

An Exploring the Factors Structure of Human Resource of Supply Chain Management Based Entrepreneurship in Aceh, Indonesia

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Abstract— The entrepreneurial opportunities emerge when certain individuals have insights into the value of resources that others do not. The resources such as alertness of entrepreneurial, knowledge, and ability become their own right. This study is intended to explore the factors structure of human resource of supply chain management based entrepreneurship in Aceh, Indonesia. The questionnaires were sent to 175 managers in firm, and were received back for an 86% response rate from 175 managers. The first factor analyzed was structure of the human resources. The summated entrepreneurship scores for managers were correlated, and responses to the human resource and entrepreneurship items were made using multivariate analysis of variance. These results identify the factors of human resources that are very influential on entrepreneurship in cluster 1 are Entrepreneurial Ability and Entrepreneurial Innovation.

Keywords— Factor Analysis (EFA), Human Resources, Supply Chain Management, Entrepreneurship.

1. Introduction

Most frequently the research examining human resources in the entrepreneurship context has looked at the number of qualifications [1], the diversity of qualifications and experience [2], the productivity of personnel [3], the education and experience of top management teams [4]. Heneman, argue that such theories about human resources, cannot be extended to small and medium entrepreneurs and tend to be incongruent with the actual human resource issues encountered by small and medium entrepreneurship practitioners in the field [5, 6]. This study attempts to fill this gap by extending current entrepreneurship based human resource theories. Previous research on human resource suggests that configurations of human resource practices may lead to higher performance on the part of firms and become sources of sustained competitive advantage because these systems of practices are often unique and difficult to imitate [7]. There have been numerous

empirically-based studies that examine the relationships between entrepreneurship and organizational performance [1]. Although research on it has been prolific, relatively little is known about the integrative effect of firm resources such as the characteristics of entrepreneurs, human resources, and organizational culture on organizational performance, specifically based on the resource-based view of the firm.

2. Literature Review

2.1 Human Resource

Human resource as sustained competitive advantage and organizational performance. Therefore the quality of sustained competitive advantage resource must add value, rare and unimitated, and no adequate substitutes [8]. Human resource include such things as the experience, judgement, and individual intelligence. The criteria of sustained competitive advantage are positive value added, unique or rare, imperfectly imitable, and unsubstituted with another resource [9]. Human resource controlled by the firm in a direct relationship [10]. Focus on knowledge, skills, and abilities [11]. Competencies of human resource in organizations such as knowledge, skills, and abilities [12]. The human resource is considered as the first source of added value. Significant links existing between investing in the human resources management activities such as employment protection, profits share, evaluation, incentives, compensation, carriers, communication, and organisational effectiveness [10]. Value creation [13]. Based on these opinions, it can be claimed that human resources are qualified individuals with appropriate intelligence and experience in sustained competitive advantages.

2.2 Entrepreneurship

Entrepreneurship is defined as innovative behavior related to strategic orientation in achieving target of

profitability and growth [8]. Furthermore, important gaps remain in our understanding of the types of entrepreneurship and innovation models, which consequently limit our understanding of economic, social and technological contributions. Cites in [14] the individual innovating entrepreneur who bring new combinations that include new processes, new product, sources of supply, new markets and new form of organization, that entrepreneurial activity require to grow and develop any economy is traceable to individuals entrepreneurs. This emphasizes the role of the entrepreneurial knowledge user in the process that creates value for the entrepreneurial firm and ultimately contributes to the growth of industries products, regions development, and economies growths [2]. Alvarez & Busenitz, argue that the resource based view can theoretically inform and extend current research on entrepreneurship. They suggest to improve the entrepreneurial development process of cognition, level of discovery, understanding the number of market opportunities, and coordinated level of knowledge that inputs become heterogeneous outputs [3].

