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Professional Competencies versus High Performance Work Systems in Brazil, Russia, India and Taiwan

Competências Profissionais versus Sistemas de Trabalho de Alto Desempenho no Brasil, Rússia, Índia e Taiwan

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Abstract: This paper aims to investigate the relations between professional competencies and high performance work systems, analyzing to what extent the demand for contemporary professional competencies has been followed by changes in the high performance work systems in organizations operating in emerging economies. Regarding the research method, a survey was conducted with a sample of 1,035 professionals enrolled in graduate management programs from four economies (Brazil, Taiwan, Russia and India). The results indicate a relationship between professional competencies and high performance work systems (administrative and people management dimension, political dimension, cultural dimension. In addiction, the

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results indicate differences among Brazil, Russia, India and Taiwan as concerns professional competencies required by organizations and in relation to the high performance work systems adopted by organizations (in the administrative and people management dimension, the political dimension and the cultural dimension).
Keywords – Professional Competencies; High Performance Work Systems; Emerging Economies.

Resumo: Este artigo tem como objetivo principal investigar as relações entre competências profissionais e sistemas de trabalho de alto desempenho, analisando em que medida a demanda por competências profissionais contemporâneas é acompanhada por mudanças nos sistemas de trabalho de alto desempenho em organizações que operam em economias emergentes. Em relação ao método de pesquisa, foi realizada uma *survey* contemplando uma amostra de 1.035 profissionais matriculados em programas de gestão de pós-graduação de quatro economias (Brasil, Taiwan, Rússia e Índia). Os resultados evidenciam uma relação entre competências profissionais e sistemas de trabalho de alto desempenho nas dimensões "administrativa e de gestão de pessoas", "política" e "cultural". Além disso, os resultados apontam diferenças entre Brasil, Rússia, Índia e Taiwan no que diz respeito às competências profissionais exigidas pelas organizações e em relação aos sistemas de trabalho de alto desempenho adotados pelas organizações (na dimensão administrativa e de gestão de pessoas, na dimensão política e na dimensão cultural).
Palavras-chave – Competências Profissionais; Sistemas de trabalho de alto desempenho; Economias emergentes.

Introduction

Globalization and stronger competition have required organizations to develop new organizational competencies usually described as a set of knowledge, professional and managerial competencies, technologies and behaviors that an organization must seek (Veliu & Manxhari, 2017; Esposito et al., 2015; Sant'Anna et al., 2013; Ryan et al., 2012; Boyatzis, 2009; Spencer et al., 2008). At the same time new professional competencies are requeried (Veliu & Manxhari, 2017; Esposito et al., 2015; Vila et al., 2014; Díaz-Fernández et al., 2014; Chong, 2011; Perrenoud, 2001), particularly in the context of the "Digital Economy", also called "Fourth Industrial Revolution" that point out to radical challenges - and opportunities - regarding new professional profiles and skills (Susskind & Susskind, 2017; Kaplan, 2017; Ross, 2017; Kelly, 2016; Ford, 2015; Schwab, 2016; Morgan, 2014).

Research on competency along the past forty years has identified a diversity of professional competencies required by corporations that are supposed to help them to achieve superior performance

(Sant'Anna et al., 2016). However, a review of the existing literature reveals that about twenty-five competencies are responsible for most of the competencies required by organizations in the current business context. That is, some competencies appear to be more significant and demanded by organizations to achieve superior performance (Ryan et al., 2012; Spencer et al., 2008; Perrenoud, 2001; Spencer & Spencer, 1993).

A study originally developed by Sant'Anna (2002) in the Brazilian context proposes an index of fifteen professional competencies as the most required to answering to the current demands of the business environment. Most of the competencies defined in Sant'Anna (2002) index are reinforced in contemporary studies (Veliu & Manxhari, 2017; Esposito et al., 2015; Vila et al., 2014; Lyle & Bernhard, 2012). Therefore, to measure the professional competencies demanded, this study took as a starting point the model of Sant'Anna (2002) which proposes a holistic view about the notion of competencies.

Although organizations around the world are demanding the development of new professional competencies, some studies reveal organizational contexts still characterized by the standardization of functions and the outsourcing of activities, especially in less developed economies, which often provide precarious work situations and contexts that do not favor the application of these competencies (Cleaver, 2017; Sant'Anna et al., 2016). In addition, it is observed the growing intensity of the volume of work and the pressures brought to bear on workers that stem from organizational optimization and more highly sophisticated control mechanisms. This scenario is legitimized by discourses based on the continuous need for professional updating (Chowdhury, 2016).

While it is reasonable to think that high performance work systems should favor the development and application of professional competencies, it still seems difficult to see that organizations have provided internal contexts that enable individuals to effectively use their knowledge (Sant'Anna et al., 2013; Goldstein, 2007; Christensen, 2006). In emerging economies such as Brazil, Taiwan, India and Russia this scenario is still more critical, considering that "their combined GDP may collectively exceed that of the G-6 in U.S. dollar terms" (Goldman Sachs, 2003).

