

The Role of HRM Policy on Academic Innovativeness

Case of Business School on Saudi Arabia

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Abstract

This study aims to understand the role of HRM on academic innovativeness. We will try to identify the adequate policy of HRM for the development of academic innovativeness.

The most important is the way in which HRM will be treated as a composite construct of many practices, working in synergistic way, to generate a capacity of innovation or innovativeness according to our definition presented here.

Our interest is oriented to the academic field due to importance of its role on social development. And our interest is oriented to the ability to innovate rather than innovation which still difficult to identify and measure. Academic innovativeness here is represented by five dimensions: behavior, product, process, market and strategic innovativeness.

The analyze of the variance explained for our variables, provides empirical evidence that the academic innovativeness depends in majority on behavioral dimension and process. The HRM policy in this case is a distinct construction which depends on training and promotion. Added to this, some relations here must be revisited specially the link between behavior dimension of academic innovativeness and the policy of HRM as a construct.

At the end of this research, we propose what we have called `the one best way` of academic innovativeness. Our theory model can be considered as user's guide for academics to innovate based on HRM policy.

Keywords: Academic innovativeness, HRM policy, Anova, innovation, HRM practices.

1. Introduction

The importance of human factor for innovation is now admitted by many researches. Anyway, innovation needs a new ideas and intellectual effort to generate new products, improve process and accept organizational change due to this one. Here, only human capital can do all of this.

According to this conception, and to valorize human resource management (HRM), researches insist on the strategic role of HRM practices which become a strategic partner (Ulrich, 1994).

So, the strategic management insists on the importance of human capital and learning in innovation which is the most important factor for competitiveness of firms (Hatch and Dyer, 2004).

Morand and Manceau(2009) consider that creativity is important for the process of innovation because it stimulates and encourage it, added to this, he argue that the diversity of teams and incentives of the risk is also important to generate innovation. These factors are related to the human capital. He is the only one able to think for creativity and for application of innovation process.

In this field, human resource in the innovation process is aborted differently:Chanal et al. (2005) adopt the concept of "Innovators people ", Gastaldi and Gilbert (2006) consider them as" researchers" and Ferrary (2008) such `Rand D researchers`. The recent term "knowledge worker" (Bouchez, 2006, Chaher and Dhen,2007) is adopted here as "workers whose activitiesare mainly centered, on the creation, production, capitalization, dissemination and transmission of knowledge "(Bouchez, 2006). This one is the ultimate source of innovation.

The question here about these knowledge workers is the managerial practices required to manage them. Does he exists a specific way to manage them according to their specific needs or it's enough to align their management with other employees (Chanal et al., 2005)?

Zankoa et al. (2008) note, in this case, in spite of its positive impact, human resource management receives little attention during the implementation of the strategy of innovation.

Based on our literature review, we can suppose that a specific management must be adopted for these specific competences. Many researches show that some HRM practices can affect knowledge generation. Brian et al. (2002) highlighted the major issue of selective recruitment; Horwitz et al. (2006) insisted on the flexibility of work and autonomy, Chaher and Dhen (2007) show, for example, the impact of"four HRM practices, individual responsibility, recruitment, training and the compensation system "on exchange and sharing of knowledge.

However, this conclusion cannot be generalized for a specific HRM practices due to the impact of cultural rules(Horwitz et al., 2006) and organizational context (Ferrary ,2008).

So, we are obliged in this research to identify a panel of HRM practices noted policy that promotes all innovation. It is a question to establish a critical path between HRM practices as a holistic system and innovation as a strategy especially academic innovation.

2. HRM policies

To take advantage of HRM, Beugelsdijk(2009) considers that HRM practices need to be used on a global HR strategy including organizational aspects.

Cooke and Saini (2010) have recently pointed problems of non-alignment between HRM practices and organizational goals, which delimit its performance and reduce its positive impact as a strategic partnership.

