Since the late nineteenth century much has been written about companies' intangible assets and their particular importance (e.g. Guthrie et al. 2012; Cañibano et al. 2000; Dumay 2009; Skinner 2008; Wyatt 2008).

Academia and some business actors have been increasingly recognising the importance of knowledge management, in particular, and intangible assets, in general, as sources of generating competitive advantage (Anand et al., 2012; Ittner and Larcker, 1998). Longo and Mura (2011) even argue that the last decade has been seen as a time of dematerialisation of companies' strategic resources. Therefore, productivity and organisational performance depend largely on the effective management of these resources (Chen, Shih and Yang 2009; Kang and Snell 2009; Campisini and Costa 2008; Reed, Lubatkin and Srinivasan 2006; Subramaniam and Youndt 2005; Sveiby 1997).

There is a consensus in literature regarding the construct's structure, namely its three-dimensional configuration: human, structural, and relational capital. To Edvinsson and Malone (1997) *human capital* emerges as the accumulation of investment in training. Based on Lee (2010) and Youndt, Subramaniam and Snell (2004), we consider that human capital includes key organisational features, such as skills, attitudes, experience and motivation, leadership traits and intellectual abilities, such as knowledge, innovation or adaptation. It should be noted that this type of capital is lost when employees leave the company, so develop and retain staff is a key success factor of this dimension (Wright, Coff and Moliterno, 2014).

Ross, Ross, Edvinsson and Dragonnetti (1997) argue that organisational knowledge is also embedded in the relationships with external stakeholders, such as customers, suppliers and partners, and this dimension is called *relational capital*. According to Capello and Faggian (2005) relational capital consists of all relations – trade, power and cooperation – established between firms, institutions and people, resulting from a strong sense of belonging and a highly developed capacity for collaboration. Bontis (1998) called it the External Capital. It is reflected by indicators such as: number of brands, customer loyalty, partnerships, market share, supplier relationships, lasting customer relationships, among others.

Concerning *structural capital*, Pandey and Dutta (2013) state that this dimension encompasses all processes, systems, structures, brands, intellectual property and other intangible property of the company not reflected in its accounting demonstrations. According to Ross et al. (1997) some elements of structural capital can be legally protected through patents, copyrights and trademarks, so, in this sense, this dimension is linked to innovation and development. Bontis (1998) calls it Internal Capital and suggests it is reflected by: the number of new services, effective application of existing knowledge, mechanisms of transmission of knowledge, the knowledge alignment with organisational strategy, organisational culture, intellectual property, management philosophy, new processes, financial situation, information systems, investment in information technology, efficient organisational structure, among others indicators.

Despite the numerous conceptualizations of intellectual capital, there is a consensual view that the value created by organisations derives from the interaction of these three dimensions (OECD 2008; Lee, Lee and Kang 2005; Youndt et al. 2004; Bontis 1998; Lynn 1998; Dzinkowski 2000; Wall 2005; Kristandl and Bontis 2007). Regarding causal relationships between the three dimensions, Bontis and Fitz-enz (2002) presented a model where human capital influenced structural and relational capital. Similarly, Moon and Kym (2006) and Ordóñez de Pablos (2004) presented this linkage between human capital and the other two dimensions, adding yet a positive influence of relational capital in structural capital. Benevene and Cortini (2010) have pointed that relational

capital directly affects structural and human capital. Finally, Longo and Mura (2011) have considered human capital as the principal element of intellectual capital, contributing to the other two dimensions and found that structural capital is affected both by human and relational capital. We therefore propose:

- i. Intellectual capital is a three-dimensional concept in which the human dimension affects the other two (H1, H2) and the relational component affects the structural one (H3).

2.2 Job satisfaction

Spector (1997) defines job satisfaction as an attitudinal variable that reflects an overall assessment of all aspects of one's job. The principal approaches to conceptualize job satisfaction are the disconfirmation theory, defining satisfaction as a function of the perceived relationship between what one wants from one's job and what one perceives it as offering (e.g. Locke, 1969), and the expectancy theory, focusing on beliefs concerning the likelihood of positive outcomes resulting from work (Vroom, 1964).