2.3 Human Resources based on Entrepreneurship

Currently what is needed in developing entrepreneurship is sustainable acquisition and development of new resources, especially human resources and new ways to reconfigure resources. Lately, new business models have emerged by utilizing digital transformation, are the result of new human resources [15-20]. The logical way in shaping entrepreneurs is to learn quickly and assimilate the implications of new changes for specific discoveries. Based on the literature review, this study explores the human resource factors and managerial characteristics of entrepreneurs can function as organizational competencies and become a source of sustainable competitiveness for the development and integration of organizational competencies. Correlation between qualify of human resources and the level of organizational performance in enhance a sustainable competitive advantage for the new entrepreneurship, has been studied [13], entrepreneurs must have managerial and psychological characteristics [21-24]. The aims of this research is exploring entrepreneur-based human resource factors. As is well known, that little research attention has been focused on human resource-based entrepreneurship [25]. There are various human resources in Asia, it is very valuable to see the relationship between human resource and entrepreneurship. And analyze entrepreneurial-based human resource factors. Entrepreneurship

has been considered to infulece the improvement of company performance [26], strong leadership and a centralized decision-making mechanism [11]. Thus, this research is intended to advance our understanding of human resource factors based on entrepreneurship.

3. Research Methodology

Survey instruments was used questionnaire directed at human resource managers was principally concerned with having them characterize the firm's human resource practices. The questionnaires were sent to 175 managers in firm, and were received back for 150 or 86% response rate from 175 managers. Using factor analysis to determine the human resources factors based entrepreneurship. And find 3 factors with eigenvalues greater than 1.0. that is explaining 58% of the variance has been determined in the data. Labels were assigned to each factor based on item loadings. The prevalent dimensions were: Entrepreneurial Knowledge, Entrepreneurial Experience, Entrepreneurial ability, Entrepreneurial Alertness, Entrepreneurial judgement, Entrepreneurial intelligent, Entrepreneurial competence, Entrepreneurial innovation, Entrepreneurial orientation. Reliabilities were computed for these factors, and an item analysis performed, resulting in a coefficient of 0.50. Accordingly, the summated entrepreneurship scores for managers were correlate, and responses to the human resource and entrepreneurship items were made using multivariate analysis of variance.

4. Results and Discussion

In spite of the fact that the human resource factors based entrepreneurship relationship is very complex, a human resource-based view points out the potential for managers to play an active role in developing such an advantage through focusing on human resources. In fact, very few other resources are under as direct a control of managers as human resources. The role of managers, then, is to recognize, develop, and exploit the human resources. In line with [14] stated that sustained competitive advantages must be found in the rare, imperfectly imitable, and nonsubstitutable resources. Based on the results of respondents' responses about human resource factors based entrepreneurship, and the results of analysis of variants of each human resource factor are as presented in the following table 1.

Table 1. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.628	
Bartlett's Test of Sphericity	Approx. Chi-Square	245.623

	Df	36
	Sig.	.000

The results show that KMO MSA 0.628 > 0.50 and Bartlett's Test of Sphericity (Sig) 0.000 < 0.05. it is said that the factor analysis in this study fulfilled the requirements.

