BARNEY'S VRIO FRAMEWORK AND PERFORMANCE IN SPORTS ORGANISATIONS

Marco Arraya
Universidade Aberta, Lisboa, Portugal

Aim of abstract/paper - research question

Growing competition in the sports industry forces sports management to understand how to utilize their resources or assets in the best way to compete. It has been recognized that the resources of an organisation are the foundations of organizational performance. Thus, cultivating a culture of resource effectiveness is a responsibility of everyone, therefore the management as a major task the efficiency of the resources with positive effects on performance. The resource-based view (RBV) approach can provide a framework for understanding the role that core resources will play in the organisational performance of organisations involved in sports industry.

This research investigates the following questions: (Q1) given the sports organisation's resources, which group of resources have a positive effect on performance? (Q2) Do personnel-based resources interact in a positive way with tangible and intangible resources? (Q3) Do the external (competitors) and internal (stakeholders) factors may enable (or inhibit) the sport organisation to realize the potential represented by their resources; and, (Q4) what are the sports organisation's resources considered most important for success by sports workers?

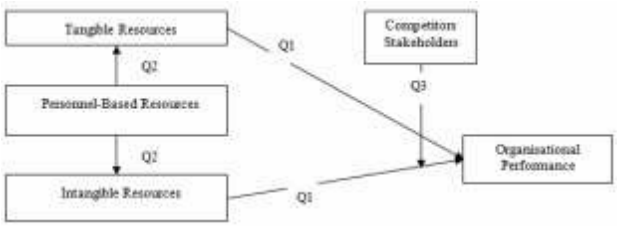

Figure 1 - Conceptual Framework

Theoretical background or literature review

The RBV can be a justification of performance differences between organisations that assumes that organisations that perform better have same resources that confer them an advantage (Barney and Arikan, 2001). The RBV argues that resources when simultaneously valuable, rare and imperfectly imitable and that the organisation can make use of it (VRIO) are a source of competitive advantage (Barney and Hesterly, 2009). As a strategic line of thought the RBV helps the organisation to analyses their strengths and weaknesses (Curado and Bontis, 2006).

The fundamental inference of RBV is that managers should seek to develop and exploit the organisation's resources which possess VRIO characteristics (Barney, 1995). Indeed, Aaker (1989) identified the pathway to competitive advantage as consisting of (1) identifying the appropriate resources and skills, (2) selecting the resources and skills which will be pertinent in the future, and (3) implementing programs which will develop, enhance, and/or protect these resources and skills. There is the notion that organisations which are not performing well will have the tendency to benchmark and copy the resource configurations of high performing organisations (Barney, 1995; Conner and Prahalad, 1996). However, if a high performing organisation has VRIO resources it will be very difficult for competitors to duplicate them because their processes and mechanism (Peteraf, 1993; Hoopes, Madsen and Walker, 2003).

Methodology, research design and data analysis

The cross-sectional survey method within the positivist tradition of scholarly inquiry was used in the current work. Online respondents were recruited from an internet professional network (LinkedIn). The participants were 78.62% male and 21.38% female. Mean participant age was 38.92 (SD = 10.05), ranged from 19 to 69 years old and 88.05% had a university degree [bachelor's degree (34,48%) , master's degree (41,93%) and PhD's degree (11.74%)].

Structural equation modelling (SEM) was used to test the hypotheses of the work aided by AMOS 21.0. Using Anderson and Gerbing's (1988) two step approach, this study developed and confirmed an effective measurement model using confirmatory factor analysis. Subsequently, the study analysed the structural model depicting the hypothesised relationships of the constructs. Respondents were also requested to rank the top three resources using the three resource constructs of the research. A weighted score was calculated for each of the items in order to obtain a clear ranking. The formula used to calculate the weighted score was designed by Simon (2010).

Measures

All measures were assessed using a five-point Likert-type scale. According to Barney and Hesterly (2009:66) "[..] resources in RBV are defined as the tangible and intangible assets that a firm controls that it can use to conceive and implement its strategies."
Tangible resources (TR). In this study tangible resources include financial and physical assets (Andersen and Kheam, 1998; Grant, 1991). Tangible resources were measured using three items adopted from several authors.
Personnel-based resources (PBR). According some authors (Barney and Hesterly, 2009; Bharadwaj, 2000; Grant, 2002; Simon, 2010) personnel-based resources are attributes of individuals and teams which have an important interest for performance in combination with others resources. Personnel-based resources were measured using nine items adopted from different authors.
Intangible resources (IR). Intangible resources include those factors that are non-physical, non-financial in nature (Andersen and Kheam, 1998) and non-personnel-based resources. Intangible resources were measured using six items adopted from several authors.