Numerous studies have investigated the relationship between job satisfaction and organisational variables such as organisational commitment or managerial practices (Lund, 2003), yet a few have demonstrated relationships between the dimensions of intellectual capital and job satisfaction. A close relationship is expected between satisfaction and human capital, considering that some authors (e.g. Moon and Kim, 2006) have proposed job satisfaction as a facet of human capital. Nevertheless, to model the relationships between intellectual capital and job satisfaction, we follow the results from Longo and Mura (2011), stating that structural capital is the only dimension directly affecting satisfaction. In this conception, giving H1 above, structural capital also mediates the possible effect of human capital over satisfaction. We therefore propose:

- ii. *Structural capital is the only dimension of intellectual capital that directly affects job satisfaction (H4).*

2.3 Internal communication

According to Grönroos (1990), internal communication represents a key element in internal marketing in combination with segmentation, managerial support, training and development. In turn, internal marketing consists of a marketing orientation towards the interior of a company allowing it to create and promote ideas, projects and useful values to the organisation, aiming at the commitment and adherence of the internal customer (staff) to the values and goals of the company. Internal communication, both top-down and bottom-up, is a crucial element to build this strategic theming that envelops the internal marketing (Wu, 2005).

The positive effects of internal marketing orientation and practices over employee satisfaction are well established in the literature (Gounaris, 2008). Concerning specifically internal communication, it also proved to be an important antecedent of job satisfaction (Kumar and Giri, 2009), although its effects could be mediated by the satisfaction with the communication itself (Carrière and Bourque, 2009). It is worth noting that internal communication has been presented as a facet of structural capital, but several studies have demonstrated it as a separate concept that could be seen as an antecedent of Intellectual Capital (Ramezan 2011; Youndt *et al.* 2004; Longo and Mura 2011). In our research model internal communication acts as an exogenous variable, influencing satisfaction both directly and indirectly through the mediation of intellectual capital:

- iii. *Internal communication has positive effects on every dimension of intellectual capital (H5, H6, and H7) as well as on job satisfaction (H8).*

The eight hypotheses derived to answer the three research questions are depicted in Figure 1, constituting the research model here proposed.

2.4 Credit unions in Brazil

Credit Unions are emerging as an important outlet facing large private financial corporations which increasingly mediate customer relationship through automated non-human service delivery (Araújo and Silva 2011). Seguí-Mas and Server Izquierdo (2010) argue that in certain contexts and territories, such institutions have become extremely important in facilitating and stimulating local socio-economic development, even in countries such as Spain where credit unions have reduced expression. Fontes-Filho, Marucci, and Oliveira (2008) argue that Brazilian Credit Unions have been undergoing significant changes with their consolidation in pursuit of

economies of scale and efficiency, in order to be an alternative financial provider within a context of lower interest rates and increased credit competition.

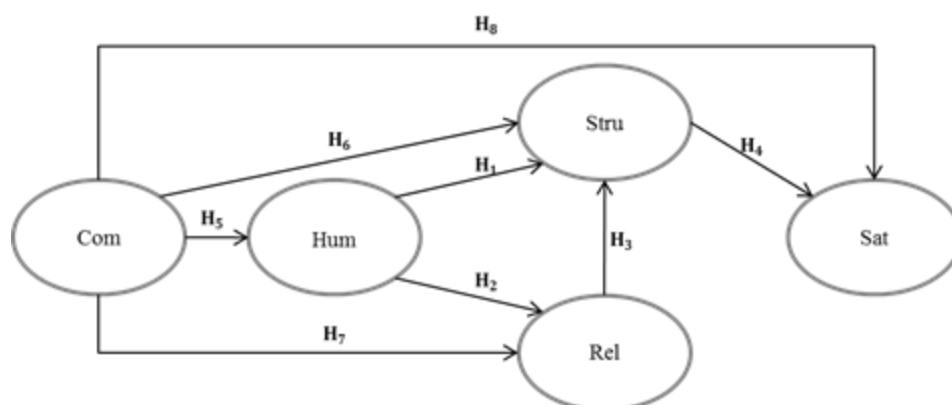


Figure 1: Conceptual model

For this empirical investigation, a Brazilian Credit Union was chosen because this sector is frankly expanding in the country. The institution chosen, UNICRED João Pessoa, is one of the first UNICRED unions in Brazil, established 25 years ago. It is also one of the largest in terms of assets, ranked in the top 3% of the more than 1,100 unions in the whole country. Last but not the least, in the UNICRED System it is considered a reference of management practices.