Table 2. Anti-image Matrices

		Ent. Knowledge	Ent. Experience	Ent. Ability	Ent. Alertness	Ent. Judgement	Ent. Intelligent	Ent. Competence	Ent. Innovation	Ent. Orientation
Anti-image Covariance	Entre. Knowledge	.845	-.179	-.024	-.126	-.055	-.106	-.090	.062	.127
	Entre. Experience	-.179	.780	.031	-.035	.006	-.109	.015	-.133	-.166
	Entre. Ability	-.024	.031	.624	-.017	-.212	.025	.124	-.253	-.125
	Entre. Alertness	-.126	-.035	-.017	.638	.092	.090	-.150	-.228	-.219
	Entre. Judgement	-.055	.006	-.212	.092	.725	-.036	-.189	-.062	-.111
	Entre. Intelligent	-.106	-.109	.025	.090	-.036	.788	-.195	.038	-.136
	Entre. Competence	-.090	.015	.124	-.150	-.189	-.195	.729	.004	-.055
	Entre. Innovation	.062	-.133	-.253	-.228	-.062	.038	.004	.605	.146
	Entre. Orientation	.127	-.166	-.125	-.219	-.111	-.136	-.055	.146	.674
Anti-image Correlation	Entre. Knowledge	.608 ^a	-.221	-.034	-.172	-.070	-.130	-.115	.087	.169
	Entre. Experience	-.221	.718 ^a	.044	-.049	.008	-.140	.020	-.193	-.229
	Entre. Ability	-.034	.044	.614 ^a	-.027	-.315	.036	.184	-.412	-.193
	Entre. Alertness	-.172	-.049	-.027	.617 ^a	.136	.127	-.220	-.367	-.334
	Entre. Judgement	-.070	.008	-.315	.136	.668 ^a	-.048	-.260	-.093	-.159
	Entre. Intelligent	-.130	-.140	.036	.127	-.048	.667 ^a	-.257	.055	-.186
	Entre. Competence	-.115	.020	.184	-.220	-.260	-.257	.643 ^a	.006	-.079
	Entre. Innovation	.087	-.193	-.412	-.367	-.093	.055	.006	.571 ^a	.228
	Entre. Orientation	.169	-.229	-.193	-.334	-.159	-.186	-.079	.228	.598 ^a
a. Measures of Sampling Adequacy(MSA)										

Based on the output above, it is known that the extraction value for all variables is greater than 0.50, thus it can be concluded that all variables can be used to explain factors.

Table 3. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.633	29.252	29.252	2.633	29.252	29.252
2	1.550	17.217	46.469	1.550	17.217	46.469
3	1.042	11.579	58.048	1.042	11.579	58.048
4	.918	10.199	68.247			
5	.832	9.249	77.495			
6	.666	7.398	84.894			
7	.604	6.715	91.608			
8	.419	4.654	96.263			
9	.336	3.737	100.000			

Based on the table, the value of initial eigenvalues and extraction sums of squared loadings that can be formed is that there are 3 variations of factors, namely [2,633, 29.25%]; [1,550, 17.22%]; and [1,042, 11.58%], so the total component value is 58.05%. The correlation value of entrepreneurial knowledge with components 1,2 and 3 is 0.395,

0.330 and 0.510. while the value of entrepreneurial correlation ability with components 2 and 3 is negative at [-0.589, and - 0.238]. Correlation value of entrepreneurial knowledge with components 1,2 and 3 is 0.395, 0.330, and 0.510. while the value of entrepreneurial correlation ability with components 2 and 3 is negative at [-0.589, and - 0.238].

Table 4. Rotated Component Matrix^a

	Component		
	1	2	3
Entrepreneurial Knowledge	-.108	.147	.701
Entrepreneurial Experience	.169	.215	.644
Entrepreneurial Ability	.832	.112	-.037
Entrepreneurial Alertness	.464	.087	.596
Entrepreneurial Judgement	.497	.611	-.152
Entrepreneurial Intelligent	-.219	.707	.191
Entrepreneurial Competence	-.057	.661	.289
Entrepreneurial Innovation	.770	-.138	.299
Entrepreneurial Orientation	.302	.601	.149
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 11 iterations.			

Table 4 shows grouped factor 1 is entrepreneurial ability 0.832 and entrepreneurial innovation 0.770 group 2 is Entrepreneurial Judgment 0.611, Entrepreneurial Intelligent 0.707, Entrepreneurial Competence 0.661, and Entrepreneurial Orientation 0.601. while group 3 Entrepreneurial Knowledge 0.701, Entrepreneurial Experience 0.644, and Entrepreneurial Alertness 0.596.

