

Investment in Human Capital as a Strategy for Achieving Competitive Advantage

Abdelghani zaoui^{1*}, khaled ali²,

¹ University of El Oued (Algeria), Business management of sustainable economic enterprises
laboratory zaoui-abdelghani@univ-eloued.dz

² University of El Oued (Algeria), Ali-khaled@univ-eloued.dz

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Summary:

This study aimed to measure and analyze the impact of investment in human capital on achieving competitive advantage from the perspective of employees at the Mobilis Regional Directorate in Ouargla. To achieve this objective, a questionnaire was distributed to a sample of 30 employees at the regional directorate and analyzed using the Statistical Package for the Social Sciences (SPSS). The study found a positive relationship between human capital and competitive advantage. However, this relationship was insufficient due to the presence of other variables, particularly the technological dimension, which also impact competitive advantage given the nature of the company's activities.

Keywords: human capital, competitive advantage, investment in human capital, Mobilis.

* Corresponding author, Abdelghani zaoui, zaoui-abdelghani@univ-eloued.dz

I- Introduction :

The business market is witnessing numerous complexities and challenges, along with intense competition resulting from rapid technological developments and diverse changes in production factors. This reality calls upon organizations aspiring to excel and compete at the top of the business world to keep pace with these changes by improving their production processes and increasing reliance on knowledge economies. In this highly competitive environment, the majority of organizations seek to search for and attract competent human capital, and then train it to be capable of achieving competitive advantage, as it is the primary source of knowledge and the fundamental element capable of making a difference and achieving the organization's strategic objectives.

Accordingly, this study seeks to answer the following question:

How does investment in human capital (such as training, motivation, and skills development) contribute to enhancing the competitive advantage of the organization under study?

To address this question comprehensively, the following sub-questions were posed:

- What are the organization's policies regarding recruitment of competencies, skills development, and employee motivation to enhance human capital?
- How is human capital utilized in the organization to achieve competitive excellence (such as innovation, customer service, and operational efficiency)?
- What are the human capital investment tools adopted by the organization (such as training programs, participation in decision-making, financial and moral incentives), and what is their impact on employee performance?

Research Hypotheses

To achieve the desired results from the study, the following hypotheses were formulated:

- There is a statistically significant effect of investment in human capital on competitive advantage in the organization under study.
- There are statistically significant differences in the responses of study participants regarding the study dimensions attributable to demographic variables.

Significance of the Study

The theoretical significance of this study stems from the intellectual enrichment it can add to the university library in this field, alongside previous and similar studies. The study topic derives its importance from the significance of its variables, particularly human capital. The latter has become a formidable factor in the calculations of organizations aspiring to leadership or those moving toward a knowledge economy, as it represents intangible capital that effectively contributes to achieving competitive advantage. In the era of the knowledge economy, material resources or technology alone are no longer sufficient to ensure excellence; rather, investment in developing human resources and advancing their capabilities has become a critical factor in achieving leadership.

Study Objectives

Based on defining the research problem and its significance, the fundamental purpose of this study is to achieve the main objective of understanding the impact of human capital on achieving

competitive advantage in the organization under study. The following scientific and practical objectives emerge from this main objective:

- Examining the reality of human capital in the organization under study.
- Understanding the extent to which the organization relies on its human capital to achieve its competitive objectives.
- Interpreting the relationship between study variables.
- Measuring the impact of human capital on achieving competitive advantage.

II. Theoretical Framework

Human capital receives significant attention from organization owners as it is considered the primary source of creativity and innovation, especially within the knowledge economy. It is the only element capable of creating and managing knowledge as a modern approach to achieving organizational objectives.

1. Concept of Human Capital

Definitions of human capital have varied as a result of passing through different time periods of varying importance, including contributions from several theorists, most notably Schultz, Becker, Stewart, Peter Drucker, and Adam Smith.