3. Method – population, sample and procedures

In order to empirically test the model, measurements of Internal Communication, Job Satisfaction, and the three dimensions of Intellectual Capital were obtained from a sample of 109 employees of UNICRED – JP, a local branch of a credit union. Although the model is derived from Longo and Mura (2011), the measurements were developed from different sources and adapted to the particular context of this credit union. All indicators were measured on bipolar five point labelled scales. The *job satisfaction* scale contains an item of overall satisfaction and four of satisfaction with aspects related to the motivational factor, according to the Herzberg (1966) dual theory. The three items of *Internal communication* were developed based on the rationale of the corporate information dimension from the communication satisfaction framework (Downs and Adrian 2004), but are centred at the product level, instead of the corporate level. The eight items from these two variables were labelled from 1 "very dissatisfied" to 5 "very satisfied" on a (dis)satisfaction scale. On the other hand, the nine items of *intellectual capital*, derived from Bontis (1998), were measured on a (dis)agreement scale from 1 "strongly disagree" to 5 "strongly agree".

Maximum likelihood estimation from the variance-covariance matrix of the 17 items was used to assess: firstly, the measurement model; and, secondly, the structural model of relationships between the five latent variables. The sample size, although smaller than usually seen in structural equation modelling, can be considered suitable for a model such as this, with only five latent variables, each of which being measured by at least three indicators (Hair, Black, Babin, and Anderson 2010). Considering the proposal of Kim (2005), this sample is below the minimum advised to ensure RMSEA = 0.05 under conditions of good fit, being suitable for the value of RMSEA = 0.064.

4. Results

The results from the measurement model are presented in Table 1. The averages of all indicators are quite high, ranging from 3.78 (internal communication about products and services) to 4.8 (relationship with union members). Analysing the means of the latent variables, it is worth noting the extremely high value of *Relational Capital* perception, employees considering that the relationship with union members is very good. On the other hand, *satisfaction* shows the lowest average value, corresponding to the fourth point of the scale, which is labelled "satisfied".

Evaluating the measurement model through confirmatory factor analysis, it behaves well regarding goodness of fit: $\chi^2/df = 1.36$; GFI = 0.875; CFI = 0.955; RMSEA = 0.058; $p(RMSEA \leq 0.05) = 0.288$. All latent variables may be considered reliable, with values of composite reliability (CR) above the threshold of 0.7. On the other hand, *Relational Capital* suffers from lack of convergent validity, since the average variance extracted (AVE) is below

50%. That is, the items of this latent variable are affected by more than 50 percent measurement error. The use of Relational Capital in the model of Figure 1 must take this limitation into account, i.e. one should consider the possibility that these items do not properly measure the perceptions of Relational Capital by the staff, so the estimation of relationships with other variables in the model may be biased. All other variables exhibit convergent validity.

Table 1: Measurement model

Item (dimension)	Average	SD	λ (CR)	λ^2 (AVE)
<i>Human Capital</i>	4.122		0.833	0.629
Suggest ideas	4.202	.847	0.892	0.796
Give an opinion	4.156	.964	0.843	0.711
Staff initiative	4.009	.877	0.617	0.381
<i>Structural Capital</i>	4.382		0.781	0.548
Learning opportunity	4.358	.764	0.842	0.709
Training in accordance with objectives	4.394	.828	0.763	0.582
Exchange of knowledge	4.394	.707	0.593	0.352
<i>Relational Capital</i>	4.617		0.719	0.461
Relationship with union members	4.798	.426	0.748	0.560
Needs of union members	4.752	.434	0.651	0.424
Differentiated products	4.275	.837	0.633	0.401
<i>Internal Communication</i>	4.052		0.847	0.655
About products and services	3.780	.886	0.617	0.381
About events	4.275	.718	0.870	0.757
About processes and procedures	4.101	.793	0.910	0.828
<i>Satisfaction</i>	4.013		0.868	0.570
Overall satisfaction	4.156	.611	0.801	0.642
Intellectual challenge	4.055	.718	0.792	0.627
Responsibility	4.174	.678	0.774	0.599
Contribution to the community	4.046	.821	0.705	0.497
Autonomy	3.633	.889	0.695	0.483
Item values: SD: standard deviation; λ : factor loading; λ^2 : variance extracted. Dimension values: CR: composite reliability; AVE: average variance extracted.				