In general HRM practices can be disconnected and adopted in different way. This can affect its performance. Some authors suppose that HRM practices can be, often, sources of obstacles to innovation (Gosselin, 1988) and can be a synonym of rigidity if we have some practices adopted in the same way in all organizations.

In other words, it is better for our research to adopt this approach of policy than some practices. We are looking for coherence and synergetic harmony between all practices which can stimulate innovativeness through a dynamic model. Here interaction and complementarity is represented by the concept of HRM policy.

To identify HRM policy adopted here, we are obliged to define policy and to translate it on human resource management practices with their different objectives to establish a useful and practical policy.

In general, policy is a formal statement of principles or rules that members of organization must respect. Each policy addresses an important aspect of an organization's mission or operations. Based on this, HRM policy can be defined as principles or rules adopted by everyone for the application of HRM practices and which must be on harmony with mission of organization.

We note here, that this policy can be qualified as strategic because it contributes on the mission. Now, next step is to identify components of this policy admitted as strategic. It is about identifying the best practices of HRM policy.

Gosselin, Le Louarn and Wils (2001) propose a model with a strategic approach of HRM in order to consolidate this important aspect. This one considers that to be strategic, some competences must be developed according to a policy of HRM, incitation and benefits also must be defined in this way to maintain the progress of team working according to organizational objectives. Added to this, they present working context and organizational culture as determinants of HRM policy.

If we have to explain these components and the importance of each one for a HRM policy having a strategic effect, the first step will be the development of competences, especially the individual competences, the acquisition, the application (Defélix and Klarsfeld, 2005) and finally the development as required.

Then, these individual competences must be shared and assimilated on an organizational level to generate an organizational learning process (Argyris et Shon, 1978).

This depends on the organizational context (Auger, 2010; Le Roy and al., 2004). If this one is based on communication and exchange between employees, the transfer on the collective level can be faster and more efficient.

The organizational culture is, also, important to establish this context through history and social relations. It is a “particular ways of conducting organizational functions that have evolved over time... [These] practices reflect the shared knowledge and competence of the organization.” (Kostova’s, 1999).

Guérin and Wils (2002), pleaded to a systemic and integrated approach of HRM practices which can support innovation. According to their research, innovative or virtual organizations, such as High-tech firms, use the so-called "free agent" which integrate complex tasks, expert commitments or highly qualified professionals, autonomy, evaluation and reward depending on the results, co-responsibility for training and career.

At all, six components of a HRM policy are identified and maintained here in order to make a synergetic system by exceeding the effect of contradictions of some management instruments.

Table 1. List of components of HRM policies

Components	Authors
Staffing practices	Youndtandal. (1996); Defélix and Klarsfeld, (2005); Jérez-Gomez et al., (2005)
Employees development (training)	Guérin and Wils (2002); Auger (2010)
Compensation	Guérin and Wils (2002)
Employees relations (organizational culture)	Guérin and Wils (2002)
Communication (organizational context)	Guérin and Wils (2002)
Promotion (career)	Guérin and Wils (2002)

3. Academic innovativeness

According to literature review, innovativeness can be defined as the ability to innovate or preparing a specific context in which innovation can happen (Hult and al, 2005; Siguaw et al, 2006).

We must distinguish between innovativeness and innovation. In general, we admit that innovation has a final output with different forms but innovativeness is the first step for innovation. In specific way, innovativeness can be assimilated to the capacity to introduce and adopt innovation in different levels (Hult and al, 2005 ; Kundu and Katz, 2003).

Innovativeness such a construct has been defined in different ways and different levels.

As a result of our literature review, we will adopt the definition of organizational innovativeness as: “an organization’s overall innovative capability of introducing new products to the market, or opening up new markets, through combining strategic orientation with innovative behavior and process”

In this sense, organization will be an academic unit which provides services to students by teaching and training in order to help them for the professional career. In fact, product can be appreciated by new way to get information; market innovativeness can be the appreciated by the new way of collaboration between universities and industrials. In this respect the role of universities has changed. But all of this depends on an innovative behavior of student and academics according to the specific processes or manner to do.