Taking that into account, the purpose of this study is to investigate the relationship between professional competencies and the current high performance work systems, analyzing to what extent the demand for new professional competencies has been accompanied by organizational competencies

evidenced through the high performance work systems adopted in organizations located in these economies.

The study seeks to contribute to the literature on professional competencies by analyzing their relationship with the high performance work systems, since there are few researches that analyze the relationship between these two constructs. In addition, the study seeks to apply the competence and high performance work systems indexes initially developed in the Brazilian context in the economies of Russia, India and Taiwan.

Theoretical Basis

Professional Competencies

The ideia of competency is getting each more relevance specially in emerging economies (Veliu & Manxhari, 2017; Esposito et al., 2015; Vila et al., 2014; Díaz-Fernández et al., 2014; Sant'Anna et al., 2013; Ryan et al., 2012; Chong, 2011). However, its definition is diversified in the existing literature. Notwithstanding the plurality of definitions, several authores agree that the organizations should support the development of cognitive, relational, emotional and leadership competencies in individuals, that are necessary for the development of high performance work systems (Sant'Anna et al., 2016).

Perrenoud (2001) argues that professional competencies required in the current context of work include knowing: how to identify either the obstacles to be overcome or the problems to be solved in order to achieve an organizational project; how to develop realistic strategies (from the point of view of available resources, such as time, information and inputs); how to analyze the strategic options considering opportunities and risks; how to implement the selected strategy by mobilizing actors and coordinating the necessary organizational resources; how to monitor the implementation of the strategy and propose adjustments where necessary; how to control emotions and conflicts, whenever they affected the effectiveness of the strategy; how to promote cooperation and dialogue between professionals; how to share the learned practices (Sant'Anna et al., 2016).

Vila et al. (2014) investigated the relationship between professional competencies and individuals' propensity to innovate in the work environment. Results provide evidence that a set of competencies may

favor this "innovative" ability: capabilite to mobilize skills to present products, ideas or reports; alertness to new opportunities, and ability to come up with new ideas and solutions.

Studies have developed a comparative analysis between competencies from different economies. Chong (2011) examined the relationship between managerial competencies and career performance in British and Singaporean firms and found that managerial competencies required for career advancement are similar in the two cultural settings investigated. Ryan et al. (2012), in turn, analyzed the association between managers' competencies and the profitability of North American and European companies and showed that the performance variation of the investigated firms may be explained by some sets of competencies: team leadership, developing other people and achievement orientation.

The studies discussed above address some of the diverse skills required of people in today's business environment. In this sense, it can be said that there is a demand for "super-men and wonder-women," “super-professionals”, multitasks and hypercompetents, figures idealized as a response to the complex reality that surrounds organizations more and more. At the same time as there is a demand for “super-heroes”, the studies reinforce the notion that these professionals and their competencies are central elements for the strategic differentiation of organizations (Veliu & Manxhari, 2017; Esposito et al., 2015; Vila et al., 2014; Díaz-Fernández et al., 2014; Sant’Anna et al., 2013; Ryan et al., 2012; Chong, 2011; Bartlett & Ghoshal, 1997).

Despite the relevance of the intellectual capital as a source of competitive advantage, notably in less develop economies the organizational actions marked by the standardization of functions and outsourcing of activities that generate precarious working conditions and a business environment where insecure jobs prevail (Sant’Anna et al., 2016).

Anyway it becomes increasingly relevant the recognition fo the importance of competencies to competitive differentiation, an important characteristic associated to this concept is the dynamic ability to create these competencies, that is, the organization's ability to continuously seek and develop the competencies needed to compete in the future, to attract new customers and to expand into yet unexplored markets and segments.

Over the next fifty years, Brazil, Russia, India and Taiwan bloc of economies is expected to become one world economic force. In this context, the purpose of this study is to investigate the

professional competencies and the high performance work systems indexes, analyzing the extent to which the demand for professional competencies walks hand in hand with the high performance work systems in organizations installed in emerging economies.

The 'Professional Competencies Index' (Sant'Anna, 2002), developed and validated in Brazil, was used as the theoretical model of the study. The choice of this index was due to the following reasons: (i) it was based on an extensive literature review on competencies; (ii) it was developed and applied in the context of Brazilian organizations (one of the contexts investigated in this study); (iii) it contemplated professional competencies that were reinforced by recent studies that investigated the theme (Veliu & Manxhari, 2017; Esposito et al., 2015; Vila et al., 2014; Lyle & Bernhard, 2012).

Understanding competency as resulting of a combination of multiple bodies of knowledge, based on a broad review of Anglo-American and French approaches, Sant'Anna (2002) used the technique of content analysis by category to identify fifteen competencies that were the most reinforced in the different articles analyzed and pointed as the most critical competencies to face the current business context (Table1).