A further test of construct validity is discriminant validity, the extent to which it is distinct from other constructs (Hair et al. 2010). Two variables are considered different if their correlation is smaller than the square root of the average variance extracted for each them. Table 2 shows that all latent variables satisfy this condition, consequently the conclusion is that Intellectual Capital is a three-dimensional construct and that job satisfaction and internal communication are constructs on their own, not to be included in intellectual capital measurement.

Table 2: Correlations between the latent variables

	Human	Structural	Relational	Internal Communication	Job Satisfaction
Human	0.791				
Structural	0.604	0.745			
Relational	0.431	0.286	0.671		
Internal Communication	0.295	0.407	0.337	0.809	
Job Satisfaction	0.518	0.721	0.315	0.492	0.754
Values in the diagonal are the square root of the average variance extracted.					

Regarding the structural model, it fits quite well: $\chi^2/df = 1.349$; GFI = 0.875; CFI = 0.956; RMSEA = 0.057; p (RMSEA \leq 0.05) = 0.31. Following the guidelines of Shrout and Bolger (2002) for mediation models, the direct and

indirect effects were assessed from the coefficients estimated in 2000 bootstrap samples. In Table 3, *Structural Capital* is the only direct predictor of *job satisfaction*. Comparing to the results from Long and Mura (2011), which inspired the model in Figure 1, our own results do not support a direct effect of communication on satisfaction, i.e. the relationship is mediated by intellectual capital.

Table 3: Standardised coefficients obtained by bootstrap estimation

Path	Direct		Indirect	
	λ	p	λ	p
<i>Communication</i> → <i>Human</i>	0.301	0.037		
<i>Communication</i> → <i>Relational</i>	0.211	0.176	0.111	0.017
<i>Communication</i> → <i>Structural</i>	0.250	0.005	0.157	0.037
<i>Communication</i> → <i>Satisfaction</i>	0.230	0.067	0.262	0.002
<i>Human</i> → <i>Relational</i>	0.370	0.013		
<i>Human</i> → <i>Structural</i>	0.542	0.001	-0.007	0.754
<i>Human</i> → <i>Satisfaction</i>	0.106	0.483	0.301	0.004
<i>Relational</i> → <i>Structural</i>	-0.019	0.870		
<i>Structural</i> → <i>Satisfaction</i>	0.534	0.006		
λ : standardized regression coefficient; p: bootstrap confidence				

As far as structure of capital is concerned, the human dimension exerts a positive effect both on relational and structural components, but the hypothesised path from the relational to the structural component is not confirmed. Finally, the exogenous variable communication positively influences human and structural capital, but not the relational component. These results are summarised in Table 4:

Table 4: Hypotheses tested

Hypotheses	Validation
<i>H</i> ₁ : Human Capital positively influences Structural Capital.	Supported
<i>H</i> ₂ : Human Capital positively influences Relational Capital.	Supported
<i>H</i> ₃ : Relational Capital positively influences Structural Capital.	Not supported
<i>H</i> ₄ : Structural Capital positively influences Job Satisfaction.	Supported
<i>H</i> ₅ : Internal Communication positively influences Human Capital.	Supported
<i>H</i> ₆ : Internal Communication positively influences Structural Capital	Supported
<i>H</i> ₇ : Internal Communication positively influences Relational Capital	Not Supported
<i>H</i> ₈ : Internal Communication positively influences Job Satisfaction.	Indirect Effect

Given the mentioned lack of convergent validity of the *Relational Capital* construct, it is expectable that non-significant paths have been underestimated. Since this dimension of Capital was not expected to directly influence job satisfaction in anyway, we suggest a more parsimonious model, considering only the human and the structural components of capital. Figure 2 depicts the structural relationships between the four variables of this model. It is straightforward to conclude that internal communication positively influences both human and structural forms of intellectual capital; human capital has a positive effect over structural capital, which in turn favourably affects job satisfaction. In other words, intellectual capital may be seen as a mediator in the relationship between communication and job satisfaction. Likewise, structural capital is a mediator in the relationship between the human component and job satisfaction.