In this research academic innovativeness is appreciated with reference to five dimensions of innovativeness presented by Wang and Ahmed (2004) translated in the academic field and his specificities. These dimensions are: behavior, product, process, market and strategic innovativeness.

4. HRM policies and academic innovativeness

In this part, it is useful to remember that HRM policy reflect a whole construct contains many of HRM practices having specific relationships according to a special organizational context and cultural effect.

The link between HRM practices and innovation was treated differently. The majority of them examine the nature and impact of these practices, while others draw attention to the contingency factors on organization or societal impact.

According to our object of research, all these references will be presented below and analyzed to determine our hypothesis related to our model of research. The first level of this literature review is related to the link between practices and innovativeness.

Next, we will try to establish a thesis links with others determinants of HRM policy. Finally all of this will be translated to the academic innovativeness, the most important concept of this article.

4.1 HRM practices and innovativeness

At this level, innovation will be defined as “a function of a firm’s ability to create, manage and maintain knowledge. This one can be created by HRM and may play an important role as drivers of innovation’ (Winne and Sels , 2010). So we will try to identify all variables related to HRM and can stimulate this ability to generate knowledge.

Added to this, the notion of innovativeness is assimilated to a primordial propensity to innovate for the organization's success in the modern economy (Hatchuel and Weil, 2002), since it represents a form of initiation to innovate by preparing a fertile ground for its development and implantation.

Leede and Looise (2005) consider that recruitment is an important variable for innovation. In the same way, Cabello-Medina et al. (2011), based on a quantitative study carried out on 85 firms, conclude that in particular a selection based on the potential learning and interpersonal skills contributes to the development of competitive advantage of human capital, which has a direct and positive effect on the innovation of the company;

Cooke and Saini (2010) note that empowerment of employees, a high level of autonomy and flexibility, as well as performance-based on recognition stimulate innovation.

Shipton et al. (2006), based on a study of 22 industrial enterprises in England, highlight the importance of team work, while de Saa-Perez and Diaz-Diaz (2010), insists on the role of stability in employment and formalization. Others researchers, evoke training (Shipton et al., 2006) and learning (Shipton et al., 2005)

This approach of HRM as practices can provide knowledge which stimulates innovation. But how to manage them in the right way? Is it better to use it as isolated practice or coherent whole of practices and processes?

4.2 HRM policies and innovativeness

Many researches consider that HRM which fosters innovation, must be aborted in a systemic or strategic approach. Schuler and Jackson (2002) have developed a contingency approach between innovation strategy and some HRM practices according.

Searle and Ball (2003) found that many organizations attach importance to innovation but fail to translate this importance within coherent HRM policy. Here coherence will be treated between practices and between HRM practices and the organizational context.

Our general idea was that knowledge created in the individual level must be shared to the organizational level through communication and limited by the cultural context.

Finally to maintain this dynamic process we need training for employee's development and encouragements by the way of material stimulators (compensation) or moral (promotion)

Senge (1990) insists on the importance of the concept of information sharing and its determinant character for knowledge creation and sharing.

As noted by Martinet (2003), HRM policy must mobilize all skills, absorb new skills, combine them in different way, in order to launch new products that are difficult to imitate.

Hurley and Hult (1998) demonstrated that innovation is positively related to a culture that promotes adaptation and innovation.