Competitors and Stakeholders (CS). Competitors are organisations that produce and sell the same or very similar goods. Stakeholders are the groups to whom the organisation owes an obligation based on their organisation's participation (Phillips, 2003). The construct were measured using four items.

Performance (PER). The performance is the dependent construct and it is characterised by the sports industry worker's perception about two items adopted from Jaworski and Kohli (1993). The scales measured the respondents for their subjective assessment of their organisation's overall performance and face the major competitors on the last three years.

Results, discussion and implications/conclusions

In order to assess reliability, two items were dropped from further analysis. After deleting, all constructs showed acceptable levels of reliability, as evidenced by the high internal consistency coefficients (Cronbach Alpha) ranging from 0.52 (TR) to 0.84 (PBR). All factor loadings were significant (p<0,001). The measurement model using maximum likelihood estimation (ML) technique demonstrated an acceptable fit with the data (χ2=548.555; df=193, p<0,001; GFI=0.906; CFI=0.898; NNFI=0.853; RMSEA=0.062). The correlations between PBR and TR (r=0.528), PBR and IR (r=0.950) were significant (p<0.01). The results of the measurement model suggest that the constructs used in this study possessed satisfactory level of construct validity. Results from fitting the structural model to the data using ML technique demonstrated an acceptable fit with the data by χ2=586.99; df=198, p<0,001; GFI=0.901; CFI=0.889; NNFI=0.842; RMSEA=0.064. Overall, the empirical results supported the conceptual model.
Following the theoretical approach of RBV, this work investigated the importance of TR, PBR, IR, and CS in order for sports organisations to achieve a positive organisational performance. The estimation of an SEM allowed understanding the general causal relationships between the constructs and performance (table 1).

Table 1. State of confirmation of the hypotheses (ML)

Hypotheses	Relationship	Estimate (*unstandardized*)	S.E.	p-value	Result
Q1	TR → PER	0,059	0,078	0,758	Not supported
	IR → PER	0,236	0,123	1,980 *	Supported
Q2	PBR → TR	0,743	0,087	8,554 ***	Supported
	PBR → IR	0,746	,076	9,860 ***	Supported
Q3	CS → PER	0,344	0,120	2,876 **	Supported

Regarding the TR latent construct in this study has not influenced in sports organisations performance. The reason for this could be the number of items evaluated. The IR latent construct, even with a lower level of significance has influence in sports organisations performance. The items "product quality" (1.326, p<0.001), "organisational processes" (1.309, p<0.001) and "innovation" (1.290, p<0.001) are the ones that contribute more in terms of this construct. These three indicators, especially organisational processes and innovation can help sports organisations improving efficiency and to achieve a better performance.

Relatively to PBR, the significant items are employee loyalty (0.946, p<0.001), technological know-how (0.945, p<0.001), staff experience (0.892, p<0.001) and top management team (0.892, p<0.001). Thus, these results show the importance of personnel attitude, skills and knowledge for a good performance. Finally, the items expressing the CS construct are all highly significant, demonstrating the active power of the competitors and organisation's stakeholders.
Moving to the structural model, the coefficients estimated for direct relationships show significant coefficients with expected positive sign (except TR PER). In particular, hypotheses Q2 and Q3 are confirmed, whereas hypothesis Q1 is partial confirmed, because TR to PER is not and IR even with lower level it's. Table 2 showes the ranking of the three resources that were considered most important by the respondents.

Table 2. Sports worker's views on the resources necessary for success

Resource	Construct	Mean (Highest = 5)	Rank score
Staff competence	PBR	4.44	427
Reputation	IR	4.40	313
Financial capital	TR	4.05	302

The PBR "staff competence" is the stand out required resource, and can be defined by the skills and abilities a person has developed and the level of success of a person's performance (Schultheiss and Brunstein, 2005). However respondents have also noted the importance of "reputation" and "financial capital" resources that interrelate well. Reputation can be viewed as the external stakeholders' perceptions about an organisation (Davies and Miles, 1998) and creates a significant strategic competitive advantage over competitors because it is an intangible and VRIO resource that helps an organisation to differentiate itself from others (Barney, 1995). Financial capital is the last resource in the top podium and is assumed to be the full "money and credit pyramid" (Allen, Bedford and Becht, 2011). According to Murthy (2011) "staff competence" as a dimension of human capital is antecedent to organisational capital which then translates into financial capital.