These results reinforce previous knowledge about the direct effect of structural capital on job satisfaction. According to Valio, Gonzalez and Martins (2014) and Ichniowski et al. (1996), companies with a strong element of structural capital usually invest in collaborative work, continuous learning and knowledge sharing systems, factors generally appreciated by staff. It is worth noting that no other form of intellectual capital directly influences satisfaction, thus corroborating Longo and Mura (2011). On the other hand, our results diverge regarding the relationship between communication and satisfaction: our results suggest that it mediated by intellectual capital. Although the dimension of relational capital has been dropped from the analysis, we still consider that the mediation effects of human and structural capital should be highlighted.

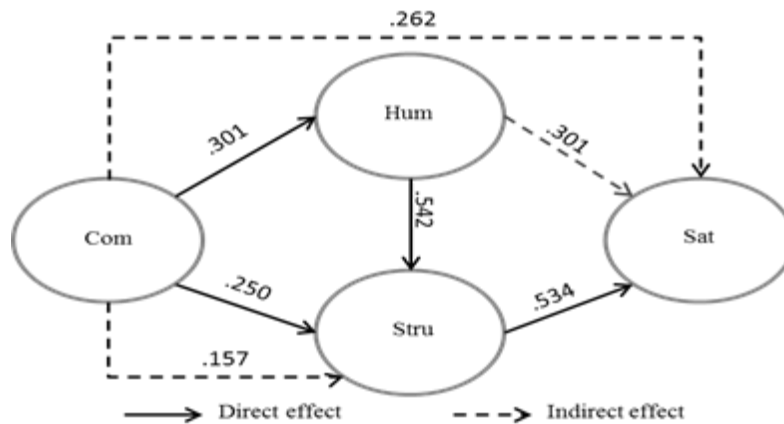


Figure 2: Simplified model

5. Conclusions

This research intended to evaluate if the three-dimensional model of intellectual capital holds in a credit union, an organisation which greatly differs from its mainstream competitors in terms of strategic management and customer relationship, given the fact that external customers are members and owners. In the present case study, the valuation of intellectual capital is unequivocal because the cooperative favors people and networks in all departments. Above all, the cooperative can be distinguished from traditional retail banks by the service provided by their employees, which is fairly less automated and more 'human'.

Although the three-dimensional structure gained additional support in this case, the hypothesised effect of relational capital on structural capital failed to replicate. The main feature of this structure is that human capital promotes both relational and structural capital. Concerning the influence of intellectual capital on job satisfaction, this study corroborates Longo and Mura (2011) by showing that satisfaction only depends on structural capital.

Regarding the relationships between internal communication, intellectual capital, and job satisfaction, which is the main subject of this paper, the crucial finding is that intellectual capital mediates the relationship between internal communication and job satisfaction, i.e. there is no direct effect of communication over satisfaction.

From a theoretical standpoint, it is worth mentioning that, as far as our results are replicable, one should not confuse neither internal communication nor job satisfaction with the dimensions of intellectual capital – all latent variables proved to have discriminant validity. As to managerial implications, this study contributes to acknowledge the crucial role of internal communication: it boosts both human and structural capital and, by doing so, it also has an indirect effect on job satisfaction. Regarding UNICRED João Pessoa, there is a daily newsletter, but the survey results suggest that communication about products and services could be improved. On the other hand, the manual of procedures accessible to all employees in the intranet may not be the best way to have staff satisfied regarding this communication feature. The fact that satisfaction closely depends on structural capital shall not distract managers from the crucial importance of antecedents such as internal communication and human capital.

It is necessary to take into consideration some limitations of this study: firstly, acknowledge that the sample size is relatively small and drawn from only one branch, which requires caution regarding result extrapolation; secondly, the measurement of Relational Capital, since the respective items have proved problematic in terms of convergent validity. From these constraints, we can indicate possibilities for further research. We begin by suggesting a replication of this survey in more branches of UNICRED in order to achieve sounder results. A longitudinal design could be considered in order to determine if the paths communication → capital → satisfaction prove to be stable over time. Finally, we suggest the development of a new measurement of Relational Capital to further verify if the lack of relationship between this dimension and both internal communication and structural capital is due to its own fragility.