Table 6. Variable groups of Human Resources

Factors	Variables
1	Entrepreneurial Ability and Entrepreneurial Innovation
2	Entrepreneurial Judgement, Entrepreneurial Intelligent, Entrepreneurial Competence, and Entrepreneurial Orientation
3	Entrepreneurial Knowledge, Entrepreneurial Experience, and Entrepreneurial Alertness

The specific individual competencies to build entrepreneurship, are fundamental to increase companies' ability to nurture and sustain innovation and make new venture creation [7]. There is empirical evidence to support the influence of human resource characteristics, of which individual competencies are required on entrepreneurship. Training and development programmes in more entrepreneurial firms were more likely to include high employee participation and active trainee involvement, be group oriented, assume a long-term or career perspective, be systematic and planned and be continuous or ongoing. The performance appraisals in these organizations included higher employee involvement and participation in the process, a greater emphasis on individual performance criteria, assess small and medium entrepreneurial outcomes or end results, a longer-term performance focus and explicit encouragement of innovative and risk-taking behaviours. Dimensions of human resource include Entrepreneurial Knowledge, Entrepreneurial Experience, Entrepreneurial ability, Entrepreneurial Alertness, Entrepreneurial judgement, Entrepreneurial intelligent, Entrepreneurial competence, Entrepreneurial innovation, and Entrepreneurial orientation very supportive in shaping human resources with entrepreneurial spirit.

5. Conclusion

These results identify the factors structure of human resources that are very influential on entrepreneurship in cluster 1 are Entrepreneurial Ability and Entrepreneurial Innovation, and for cluster 2 are Entrepreneurial Judgment, Entrepreneurial Intelligent, Entrepreneurial Competence, and Entrepreneurial Orientation. Therefore, an important role for the human resource function in the formulation and implementation of the company's strategy is needed in the improvement of the entrepreneurial spirit. In addition, the significant findings of each of the

underlying human resource dimensions identified through factor analysis show a relationship that is consistent with this proposition [22, 27]. Human resources management also provides those interested in entrepreneurship with a number of fertile opportunities for further research. A combined package of selection, training and appraisal options might have a differential impact on entrepreneurship than the sum of the impacts of the individual practices. In addition, the current study focused on middle level management. Subsequent work might examine whether the human resource practices that facilitate entrepreneurship differ by level in the firm. Not only will the manifestations of entrepreneurship vary at different levels of the firm. Additional research should be directed towards examining possible ways in which human resource practices interact with other organizational variables in affecting entrepreneurship. Examples of such variables include company structure, technologies employed, types of budgetary and control systems and stage of the organizational life cycle

References

- [1] Agarwal, M. N., & Chatterjee, L. (2007). Entrepreneurial Human Capital and New Venture Performance: In Search of the Elusive Link. *Academy of Entrepreneurship Journal*, 13(1), 1-22.
- [2] Agarwal, R., Audretsch, D., & Sarkar, M. (2010). Knowledge spillovers and strategic entrepreneurship. *Strategic Entrepreneurship Journal*, 4(4), 271-283.
- [3] Alvarez, S., & Busenitz, L. (2001). The entrepreneurship of resource-based theory. *Journal of Management*, 6, 755-775.
- [4] Bantel, K. A., & Jackson, S. E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal*, 10, 107-125.
- [5] Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17, 99-120.
- [6] Baum, J. R., & Locke, E. A. (2004). The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth. *Journal of Applied Psychology*, 89, 587-598.
- [7] Carland, J. W., Boulton, H. F., William, R., & Carland, J. A. (1984). Differentiating Entrepreneurs from Small Business Owners: A Conceptualization. *Academy of Management Review*, 9(2), 354-35.