Schultz states that "human capital is all human energies that can be exploited in the process of obtaining economic resources" (Al-Jadael, 2012, p. 15)

Human capital is also defined as the intangible portion of an organization's capital, which reflects the level of skills and expertise available to workers that can contribute to creating added value. (Jirar & Bouzourin, 2021, p. 168)

Accordingly, human capital represents the intangible assets in the organization that reside in workers' capacities of experience, skills, and knowledge. These can be developed through training, education, and motivation to enhance their performance toward achieving organizational objectives. (Hanawi, 2006)

2. Investment in Human Capital: Concept and Dimensions

a. Concept: Investment in human capital refers to allocating specific expenditures for developing human assets to increase their knowledge and skills and raise their productive efficiency levels. This leads to increased profits and achieving sustainability and continuity in the market. This benefits the individual, the organization, and society as a whole, as Adam Smith states (Al-Anzi & Saleh, 2007, p. 239)

b. Dimensions: The dimensions of investment in human capital can be divided according to the organization's strategy for attracting, developing, and retaining competencies as follows:

- **Determining Human Resource Needs:** The human resources department, in coordination with senior management responsible for strategy development, provides precise job descriptions for positions worthy of recruitment to strengthen the organization's human structure and achieve desired objectives both presently and in the future. (Murai & Hanan, 2017, p. 7)
- **Attracting Human Competencies:** This procedure involves the policies, criteria, and legal measures necessary to search for the best human competencies capable of adding value to the organization. (Makhlouf, 2011)

- **Developing Competencies:** After attracting competencies, the organization's role comes in activating and continuously developing its human assets in response to market requirements. This is achieved through training and development processes inside and outside the organization, depending on each organization's capabilities and strategy. (Murai & Hanan, 2017)
- **Retaining Competencies:** Due to the importance of human resources and the difficulty of obtaining and replicating them, the organization must formulate policies and develop effective plans to maintain its human capital through providing attractive privileges and rewards. (Bentour, 2020)

3. Competitive Advantage

It refers to an organization's ability to provide the best product or service to its customers compared to its competitors, through quality policies or cost reduction and price competition. (Kharshi & Ben Awaq, 2022)

It also refers to the organization's strategy and policy for survival and continuity in the market for as long as possible in light of fierce competition, by studying competitors' strengths and weaknesses and exploiting available opportunities to expand market share. (Azimi & Mane, 2020)

Types of Competitive Advantage:

There are three types of competitive advantage that can be extracted from what was previously mentioned in the definitions:

- **a. Product or Quality-Based Differentiation:** This means offering products characterized by high quality in terms of design, technology, and brand. (Kharshi & Ben Awaq, 2022)
- **b. Price or Cost-Based Differentiation:** This involves the organization's reliance on reducing production costs, which allows it to compete and control the selling price compared to competitors' prices. (Yulevat, 2019, p. 79)
- **c. Niche-Based Differentiation:** This is less common, where the organization targets a specific customer segment and offers them products better than those of competitors. (Nasr, Adnan & Al-Dibyani, 2014, p. 6)

II– Methods and Materials:

This research adopts the descriptive methodology due to its suitability for the nature of the study topic. This approach allows for describing the phenomenon under study and the factors affecting it, then collecting information about it and identifying tools that enable its analysis and interpretation in order to reach conclusions that can be relied upon in providing recommendations and proposals that would benefit decision-makers.

Applied Framework of the Study

1. Study Population and Sample

The study population consisted of all employees at the Mobilis Regional Directorate in Ouargla, numbering thirty (30) employees at the time of conducting the study.

2. Study Instrument and Tools

Study Instrument: A questionnaire was used as a data collection tool (using Google Forms). It was divided into two main dimensions: the first dimension measures the human capital variable and

consists of 18 items, while the second dimension measures the competitive advantage variable and consists of 15 items. A five-point Likert scale was used to measure the aforementioned statements.

Tools Used: The data obtained were processed and analyzed using the Statistical Package for the Social Sciences (SPSS). The data were processed using the following tools:

- Cronbach's Alpha test to determine scale reliability.
- Spearman's correlation coefficient to measure correlation.
- Linear Regression analysis between study variables.
- Independent Samples t-test.
- One-Way ANOVA for comparing means.

3. Scale Reliability

Scale reliability means obtaining approximately the same results if the questionnaire were used for the same population under the same conditions. The results are shown in Table 1.

Table 1: Cronbach's Alpha Analysis Results

Axis	Number of Items	Reliability
Human Capital	18	0.88
Competitive Advantage	15	0.83
Complete Questionnaire	33	0.90

Source: SPSS V.27 outputs.

The table results show that Cronbach's Alpha values for each dimension and the entire questionnaire are high, indicating that the questionnaire in all its dimensions enjoys a high degree of reliability and can be relied upon in the study.