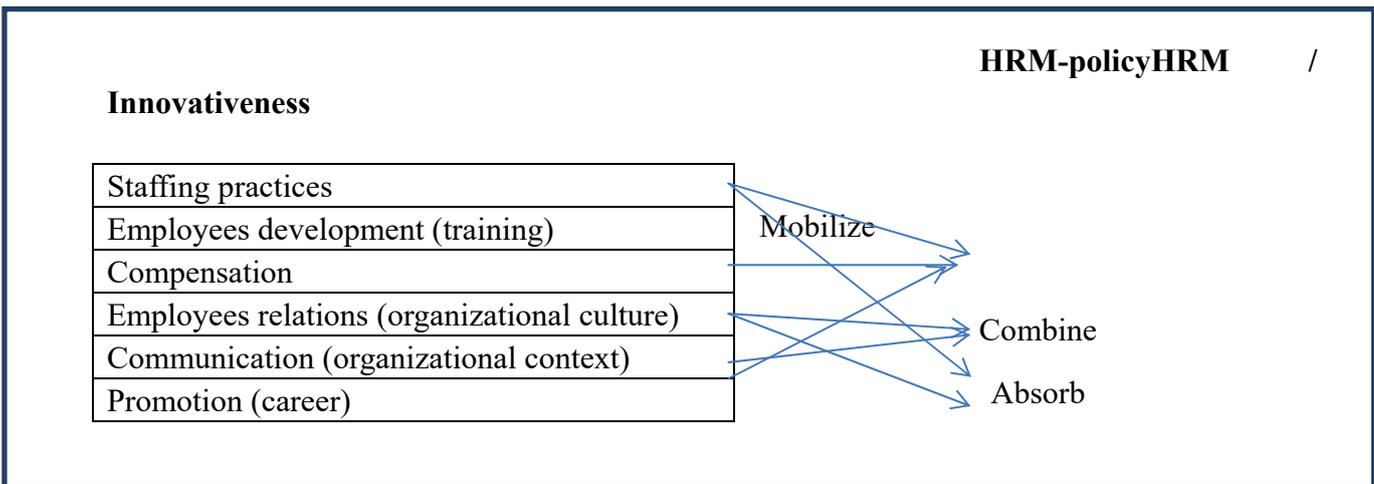


Figure 1. The relation between HRM policies and innovativeness process

All hypotheses developed here can be summarized at the model presented below:

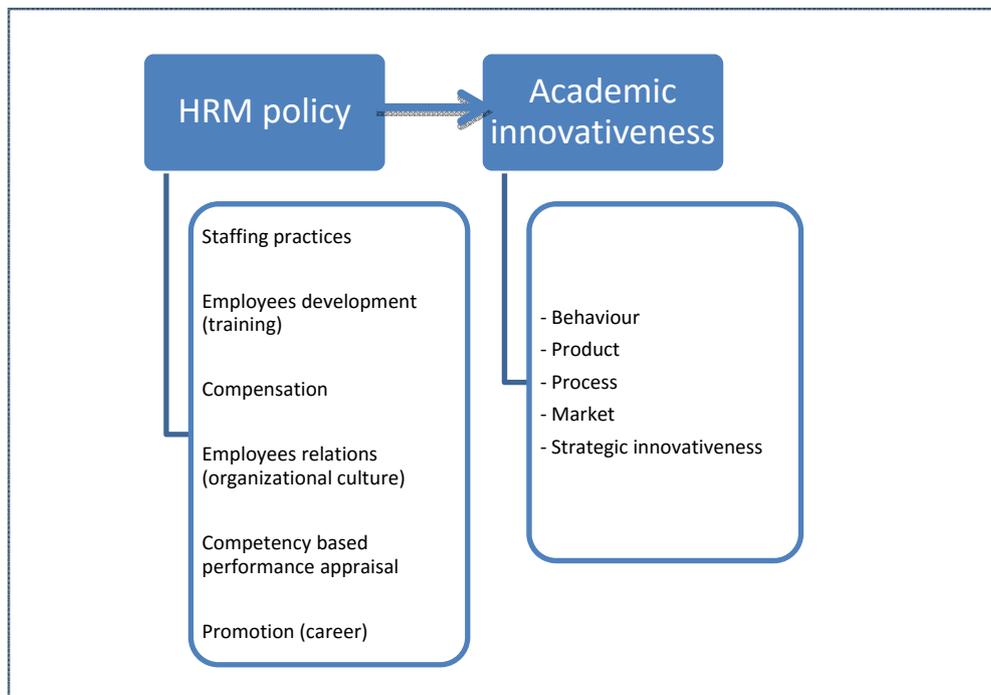


Figure 2. The relation between different dimensions of research

5. Methodology

In this part, we will present details related to our empirical investigation based on quantitative approach. Items and data collection process will be presented too.