- [8] Chandler, G. N., Honig, B., & Wiklund, J. (2005). Antecedents, moderators, and performance consequences of membership change in new venture teams. *Journal of Business Venturing*, 20, 705-725.
- [9] Dastmalchian, A., Lee, S., & Ng, I. (2000). The Interplay between Organizational National Cultures: A Comparison of Organizational Practices in Canada and South Korea Using the Competing Values Framework. *International Journal of Human Resource Management*, 11(2), 388-412.
- [10] Deeds, D. L., DeCarolis, D., & Coombs, J. E. (1998). Firm-specific resources and wealth creation in high-technology ventures: Evidence from newly public biotechnology firms. *Entrepreneurship Theory and Practice*, 22(3), 55-73.
- [11] Den Hartog, D. N., & R., M. V. (2004). High Performance Work Systems, Organizational Culture and Firm Effectiveness. *Human Resource Management Journal*, 14(1), 55-78.
- [12] Dierickx, I., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35, 1504-1511.
- [13] Hashimoto, M. (1981). Firm-specific human capital as a shared investment. *American Economic Review*, 71, 475-482.
- [14] Hayton, J. C. (2005a). Competing in the new economy: The effect of intellectual capital on corporate entrepreneurship in high technology new ventures. *R&D Management*, 35(2), 137-155.
- [15] Heneman, R. L., J.W., T., & S. M., C. (2000). Enterprises: Unanswered Questions and Future research Perspectives. *Entrepreneurship Theory and Practice*, 25(1), 11-26.
- [16] Kaur, A. (2018). HRM in Digital Era: Transformational Role and Challenges of HR professionals. *Journal of HR Organizational behavior Entrepreneurship development*, 2(02), 12-14.
- [17] Lado, A. A., & M., C. W. (1994). Human Resource Systems and Sustained Competitive Advantage: A Competency-Based Perspective. *Academy of Management Review*, 19(4), 699-727.
- [18] McKelvey. (1983). Organizational Systematics: Taxonomy, Evolution, and Classification. CA: University of California Press.
- [19] Morris, M. H., & Jones, F. F. (1993). Human resource management practices and corporate entrepreneurship: An empirical assessment from the USA. *The International Journal of Human Resource Management*, 4, 873-896.
- [20] Olutuase, S. O. (2014). Entrepreneurship Model for Sustainable Economic Development in Developing Countries. Proceedings of the International Conference on Innovation & Entr. Retrieved from Research Gate.
- [21] Sadler-Smith, E., Y, H., I, C., & B, B. (2003). "Managerial Behavior, Entrepreneurial Style, and Small Firm Performance. *Journal of Small Business Management*, 41(1), 47-67.
- [22] Seong, J. Y. (2011). The Effects of High Performance Work Systems, Entrepreneurship and Organizational Culture on Organizational Performance. *Seoul Journal of Business*, 17(1), 3-36.
- [23] Wright, P. M., McMahan, G. C., & McWilliams, A. (1993). Human Resources and Sustained Competitive Advantage: A Resources-Based Perspective. *Center for Effective Organizations*, 1-34.
- [24] Zahra, S. A., & J, G. C. (1995). Contextual Influences on the Corporate Entrepreneurship-Performance Relationship: A Longitudinal Analysis. *Journal of Business Venturing*, 10, 43-58.
- [25] Sadehpour, F., Far, M. G., Khah, A. R., & Akbardokht Amiri, M. A. (2017). Marketing Strategic Planning and Choosing the Right Strategy using AHP Technique (Case Study: Ghavamin Bank Mazandaran). *Dutch Journal of Finance and Management*, 1(2), 45. <https://doi.org/10.29333/djfm/5821>
- [26] Daneshfard, K., & Souri, A. R. (2017). The relationship between strategic human resource management by empowering employees, meli Bank branches in Tehran City. *UCT Journal of Management and Accounting Studies*, 5(1), 12-16.
- [27] Warner, S., & Kaur, A. (2017). The Perceptions of Teachers and Students on a 21st Century Mathematics Instructional Model. *International Electronic Journal of Mathematics Education*, 12(2), 193-215.