References

- Anand, A., Kant, R., Patel, D. P., and Singh, M. D. (2012). "Knowledge Management Implementation: A Predictive Model Using an Analytical Hierarchical Process". *Journal of the Knowledge Economy*, 1, 24.
- Araújo, E. and Silva, W. (2011). "Cooperativas de crédito: A evolução dos principais sistemas brasileiros com um enfoque em indicadores econômico-financeiros", *Revista Contemporânea de Economia e Gestão*. 9(1), 117-126.
- Benevene, P. and Cortini, M. (2010). "Interaction between structural capital and human capital in Italian NPOs". *Journal of Intellectual Capital*, 11(2), 123-139.
- Bontis, N. (1998). "Intellectual capital: an exploratory study that develops measures and models". *Management Decision*, 36(2), 63-76.
- Campisini, D. and Costa, R. (2008). "A DEA-Based Method to Enhance Intellectual Capital Management", *Knowledge and Process Management*, 15(3), 170-183.
- Cañibano, L., García-Ayuso, C. and Sánchez, P. (2000) "Accounting for intangibles: a literature review", *Journal of Accounting Literature*, 19, 102-130.
- Capello, R. and Faggian, A. (2005) "Collective learning and relational capital in local innovation processes", *Regional Studies*. 39, 75-87.
- Carrière, J., and Bourque, C. (2009). "The effects of organisational communication on job satisfaction and organisational commitment in a land ambulance service and the mediating role of communication satisfaction". *Career Development International*, 14(1), 29-49.
- Chen, S., Shih, A. and Yang, Y. (2009). "The role of Intellectual Capital in knowledge transfer", *IEEE Transactions on Engineering Management*. 56(3), 402-411.
- Curado, C. (2008) "Perceptions of knowledge management and intellectual capital in the banking industry", *Journal of Knowledge Management*, 12(3), 141 – 155.
- Downs, C., and Adrian, A. (2004). *Assessing organisational communication: strategic communication audits*. Guilford: New York.
- Dumay, J. C. (2009). "Intellectual Capital measurement: a critical approach" *Journal of Intellectual Capital*, 10(2), 190-210.
- Dzinkowski, R. (2000). "The measurement and management of Intellectual Capital: an introduction", *Management Accounting*, 78(2), 32-36.
- Edvinsson, L. and Malone, M. (1997). *Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden*, Harper Business, New York.
- Fontes-Filho, J., Marucci, J. and Oliveira, M. (2008) "Governança cooperativa: participação e representatividade em cooperativas de crédito no Brasil", *Revista de Contabilidade e Organizações*, 2(4), 107 – 125.
- Gounaris, S. (2008). The notion of internal market orientation and employee job satisfaction: some preliminary evidence. *Journal of Services Marketing*, 22(1), 68-90
- Grönroos, C. (1990), "Relationship approach to marketing in service contexts: the marketing and organisational behaviour interface". *Journal of Business Research*, 20(1).
- Guthrie, J., Ricceri, F., and Dumay, J. (2012). "Reflections and projections: a decade of Intellectual Capital accounting research", *The British Accounting Review*, 44(2), 68-82.
- Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). *Multivariate data analysis*, Pearson Education Harlow.
- Herzberg, F. I. (1966) *Work and the nature of man*, World, Oxford.
- Huang, C., Luther, R., and Tayles, M. (2007). "An evidence-based taxonomy of intellectual capital" *Journal of Intellectual Capital*, 8(3), 386-408.
- Ichniowski, C., Kochan, T., Levine, D., Olson C. and Strauss, G. (1996) "What works at work: overview and assessment", *Industrial Relations*, 35, 299-333.
- Kang, S. and Snell A. (2009) "Intellectual Capital architectures and ambidextrous learning: a framework for human resource management" *Journal of Management Studies*. 46(1), 65-92.
- Kaplan, R. S., and Norton, D. P. (2004) *Strategy maps: converting assets into tangible outcomes*. Harvard Business School Press, Boston
- Kim, K. H. (2005) "The Relation among Fit Indexes, Power, and Sample Size in Structural Equation Modeling". *Structural Equation Modeling*, 12(3), 368-390.
- Kristandl, G. and Bontis, N. (2007) "The impact of voluntary disclosure on cost of equity capital estimates in a temporal setting", *Journal of Intellectual Capital*, 8(4), 577-594.
- Kumar, B., and Giri, V. (2009). Examining the Relationship of Organisational Communication and Job Satisfaction in Indian Organisations. *Journal of Creative Communications*, 4(3), 177-184.
- Lee, K. Lee, S. and Kang, I. (2005) "KPMI: measuring knowledge management performance", *Information and Management*, 42, 469-482.
- Lee, S. (2010) "Using fuzzy AHP Intellectual Capital evaluation model for assessing their performance contribution in a university" *Expert Systems with Application Journal* 37, 4941-4947.
- Locke, E.A. (1969). "What is job satisfaction?" *Organizational Behavior and Human Performance*, 4, 309-36.
- Longo, M. and Mura, M. (2011). "The effect of Intellectual Capital on employees' satisfaction and retention". *Information and Management* 48, 278-287.
- Lund, D. B. (2003). "Organizational culture and job satisfaction". *Journal of Business & Industrial Marketing*, 18(3), 219-236.
- Lynn, B. (1998). "Intellectual Capital". *CMA Management*, 72, 10-15.