Professional Competencies	Capacity to rapidly assimilate new concepts and technologies
	Capacity for teamwork
	Creativity
	Broad and overall world view
	Capacity for commitment to the organization's objectives
	Capacity for communication
	Capacity to deal with uncertainties and ambiguities
	Skill in mastering new technical know-how relating to your job or occupation
	Capacity for innovation
	Capacity for interpersonal relationships
	Initiative to take action and decisions
	Emotional self-control
	Entrepreneurial capacity
	Capacity to produce effective results
	Capacity to deal with new and unexpected situations

Table 1. Professional Competencies
Source: Sant'Anna (2002, p. 96)

High Performance Work Systems

At the organizational level, the high performance work systems have been considered as a way for organizations to face competition in today's business world by adopting management policies and practices that favor the creation of contexts that stimulate the application of individuals' competencies in the work environment (Sant'Anna et al., 2013; Medlin et al., 2016).

Conventional strategies based on managerial authority are no more enough to enable the organization to meet the demands imposed by the current business environment. It is necessary to break with the past, to leave aside traditional management styles (centralized) to enhance creative solutions for individuals to apply and develop competencies in the work context (Sant'Anna et al., 2016; Gonçalves, 1997).

In this direction, in order to face the contemporary challenges, organizations must develop flexible and decentralized internal structures; value their intellectual capital (Bratton & Gold, 2017); strengthen the relationship with their target public; enable the development of decision-making skills in increasingly complex and uncertain environments. All this consequently requires a review of traditional business models as well as business management and the division of labor.

According to Boon and Lepak (2019), there is a *consensus* about the importance of organizations developing more holistic human resource systems rather than encouraging the development of isolated HRM practices. The design of systems of this nature involves planning integrated actions related to the various sub-areas of HR (in activities such as recruitment, selection, job design, reumneration and benefits, training and development, career and people monitoring). This represents an organizational effort to turn task-focused employees into professionals with a focus on articulated processes and results; rethink the roles of managers in this new organization with a focus on more decentralized and participatory management; promote the learning of individuals and the sharing of internal knowledge, as well as shaping a new organizational culture that favors the application and development of their competencies.

In the Brazilian context, based on an original proposal developed by Eboli (1996), Sant'Anna (2002) applied a holistic approach to mesure the organizational competencies that includes several indicators of high performance work systems including the administrative and people management

dimension; political dimension; cultural dimension (Table 2). This was the theoretical model adopted to measure the index of high performance work systems in the four economies investigated.

Administrative and people management dimension	The organization's remuneration system rewards competent actions
	The organization is strongly results-oriented
	There is an assessment system that allows differentiation between good and poor performance
	The organization offers a proper balance among concerns about financial results, people and innovation
	Human resource policies and practices encourage people to be concerned about continuous learning
	The main promotion criteria are competence and a person's productivity
	The organization offers a balance between the use of advanced technology and people's creativity
	That technology employed favors interaction between people and areas
	The organization's policies and practices encourage people to be always well informed and up to date
	The organization's strategy, mission, objectives and goals are clearly defined
	The organization's human resources policies and practices encourage personal and professional development
	Overall, employees know what they must do to collaborate with the organization's objectives
Political Dimension	The organization's decision-making process is decentralized
	The organization favors autonomy in decision-making
	As regards the political aspect, the regime in place at the organization can be characterized as a democratic one
	Decision-making processes are participative and transparent
	The organization counts on participative management systems that encourage people's initiatives and actions
	The organization allows behavioral diversity and respects individual differences
	The work environment facilitates relationships among people, even from different hierarchical levels
Cultural dimension	The organization's internal climate encourages new and creative ideas
	The organization's internal climate encourages people to undergo a continuous learning process through their day-to-day work
	There is a stimulating climate for people to carry out their activities as they seek to surpass themselves
	The organization encourages individual initiative and responsibility

Table 2. High Performance Work Systems
Source: Adapted from Eboli (1996) by Sant'Anna (2002, p. 190)

Professional Competencies and High Performance Work Systems in Brazil, Russia, India and Taiwan

Even considering this large and growing body of theory on how competitive advantage can be secured and sustained based on professional competencies and high performance work systems, recent organizational studies cast some doubt upon the generalization of this theories to countries transitioning from centraly-planned to decentralized, more market-based economies. Notably, due to the institutional turbulence of these transition economies, strategic choice is fundamentally different than that in the developed economies (Judge, Naoumova, & Douglas 2009).

The institutional context of emerging economies is very different from developed ones, because of, among others characteristics, resource scarcities and a pervasive role of government institutions in their economic activities (Wright, Filatotchev, Hoskisson, & Peng, 2005). These institutional characteristics, coupled with economic liberalization, lead to firm-level changes in resources and capabilities that are rather different from those of developed economies. Thus, researchers have pointed out the need to study how firms adapt and learn in the face of environmental changes in emerging economies (Hoskisson, Eden, Lau, & Wright, 2000; Wright et al., 2005). The resources and capabilities literature stream should also aim to identify capabilities that lead to superior performance in specific contexts (Malik & Kotabe, 2009).