5.1 Research goal and instruments

The aim of this study is to determine the effect of HRM policies on academic innovativeness according to an exhaustive approach of HRM practices.

Eventually, based on our literature review, HRM policies are represented by six dimensions.

Staffing practices scale was adopted from Youndtand al. (1996) with reference to the two levels administrative and strategic. For our interest, only the administrative approach is adopted. This one is represented by 7 items. For each practice, we have to indicate the degree of adoption.

Eventually, based on the literature (Youndtandt al, 1996; Mac duffie, 1995; Collins et Clark, 2003) we identified sixteen item scale for the five aspects of HRM policy including employees development (training), compensation, employees relations (organizational culture), communication (organizational context) and promotion (career).

For others researchers, HRM policies are considered as a multidimensional construct which must be analyzed by dimensions (Dessler, 2002; Ulrich, 2001). At all 40 items was adopted based on Demo and al. (2012) because these scales satisfy what we are looking for. In other words, it takes HRM policies through an exhaustive approach such our conception adopted here.

Then, the scale of academic innovativeness was camped up with five dimensions mentioned and twenty items from Wang and Ahmed (2004). This one has been used in previous research and tested on the different context of analyze. At all 30 items related to the five dimensions are admitted here.

Table 2. Items of research constructs

Dimension	Numbers of Items	Authors
Staffing practices	6	Dessler (2002) Mathis and Jakson (2003) Armstrong (2009)
Training	6	Sisson (1994) Dutra (2001) Dessler (2002)
Compensation	5	Dutra (2001) Bohlander and Snell (2009) Gerhart (2010)
Organizational culture (working condition)	6	Dessler (2002) Bohlander and Snell (2009) Loudon and Johnstone (2010)
Competency based performance appraisal	5	Dutra (2001) Mathis et Jackson (2003)
Promotion	12	Ulrich and al. (1991) Siqueira (2008)
Behaviour	5	Miller and Friesen (1983) Rainey (2003) North and Smallbone (2000)
Product	6	Shumpeter (1934) Lyon and al. (2000) North and Smallbone (2000)
Process	8	Shumpeter (1934) Lyon and al. (2000) North and Smallbone (2000)
Market	4	Shumpeter (1934) Capon et al. (1992) North and Smallbone (2000)
Strategic innovativeness	7	Miller and Friesen (1983) Rainey (2003) Avlonitis et al. (1994)

5.2 Sample and data collection

The data collection was conducted on Qassim University. We have at least 60 responses from academic staff. The questionnaire was administrated face to face and by email. The data collection was carried out on three weeks.

6. Analysis and results

The quantitative approach of research is adapted to here. The first step was a principal components factor analysis with varimax rotation to examine the dimensionality of measures.

6.1 Factor analysis

In general principal component analysis is used to determine the multidimensionality of construct. In this research, we have to identify the six components of HRM policies admitted from literature and the five components of academic innovativeness used on our model of research.

The first step of factor analysis was the Keiser Meyer Olkin (KMO) which measures the adequacy of items for each variable. The KMO for our first variable (HRM policies) was 0.77 and 0.83 for the second one (academic innovativeness), this supported a factor analysis.

The second step was the total variance explained for each variable and the contribution of each item to factors identified based on this analyze.

Table 3 shows results of this step for HRM policies with details related to loadings of items in each factor with the eigenvalue and percent of this one compared to the total variance explained for the construct.

The six factors dimensions selected explain over than 50% of the variance among the data. But only two factors show a strong contribution to the construct. This difference explain why we have proceed to the hierarchical classify for the test of ANOVA.