- Moon, Y. J., and Kym, H. G. (2006). "A Model for the Value of Intellectual Capital". *Canadian Journal of Administrative Sciences*, 23(3), 253-269.
- OECD. (2008) Measurement, Reporting and Valuation of Intellectual Assets - the Investor View, OECD Experts Workshop, Washington DC.
- Pandey, S. and Dutta, A. (2013) "Role of knowledge infrastructure capabilities in knowledge management", *Journal of Knowledge Management* 17(3), 435-453.
- Ramezan, M. (2011) "Intellectual capital and organisational organic structure in knowledge society: How are these concept related?" *International Journal of Information Management*, 31(1), 88-95.
- Reed, K. Lubatkin, M., and Srinivasan, N. (2006) "Proposing and testing an Intellectual Capital-based view of the firm", *Journal of Management Studies*. 43(4), 867-893.
- Ross, J., Ross, G., Edvinsson, L. and Dragonetti, N. (1997) *Intellectual Capital: Navigating in the New Business Landscape*, Macmillan Business, London.
- Seguí-Mas, E. and Server Izquierdo, R. J. (2010). "Caracterización del Business Capital de las Cooperativas de Crédito a través del análisis Delphi. *REVESCO. Revista de Estudios Cooperativos*, (103),101-122.
- Shrout, P., and Bolger, N. (2002) "Mediation in experimental and no experimental studies: New procedures and recommendations". *Psychological Methods* 7(4), 422-445.
- Skinner, D. J. (2008) "Accounting for intangibles – A critical review of policy recommendations". *Accounting and Business Research*, 38(3), 191-204.
- Spector, P.E. (1997), "Job Satisfaction: Application, Assessment, Causes, and Consequences". Sage Publications, Thousand Oaks, CA.
- Starbuck, W. (2002) "Keeping a butterfly and an elephant in a house of cards", in Choo, C. and Bontis, N. (Eds), *The Strategic Management of Intellectual Capital and Organisational Knowledge*, Oxford University Press, New York.
- Subramaniam, M. and Youndt, M. (2005). "The Influence of Intellectual Capital on the types of innovative capabilities", *Academy of Management Journal*, 48(3), 450-463.
- Sveiby, K. (1997). *The New Organisational Wealth: Managing and Measuring Knowledge-Based Assets*, Berrett-Koehler, New York.
- Valio, R., Gonzalez D., and Martins, M., (2014). "Mapping the organisational factors that support knowledge management in the Brazilian automotive industry", *Journal of Knowledge Management*, 18(1),152 – 176.
- Vroom, V. H. (1964). *Work and motivation*. Wiley. New York.
- Wall, A. (2005). "The measurement and management of Intellectual Capital in the public Sector: taking the lead or waiting for direction?" *Public Management Review*, 7(2), 289-303.
- Wright, P., Coff, R., and Moliterno, T. (2014). "Strategic Human Capital: Crossing the Great Divide" *Journal of Management*, 40(2), 353 –370.
- Wu, A., (2005) "The integration between Balanced Scorecard and intellectual capital", *Journal of Intellectual Capital*, 6(2), 267 – 284.
- Wyatt, A. (2008) "What financial and non-financial information on intangibles is value-relevant? A review of the evidence" *Accounting and Business Research*, 38(3), 217-256.
- Youndt, M., Subramaniam, M., and Snell, S. (2004) "Intellectual Capital profiles: An examination of investments and returns" *Journal of Management Studies*, 41, 335-362.