If an organization's ability to adapt and change is tested during institutional disruptions in economies in transition (Zhou, Tse & Li 2006), a survey of sources of competitive advantage in an economy in transition should start with a review of the organization's internal resources. and the capacity to deal with these dramatic and ongoing institutional changes (Judge et al., 2009). Economic liberalization in emerging economies over the last twenty-five years has created new technological and learning opportunities for emerging market companies, including options for new product offerings and replication business capabilities developed countries. As these market environments become more dynamic, the capabilities of firms also require corresponding changes (Hoskisson et al., 2000, Penrolse, 1997).

However, while the logic suggests that the high performance work systems of these economies should be geared towards the development of new professional skills that can effectively respond to their new role in the global economic scenario, little is known about the level of this demand finds favorable contexts to allow its effective manifestation. To what extent are organizations in these economies able to identifying and, above all, retaining the new professional profiles required? Do their high performance work systems adhere to these new required professional profiles? The construction of high performance work systems (administrative and people management dimension, political dimension, cultural dimension), that is, those favorable to the application of such competencies (Sant'Anna, 2002; Sant'Anna et al., 2013) is fundamentally different among emergents countries?

Taking these theoretical arguments into account, we expect that: a) Hypothesis 1 (H1): There is a significant, positive relationship between professional competencies and high performance work systems

(administrative and people management dimension, political dimension, cultural dimension); b) Hypothesis 2 (H2): There is a significant difference among Brazil, Russia, India and Taiwan as concerns professional competencies required by organizations; c) Hypothesis 3 (H3): There is a significant difference among the Brazil, Russia, India and Taiwan as concerns high performance work systems (administrative and people management dimension, political dimension, cultural dimension) as adopted by organizations.

Method

Data Collection

As a research method, this study has a quantitative nature and it is a survey (Malhotra, 2016), comprising data stemming from four economies: Brazil, Taiwan, Russia and India. According to Malhotra (2016), this is a type of survey in which a sample of respondents is extracted from the target population and information is obtained from this sample only once. This survey can be used not only to describe but also to determine relationships between variables at the time of the study.

In addition, the study can be characterized as descriptive, considering the objective of determining the incidence and distribution of the characteristics and opinions of the studied sample, investigating representative characteristics of such populations (Kelinger, 1980). The study can also be characterized as comparative, as similarities and differences between the perceptions of respondents from different countries are analyzed.

Using the Statistical Package for the Social Sciences - SPSS, the professional competencies were operationalized with 15 items, applying the proposal developed by Sant'Anna (2002), by Likert's 11-point scale. High performance work systems index were operationalized with 23 targeted items, and further divided into administrative and people managementdimension (12 items); cultural dimension (4 items); and political dimension (7 items), using the proposal as developed by Sant'Anna (2002), via Likert's 11-point scale.

Questionnaires were translated into the local languages of the targeted economies in the study by native professionals and, previous to their application, were submitted to pre-testing for form and content

validation. Data collection involved questionnaires, the Internet (India), and personal contact (remaining economies).

In Brazil were investigated 572 professionals enrolled in MBA programs, 52.3% female, ages younger than 30 years (51.3%) that are for 5 years' or less occupying their present positions at their respective corporations (65.3%).

The Russian sample involved a sample of 200 professionals, with the same number of males and females (50%), with a predominance of professionals in the age bracket of 30 years or less (53%) and 5 years' or less occupying their present positions at their respective corporations (78.5%).

In India the survey was administered to 103 professionals regularly enrolled in MBA programs at the Faculty of Management Studies of Delhi University. 89% of the sample were male, containing the same number (46.2%) of professionals in the age bracket of 30 years or less and between 31 and 40 years, and having 5 years' or less occupying their present positions at their respective corporations (49%).

In Taiwan the survey was administered to 160 professionals regularly enrolled in MBA programs, predominantly male professionals (68.8%), in the age bracket of above 40 years (50.56%) and having between 6 and 15 years occupying their present positions at their respective corporations (47.2%). Summing up, Brazil, Russia, India and Taiwan yielded a sample of 1,035 respondents. Among these the majority (56%) are male professionals at the age bracket between 31 and 40 years (45.1%) and having 5 years' or less occupying their present positions at their respective corporations (58.4%).

Data Preliminar Exploration

Data analysis began with data quality verification (Tabachnick & Fidell, 2003). Missing values are the missing values for data collected in Brazil, Taiwan and India. Only cases with a high concentration of missing data were excluded from the sample (20, 1 and 10 respectively). In the case of Russia there was no need to delete any questionnaire. For all countries, the remaining missing data were reset according to the stepwise regression procedure (Hair et al., 2009). After this procedure obtained 1,035 observations.

The analysis also sought to identify the presence of outliers that could affect the results. Considering the propositions of Kline (1998), Tabachnick and Fidell (2003), to analyze the presence of multivariate outliers, the 99th percentile (99%) of the empirical distribution of distance D^2 (Mahalanobis

distance) was estimated, recalculating 1,000 sub-samples equal to 100 of the samples from each country. Using the percentile limits obtained in this procedure, no outliers were identified in this data set.