As Table 3 indicates, the staffing practices is represented by the first dimension with six items and explained 19.83 % of total variance. Training, six items, explained 10.8 % of the variance. Working condition emerged with six items, too and explained 7.9% of the variance. For the rest of factors we can consider that the contribution of each one is the same and have the same importance as components of HRM policies: compensation, promotion and Competency based performance appraisal.

Table 3. Total Variance Explained for HRM policies

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.935	19.838	19.838	7.935	19.838	19.838
2	4.348	10.870	30.708	4.348	10.870	30.708
3	3.187	7.966	38.674	3.187	7.966	38.674
4	2.442	6.104	44.778	2.442	6.104	44.778
5	1.912	4.781	49.559	1.912	4.781	49.559
6	1.769	4.422	53.981	1.769	4.422	53.981

Extraction Method: Principal Component Analysis.

Results of factor analysis related to the academic innovativeness as a construct are represented on the table 4. After analysis, we can suppose that this variable can be explained by others dimensions added to these admitted here because the total variance explained show that the variance can exceed 80% with 7 factors not only five defined here.

We have chosen to admit the five dimensions as shown on our model of research. In this case the range of variance explained is about 64%.

The first factor identified with 27% of variance is represented by the product. This maintains the idea of the importance of the new product for any innovation. The character of newest must be translated on tangible way.

The second factor is related to the process with 17% of total variance. Here, it is easily to innovate on process than another type of innovation because we are talking about service which has some specifics.

The third factor, with five items explains 8% of variance and contains all items issued from the behavioral dimension of academic innovation. Based on this, we can conclude that to generate academic innovative a voluntary approach of actors must be adopted.

Table 4. Total Variance Explained for academic innovativeness

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.740	27.881	27.881
2	2.887	16.981	44.862
3	1.280	7.528	52.390
4	1.035	6.090	58.480
5	.945	5.556	64.036

Extraction Method: Principal Component Analysis.

6.2 Reliability analysis

Academic innovativeness and HRM policies were submitted to reliability analysis and reliability scores ranged from 0.571 to 0.834. The table 5 shows this score for each dimension and also the number of items related to each one.

Table 5. Internal reliabilities of academic innovativeness and HRM policies dimensions

	Cronbach's Alpha	N of Items
Staffing practices	0.728	6
Training	0.834	6
Compensation	0.611	5
Organizational culture (working condition)	0.714	6
Competency based performance appraisal	0.571	5
Promotion	0.802	12
Behaviour	0.732	5
Product	0.634	6
Process	0.704	8
Market	0.678	4
Strategic innovativeness	0.741	7

In this state of analysis, dimensions are tested and the composition of our constructs is detailed. The next step of this research is the measure of dependence and effect of HRM policies. For this, a test of Pearson will be presented in order to evaluate the correlation between these variables as mentioned in the beginning of this study.

Then, the ANOVA test is detailed in order to evaluate the effect of HRM policies on academic innovativeness. For this test, a hierarchical classification is done to differentiate six groups of HRM policies according to the level of use of some dimensions. These systems will be detailed on the last part of the analysis.

6.3 Correlation analysis

Correlation analysis insists on the positive and strong effect of HRM policies on the academic innovativeness. This one, show that the level of correlation between academic innovativeness dimensions is strong. This observation confirms the hypothesis of the interdependence between factors of innovation.