The correlations between "staff competence" and "reputation" (r=0.372; p<0.01), "staff competence" and "financial capital" (r=0.173; p<0.01), and "reputation" and "financial capital" (r=0.290; p<0.01) were significant. Since a strategic advantage is associated with a favorable reputation and organisation's resources have to generate cash flows always, as a result staff competence is a resource which is useful in generation of cash flows (Grajkowska, 2011).

In conclusion, the findings of this study reinforce the argument for the strategic potential of PBR and IR as sources of competitive advantage. Further proof is the influence of CS on organisation decisions and welfare. Thus, the argument that IR and CS, especially stakeholders, abilities to provide organisations with a frame over competitors in the form of performance could draw from a VRIO and heterogeneous ability which enables sports organisations' intangible resources as the more effective influence ones in performance. These empirical results strengthen the argument of the value of intangible and personnel-based resources to create competitive advantage through enabling resources and allows sports managers a validated framework to assess this value. Although the present study adds contributions on the subjects involved at macro level, further research will be focused on specific resource configurations, relations between resources, as well as investigating other kinds of resources.

References

- Aaker, David A. (1989). Managing Assets and Skills: The Key to a Sustainable Competitive Advantage. *California Management Review*, 31(2), pp. 91-106.
- Allen, R., Bedford, N. and Becht, M. A. (2011). A "human ecology economics" framework for Eastern Europe. *International Journal of Social Economics, 38* (3), 192-208.
- Andersen, O., Kheam, L.S. (1998). Resource-based theory and international growth strategies: an
- exploratory study. *International Business Review* 7, 163–184.
- Anderson, J., Gerbing, W. (1988). Structural equation modelling in practice: A review and recommended two stage approach. *Psychological Bulletin* 27(1), 5-24.
- Barney J.B., Arikan A. (2001). *Resource-based view: origins and implications*. In The Blackwell Handbook of Strategic Management, Hitt M, Freeman R, Harrison J (eds). Blackwell: Malden, MA; 124–18
- Barney, J.B. and Hesterly, W.S. (2009). *Strategic management and competitive advantage: concepts and cases*. Prentice Hall 3rd edition.

- Barney, Jay B. (1995). Looking Inside for Competitive Advantage. *Academy of Management Executive*, 9(4), pp. 49-61.
- Bharadwaj, A.S. (2000). A Resource Based Perspective on Information Technology Capability and Firm Performance: An Empirical Investigation. *MIS Quarterly*, Vol. 24, No. 1 (2000): 169-196.
- Conner, K. R. and Prahalad, C. K. (1996). A resource-based theory of the firm: Knowledge versus opportunism. *Organization Science*, 7: 477-501
- Curado, C. and Bontis, N. (2006) The knowledge-based view of the firm and its theoretical precursor. *Int. J. Learning and Intellectual Capital*, Vol. 3, No. 4, 2006.
- Grajkowska, A. (2011). Valuing intellectual capital of innovative start-ups. *Journal of Intellectual Capital, 12*(2), 179-201.
- Grant, R.M. 2002, *Contemporary Strategy Analysis*, 4 edn, Blackwell Publishers Inc, Oxford.
- Hoopes, D.G, Madsen T.L. and Walker G. (2003). Guest editors' introduction to the special issue: Why is there a resource-based view? Toward a theory of competitive heterogeneity. *Strategic Management Journal*, October Special Issue 24: 889–902.
- Jaworski, B.J. & Kohli, A.K. (1993). Market orientation: antecedents and consequences.
- *Journal of Marketing* 57 (3) 53-70.
- Murthy, V. and Mouritsen, J. (2011). The performance of intellectual capital mobilizing relationships between intellectual and financial capital in a bank. *Accounting, Auditing & Accountability Journal, 24*(5), 622-646
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14: 179-191
- Phillips, R. A. (2003). *Stakeholder theory and organizational ethics*. San Francisco: Berrett- Koehler Publishers.
- Schultheiss, O. and Brunstein, J. (2005), "*An implicit motive perspective on competence*", in Elliot, A. and Dweck, C. (Eds), Handbook of Competence and Motivation, The Guilford Press, New York, NY, pp. 31-51.
- Simon, A. (2010). Resources, dynamic capabilities and Australian business success. *Journal of Global Business and Technology*, Volume 6, Number 2, Fall 2010.