Finally, the assumptions of linearity, homoscedasticity and normality were evaluated. For the analysis of normality, graphical inspection of histograms and Q-Q diagrams of normality and formal normality tests (Kolmogorov-Smirnov) were employed. Linearity and homoscedasticity could be analyzed by inspecting the dispersion diagrams of the variables (Hair et al., 2009). After all steps were taken to ensure a good preparation of the data the authors proceeded to the data measurement step.

The scales were validated according to the dimensionality and confidentiality parameters. To this end, the psychometric properties of the scales were analyzed via the application of Exploratory Factor Analysis - EFA and Confirmatory Factor Analysis – CFA. Besides, the Kaiser-Meyer-Olkim (KMO) measurement analysis was employed to verify the adequacy of the sample (Malhotra, 2016; Hair et al., 2009).

As a standard to measure the reliability of the measurements proposed, this study adopted Cronbach's Alpha coefficient, which Malhotra (2016), Nunally and Berstein (1994) and Hair et al (2009), consider to be a consistent indicator for analyzing the reliability of a scale. According to Hair et al (2009), believes that Cronbach's Alpha values that are equal to or greater than 0.70 reflect acceptable trustworthiness, while values below 0.70 can be accepted for exploratory research. Similarly, Nunnaly and Bernstein (1994) also believe that Cronbach's Alpha values that are equal to or greater than 0.70 are acceptable, while Malhotra (2016) will accept values that are equal to or greater than 0.60.

All these analyzes were performed in order to obtain a better refinement of the scales and to identify the most important indicators for each variable that make up this study. As to the reliability of the scale aimed at assessing individual competencies required, considering it one-dimensional, Cronbach's Alpha coefficients revels significant scores to all economies investigated - Brazil (0.918), India (0.915), Taiwan (0.895), Russian (0.897) - as well as for all these four countries together (0.898). Table 3 shows the results of Cronbach's Alpha, KMO and Explained Variance for the scale aimed at measuring Professional Competencies.

VARIABLE	ITENS	LOADING FACTORS				
		Brazil	**India**	**Taiwan**	**Russian**	**Brazil, Russia, India, Taiwan**
Professional Competencies	Capacity to assimilate new concepts and technologies rapidly	0.665	0.685	0.543	0.437	0.616
	Capacity for teamwork	0.650	0.748	0.641	0.450	0.668
	Creativity	0.758	0.804	0.703	0.580	0.698
	Broad and overall world view	0.713	0.647	0.603	0.496	0.651
	Capacity for commitment to the organization's objectives	0.707	0.603	0.710	0.501	0.651
	Capacity for communication	0.683	0.657	0.699	0.723	0.667
	Capacity to deal with uncertainties and ambiguities	0.646	0.571	0.615	0.787	0.616
	Skill in mastering new technical know-how relating to the job or occupation	0.643	0.707	0.589	0.798	0.601
	Capacity for innovation	0.716	0.757	0.705	0.666	0.669
	Capacity for interpersonal relationships	0.718	0.694	0.671	0.794	0.628
	Initiative to take action and make decisions	0.744	0.783	0.745	0.635	0.699
	Emotional self-control	0.705	0.773	0.600	0.706	0.593
	Entrepreneurial capacity	0.659	0.675	0.674	0.547	0.658
	Capacity to produce effective results	0.596	0.428	0.559	0.743	0.584
	Capacity to deal with new and unexpected situations	0.682	0.722	0.704	0.672	0.671
	Explained Variance	**47.20%**	**47.60%**	**42.72%**	**41.9%**	**41.69%**
	Cronbach's Alpha	**0.918**	**0.915**	**0.895**	**0.897**	**0.898**
	KMO	**0.916**	**0.851**	**0.853**	**0.902**	**0.931**

Table 3. Required Professional Competencies: One Dimensional Factorial Soluction
Source: Research Data

Regarding scales adopted to measure administrative and people management dimension, political dimension, cultural dimension and considering each one to be one-dimensional, the values found for Cronbach's Alpha coefficient (for each one) demonstrate a satisfactory level of reliability.

Table 4 shows the results of Cronbach's Alpha, KMO and Explained Variance in the scales aimed at measuring High Performance Work Systems Index.