Table 6. Correlations of HRM policies and academic innovativeness dimensions

Variable	Moy.	1	2	3	4	5	6	7	8	9	10
1- Staffing practices	3.77										
2. Training	3.38	.212**									
3. Compensation	2.82	.250*	.324*								
4. working condition	3.26	.187	.256*	.286**							
5. Comp perf app	3.21	.356**	.421**	.176*	.201						
6.Promotion	2.77	.082**	.367**	.291*	.219	.214					
7. Behavior	2.72	.241*	.241*	.423**	.326*	.467*	.501**				
8. Product	3.45	.561*	.531	.326**	.254*	.231	.232**	.411*			
9. Process	3.41	.325	.236*	.289	.499*	.286**	.176*	.372*	.323*	.377**	
10.Market	2.66	.433*	.278*	.274**	.291	.264	.234**	.321*	.497	.203**	
11.Strategic innovativeness	2.89	.236*	.259*	.199*	.223	.261	.211**	.289*	.254*		.511**

P**<0.01 ; p*<0.05

As we can see from the table, correlations among dimensions are all positively related.

The range of this correlation between HRM policies dimensions range from.18 to.42 and these of academic innovativeness range from.21 to.56

Some high values can be detected and must be analyzed, the highest correlation is between training and product innovativeness. Then, we can associate compensation with behavior innovativeness, work condition with process innovativeness, promotion and behavior innovativeness and finally market innovativeness and strategic innovativeness are positively and strongly related.

6.4 Test ANOVA

HRM policies dimensions were entered into the equation as a determinant for each academic innovativeness dimensions. We identified six groups of HRM policies according to the dimension admitted as important based on the frequency of its use.

After this we are obliged to measure the effect of each one on the academic innovativeness with all dimensions, results of test ANOVA are represented below:

Table 7. Test ANOVA

	1	2	3	4	5	6
Variables						
Staffing practice	3.88	2.12	2.01	1.07	1.34	2.43
Training	2.03	3.94	2.34	2.45	1.97	2.23
Compensation	1.45	2.43	3.83	1.18	2.31	1.97
working condit	1.22	2.34	1.99	3.76	2.41	1.88
Comp perf app	1.56	1.24	1.78	2.45	3.93	1.75
Promotion	2.11	1.98	1.74	2.90	1.82	3.04
Behavior	2.57	2.05	4.01	2.76	2.21	3.88
Product	3.97	3.76	2.09	1.87	2.47	2.11
Process	1.78	2.90	1.75	3.91	3.45	2.34
Market	2.86	2.77	2.98	2.87	2.01	2.13
Strategic innovat	2.76	2.68	2.55	1.99	2.24	2.06

7. Conclusion

Based on our results, a positive effect of HRM policies on Academic innovativeness is detected and detailed in different way. An exhaustive approach of each concept is adopted according to literature review. Added to this, we tested an integrated heuristic model related to the question of the HRM policy with the imperatives of innovativeness. The results of this study indicate that the measure of academic innovativeness must be appreciated by seven dimensions not only five.

Majority of the correlation indicators shows that HRM policies improve academic innovativeness in particular training; work condition and Competency based performance appraisal had a highest correlation with all academic innovativeness dimensions.

This analyze of the variance explained for our variables, provide empirical evidence that the academic innovativeness depend in majority on behavioral dimension and process. In the other hand, the HRM policies in this case area distinct construction which depends on training and promotion.

As a conclusion, we can argue that the higher level of HRM policies mean a greater level of academic innovativeness.

This study has empirical implications for practitioners who aim to improve academic innovativeness on the business school. For each dimension of it, we have identified the adequate system of HRM policies.

But our principal contribution was the identification of the 'one best way' to innovate in business school: the behavioral dimension is assimilated to a behavioral commitment towards innovations which need compensation and promotion, the product dimension is evaluated by the degree of novelty products represented here by the innovative service related to the field of education or a collaborative process between universities and industrials need specially training and staffing practices, the process of academic innovativeness contains new ways, techniques or technology to study and communicate with students is generated by two HRM policies which are work condition and competency based performance appraisal, market and strategic innovativeness are correlated. So, these dimensions are correlated with the majority of HRM policies with a little difference at the level of staffing practices. This last one affects strategic innovativeness more than market innovativeness.

At the end of this research, we note that the dimensions of academic innovativeness are interdepends and can be appreciated by others dimensions to rich our model of research.

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