VARIABLES	ITENS	LOADING FACTORS				
		Brazil	**India**	**Taiwan**	**Russia**	**Todos**
Administrative and People Management Dimension	The organization's remuneration system rewards competent actions	0.698	0.661	0.712	0.595	0.669
	The organization is strongly results-oriented	0.766	0.843	0.776	0.429	0.726
	There is an assessment system that allows differentiation between good and poor performance	0.847	0.729	0.810	0.621	0.775
	The organization offers a proper balance among concerns about financial results, people and innovation	0.829	0.723	0.766	0.423	0.750
	Human resource policies and practices encourage people to be concerned about continuous learning	0.762	0.802	0.788	0.483	0.740
	The main promotion criteria are competency and productivity	0.779	0.789	0.811	0.826	0.707
	The organization offers a balance between the use of advanced technology and people's creativity	0.795	0.837	0.824	0.837	0.738
	That technology employed favors interaction between people and departments	0.857	0.852	0.844	0.834	0.803
	The organization's policies and practices encourage people to stay well informed and up to date	0.580	0.733	0.721	0.723	0.612
	The organization’s strategy, mission, objectives and goals are clearly defined	0.849	0.767	0.847	0.771	0.769
	The organization's human resources policies and practices encourage development	0.808	0.858	0.871	0.749	0.754
	Overall, employees know what they must do to meet the organization's objectives	0.767	0.818	0.683	0.773	0.701
	Explained Variance	**61.1%**	**61.9%**	**62.4%**	**47.4%**	**53.3%**
	Cronbach's Alpha	**0.941**	**0.943**	**0.944**	**0.897**	**0.920**
	KMO	**0.930**	**0.902**	**0.926**	**0.897**	**0.943**
Political Dimension	The organization’s decision-making process is decentralized	0.833	0.784	0.856	0.429	0.794
	The organization favors autonomy in decision-making	0.877	0.800	0.868	0.412	0.794
	The regime in place at the organization can be characterized as a democratic one	0.841	0.872	0.869	0.620	0.767
	Decision-making processes are participative and transparent	0.880	0.684	0.900	0.721	0.794
	The organization counts on participative management systems that encourage people’s initiatives	0.873	0.846	0.925	0.834	0.818
	The organization allows behavioral diversity and respects Professional differences	0.730	0.759	0.828	0.759	0.717
	The work environment facilitates relationships among people, even from different hierarchical levels	0.709	0.694	0.783	0.736	0.704
	Explained Variance	**67.8%**	**61.9%**	**74.3%**	**43.9%**	**59.4%**
	Cronbach's Alpha	**0.941**	**0.943**	**0.942**	**0.782**	**0.885**
	KMO	**0.930**	**0.902**	**0.923**	**0.776**	**0.890**
Cultural Dimension	The organization's internal climate encourages new and creative ideas	0.838	0.791	0.846	0.635	0.787
	The organization's internal climate encourages people to undergo a continuous learning process	0.912	0.877	0.907	0.806	0.847
	There is a stimulating climate for people to carry out their activities as they seek to improve	0.922	0.912	0.890	0.776	0.851
	The organization encourages Professional initiative and responsibility	0.899	0.867	0.767	0.850	0.828
	Explained Variance	**79.8%**	**74.5%**	**72.6%**	**59.4%**	**68.7%**
	Cronbach's Alpha	**0.916**	**0.886**	**0.875**	**0.770**	**0.848**
	KMO	**0.822**	**0.822**	**0.810**	**0.750**	**0.812**

Table 4. High Performance Work Systems: One Dimensional Factorial Solution

Results

For the analysis of hypothese H1, a simple linear regression analysis was performed to assess the role of professional competencies on progressive organizational environments and the High Performance Work Systems, using professional competencies as independent variable and as dependent variables: administrative and people management dimension, political dimension, cultural dimension.

The correlation coefficient (*R*) and the coefficient of determination (R^2) provides the predictive capacity of the model. For this analysis, despite being presented, the adjusted R^2 value (ΔR^2) was not used, as its use is only justified in the comparison between different models, i.e. in the use of a multiple linear regression analysis as it considers in its calculation the number of independent variables and the sample size that each model is based on. (Hair et al., 2009).

Still according to Hair et al. (2009), another indicator to be considered in the Regression, is the F test, because it is considered the 'model test'. Test F attempts to assess the relative importance of residues due to the entry of the new variable over regression residues without this variable. This test is most useful in the case of multiple regression, when you want to choose the variables that together improve the model. In the case of simple linear regression, Test F tests whether the complete model (with the independent variable) is better than the reduced model (beta zero only). The results of the simple linear regression are presented in table 5.

VARIABLES	**COUNTRY**				
	Brazil	**India**	**Taiwan**	**Russia**	**Todos**
Professional Competencies x Administrative and People Management Dimension	0.344*	0.214**	0.254*	0.363*	0.402*
R^2	**0.118**	**0.046**	**0.064**	**0.131**	**0.162**
ΔR^2	**0.116**	**0.035**	**0.059**	**0.127**	**0.161**
F	**63.072***	**4.366****	**10.893***	**29.972***	**177.780***
Professional Competencies x Political Dimension	0.297*	0.241**	0.254*	0.252*	0.356*
R^2	**0.089**	**0.058**	**0.064**	**0.064**	**0.127**
ΔR^2	**0.087**	**0.049**	**0.058**	**0.059**	**0.126**
F	**45.636***	**6.159****	**10.874***	**13.463***	**133.966***
Professional Competencies x Cultural Dimension	0.394*	0.372*	0.264*	0.299*	0.450*
R^2	**0.156**	**0.139**	**0.133**	**0.089**	**0.212**
ΔR^2	**0.154**	**0.129**	**0.127**	**0.085**	**0.211**
F	**86.610***	**14.640***	**24.199***	**19.437***	**247.746***

Note: *p < 0.001; **p < 0.05
Table 5. Regression Analysis
Source: Research Data

The table 5 revels a significant relationship between professional competencies and high performance work systems, thus confirming hypothesis H1.

In the case of India, although the results show that there are significant relationships in the regression models between the independent and dependent variables, for the relations suggested in hypothesis H1 between required professional competencies and administrative and people management dimension ($F = 4,366$; $p < 0.05$) and between professional competencies and political dimension ($F = 6,159$; $p < 0.05$), relationships are obtained with a significance level ($p < 0.05$) higher than for other countries and for the four countries together.

By observing the correlation coefficient value of each of the regression models tested for all countries and for the four countries together, it is clear that the correlation between professional competencies and cultural dimension for the for the four countries together ($B = 0.450$; $p < 0.001$) is the strongest compared to the correlation values presented in the other regression models tested, followed by Brazil ($B = 0.394$; $p < 0.001$), and then by India ($B = 0.372$; $p < 0.05$).

For Russia ($B = 0.363$; $p < 0.001$), the correlation between professional competencies and administrative and people management dimension are the strongest compared to the correlation values presented for the four countries together in the other regression models tested.

Regarding the coefficient of determination (R2), it is verified by the values presented in table 5, that in all regression models tested, the independent variable (professional competencies) helps to explain the dependent variables.

Brazil (15.6%), India (13.9%), Taiwan (13.3%) and the four countries together (21.2%) presented a greater power of explanation of professional competencies on cultural dimension when compared to others aspects that make up the other variables High Performance Work Systems. Only in the case of Russia (13.1%), this greater power of explanation happens between professional competencies and administrative and people management dimension.

For the analysis of hypotheses H2 and H3 an analysis of variance (ANOVA) was performed to verify if there is significant difference between the countries regarding: a) professional competencies required by organizations (H2); b) High Performance Work Systems (administrative and people management dimension, political dimension, cultural dimension) adopted by the organizations (H3).

The analysis of variance (ANOVA) compares the variance between the different groups with the variability within each group. A high F value indicates that the variability between groups is greater than the variability within groups, indicating that there are subset differences within all analyzed. However, the Test F does not indicate which groups are different from each other, and it is necessary to use post-hoc tests to detect these differences (Malhotra, 2016).

Table 6 presents the results of ANOVA, where the countries were used as an independent variable and as the dependent variable professional competencies.

COUNTRY	N	Groups for Alpha < 0.001			F
		M_1	M_2	M_3	
Russia	200	**6.95**			63.494
Índia	103		**7.73**		
Brazil	572			**8.38**	
Taiwan	160			**8.46**	

Table 6. ANOVA Results of Professional Competencies
Source: Research Data

In comparing the means, it is possible to identify the generation of three distinct groups, where group 1 is formed by Russia (M = 6.95), group 2 formed by India (M = 7.73) and group 3 formed by Brazil (M = 8.38) together with Taiwan (M = 8.46). These groups show significant differences (F = 63,494; p <0,001) and the results show that the countries differ in the importance of requiring professional skills to hold the position or function, confirming the hypothesis 2 (H2).

Of all countries, Russia (M = 6.95) states that it is necessary to obtain less professional competencies required for the position or function, unlike Taiwan (M = 8.46) which has the highest average compared to the other countries, showing thus that professional competencies have been most required in this country for the exercise of the position or function.

Table 7 presents the results of ANOVA, where the countries were used as an independent variable and as the dependent variable, administrative and people management dimension.

COUNTRY	N	Groups for Alpha < 0.001			F
		M_1	M_1	M_1	
Russia	200	**5.20**			36.160
Índia	103		**5.81**		
Taiwan	160			**6.51**	
Brazil	572			**6.93**	

Table 7. ANOVA Results of Administrative and People Management Dimension Source: Research Data

In comparing the means, it is possible to identify again the generation of three distinct groups, where group 1 is formed by Russia (M = 5.20), group 2 formed by India (M = 5.81) and group 3 formed by Taiwan (M = 6.51) and Brazil (M = 6.93). These groups show significant differences (F = 36,160; p <0,001) and the results show that the countries differ regarding the importance of administrative and people management practices being adopted by organizations.

Of all countries, Russia (M = 5.20) states that the adoption of administrative and people management practices by organizations has been little practiced, unlike Brazil (M = 8.46) which has the highest average compared to the other countries. In other words, Brazil presents organizations that have been adopting more strongly the administrative and people management practices.

Table 8 presents the results of ANOVA, which used as independent variable the countries and as the dependent variable, the political dimension.

COUNTRY	N	Groups for Alpha < 0.001			F
		M_1	M_1	M_1	
Russia	200	**5.08**			39.249
Índia	103	**5.39**			
Taiwan	160		**6.22**		
Brazil	572			**6.89**	

Table 8. ANOVA Results of Political Dimension
Source: Research Data

In comparing the means, it is possible to identify the generation of three distinct groups, where group 1 is formed by Russia (M = 5.08) and India (M = 5.39), group 2 is Taiwan (M = 6.22) and group 3 formed by Brazil (M = 6.89). These groups present significant differences among themselves (F = 39,249; p <0,001) and the results show that the countries differ regarding the importance of political dimension being adopted by organizations.

Of all countries, Russia (M = 5.08), followed by India (M = 5.39), state that the adoption of political dimension by organizations has been little practiced, unlike Brazil (M = 6.49) which has the highest average in comparison with other countries, that is, it presents organizations that have been adopting more strongly the political dimension in their practices compared to the other countries.

Table 9 presents the ANOVA results, where the countries were used as an independent variable and as the dependent variable, the cultural dimension.

COUNTRY	N	Groups for Alpha < 0.001			F
		M_1	M_1	M_3*	
Russia	200	**5.29**			44.998
Índia	103		**6.29**		
Taiwan	160			**7.12**	
Brazil	572			**7.22**	

Table 9. ANOVA Results of Cultural Dimension
Source: Research Data

In comparing the averages, it is possible to identify the generation of three distinct groups, where group 1 is formed by Russia (M = 5.29), group 2 formed by India (M = 6.29) and group 3 formed by Taiwan (M = 7.12) and Brazil (M = 7.22). These groups present significant differences among themselves (F = 44,998; p <0,001) and the results show that the countries differ regarding the importance of cultural dimension being adopted by organizations.

Of all countries, Russia (M = 5.29) states that the adoption of cultural dimension by organizations has been little practiced, unlike Brazil (M = 7.22) and Taiwan (M = 7.12), which make up group 3 with the highest averages; it shows that in the organizations of Taiwan and Brazil cultural dimension are quite relevant in their management practices.

Thus, through the results presented in tables 7, 8 and 9, it can be stated that the countries differ high performance work systems (administrative and people management dimension, political dimension, cultural dimension) adopted by the organizations, confirming hypothesis 3 (H3).

Conclusions

This study demonstrated the existence of a positive and significant relationship between the role professional competencies on the high performance work systems for the four countries, thus confirming the proposed H1 hypothese. These findings corroborate with proposal developed and applied by Sant'Anna (2002).

The analysis of variance (ANOVA) confirms the hypothesis H2, and H3 proposed, which demonstrates the existence of significant difference between Brazil, India, Taiwan and Russian, such as: a) the professional competencies required by the organizations (F = 63,494; p <0,001), which shows that in Taiwan (M = 8,46) and in Brazil (M = 8,38), the professional competencies have been more required for office or function in organizations compared to Russia (M = 6.95); b) High Performance Work Systems: administrative and people management dimension (F = 36.160; p <0.001), political dimension (F = 39.249; p <0.001), cultural dimension (F = 44.998; p <0.001) adopted by organizations.

Of all countries, Brazil and Taiwan presented higher averages, respectively, for the three dimensions: administrative and people management (M = 6.93; M = 6.93), political (M = 6.89; M =), cultural (M = 7.22; M = 6.93). In contrast, Russia presented the lowest averages for the three dimensions: administrative and people management (M = 5.20), political (M = 5.08), cultural (M = 5.29), thus demonstrating that these three dimensions are more required and more strongly adopted by Brazilian and Taiwanese organizations in their management practices than by Russian organizations.

Through analysis of variance (ANOVA) it is clear that India always presents itself as a lonely member of group 2, where professional competencies (M = 7.73); high performance work systems: administrative and people management dimension (M = 5.81), political dimension (M = 6.22), the cultural dimension (M = 6.29) adopted by organizations, compared to the other countries. This shows that while organizations in India need professional competencies from their managers and adopt in their organizational practices the three dimensions of high performance work systems, this still happens to a lesser extent compared to Brazilian and Taiwanese organizations; and to a greater extent than the Russian organizations.

These findings corroborate with Sant'Anna (2002), considering that the effective development of professional competencies may be influenced by the administrative and people management, cultural and political dimensions of management and that these practices may be more conservative in some emerging countries than in other countries. This suggests that although Brazil, Taiwan, India and Russia are emerging countries, the prevalence of differentiated and heterogeneous realities, generates in their organizations, the adoption of different management policies and practices related to the professional competencies required for office or function in organizations.

The findings also indicate the high demand for social and relational competencies (Aubrum and Orofiama, 1991) as well as high demand for the competencies investigated reinforcing considerations pointed out by Gitahy and Fischer (1996) regarding the superman syndrome also identified in studies developed by Luz (2001) and Sant'Anna (2002).

Some limitation of the study relates to the difficulty of accessing participants who speak English. Despite the limitations, the study proved useful. In theoretical terms, the study proved useful in expanding the research developed on the required professional competencies indexes, correlating with other indexes such as high performance work systems. It was also important due to its aim to extrapolate traditional competency approaches focused on design, recruitment and selection based on prescriptive competencies, adding the relevance of organizational environments that support the required competencies.

Finally, this study suggests the need for organizational environments that are more adherent to the new professionals competencies required and which contribute to the effective implementation and development of professional competencies, as well as high performance work systems that take into account the real situation in countries with emerging economies.

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