4. Descriptive Analysis of Study Variables

To answer the question regarding the levels of the study dimensions, the mean and standard deviation for the three dimensions were calculated. Table 2 shows the results.

Table 2: Mean and Standard Deviation for Study Dimensions

Variable	Mean	Standard Deviation
Human Capital	3.21	0.46
Competitive Advantage	3.61	0.38

Source: SPSS V.27 outputs.

The results above show that the mean for the human capital dimension was 3.21, which is higher than the theoretical mean (3 on the five-point Likert scale). This result indicates a positive attitude toward the importance of human capital in the studied organization, and that the organization's policies regarding recruitment of competencies, skills development, and employee motivation to enhance human capital are acceptable to respondents. The relatively low standard deviation (0.46) indicates homogeneity in respondents' opinions, meaning there is relative consensus on evaluating the organization's policies in enhancing human capital without significant variation among individuals. The mean value also suggests that some human capital elements (such as leadership, innovation, or organizational loyalty) may need strengthening to achieve greater excellence.

The mean for the competitive advantage dimension (3.61) also shows a positive attitude from respondents in evaluating their organization's competitive advantage, without noticeable variation (low standard deviation of 0.38). These results mean that the studied organization's investment in its human capital has achieved competitive advantage for it, and it possesses some competitive factors (such as customer loyalty, operational efficiency, or service excellence).

III-Résultats et Discussion : Testing Study Hypotheses

First Hypothesis: To test this hypothesis, which indicates the existence of an effect of human capital on achieving competitive advantage in the organization under study, simple linear regression analysis was used. The results are shown below:

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.546 ^a	.298	.273	.32671
<i>a. Predictors: (Constant), Human Capital</i>				

Source: SPSS V.27 outputs.

The correlation coefficient value between the two dimensions, which reached 0.546, shows that there is a moderate to strong positive correlation, statistically significant at the 0.05 level or less, between human capital and competitive advantage. This correlation means there is a positive trend: the more human capital increases, the more competitive advantage increases. However, the relationship is not perfect (not close to 1), indicating the presence of other factors besides human capital that affect competitive advantage.

The coefficient of determination ($R^2 = 0.298$) indicates that 29.8% of the variance in competitive advantage is explained through changes in human capital, and the remaining percentage (70.2%) is attributed to other factors not included in the model (such as technology, management, competition, etc.). This percentage is considered acceptable in social and administrative studies but calls for adding other independent variables to improve the model.

The adjusted R^2 value (0.273) indicates that adding more independent variables may not significantly improve the model, and the model is not overly complex. The standard error of estimate (Std. Error = 0.32671) also shows the model's accuracy to some extent in predicting competitive advantage based on the level of investment in human capital.

Table 4: ANOVA

ANOVA ^a		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.266	1	1.266	11.864	.002 ^b
	Residual	2.989	28	.107		
	Total	4.255	29			
<i>a. Dependent Variable: Competitive Advantage</i>						
<i>b. Predictors: (Constant), Human Capital</i>						

Source: SPSS V.27 outputs.

The results indicate that the statistical model as a whole is statistically significant, as the relatively large F value (11.864) indicates that the model is significantly better than a model without independent variables. The significance level is less than 0.05, so we reject the null hypothesis stating there is no relationship between variables, confirming that there is a statistically significant relationship between human capital and competitive advantage.

Table 5: Coefficients

Coefficients ^a		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.162	.426		5.074	.000

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	Human Capital	.453	.131	.546	3.444	.002
<i>a. Dependent Variable: Competitive Advantage</i>						

Source: SPSS V.27 outputs.

Based on the results, the regression equation can be written as follows:

$$\text{Competitive_Advantage} = 2.162 + 0.453 \times (\text{Human_Capital})$$

The constant value (Constant = 2.162) shows that when the human capital value is zero, the expected value of competitive advantage is 2.162. The significance value (Sig. = 0.000) indicates that this constant is highly statistically significant. The human capital coefficient (B = 0.453) means that for every one-unit increase in human capital, competitive advantage increases by 0.453 units. The standardized coefficient value (Beta = 0.546) confirms that the relationship is positive and moderately strong. The analysis generally shows that human capital has a positive and statistically significant effect on competitive advantage (B=0.453, p=0.002), where each unit increase in human capital leads to an average increase in competitive advantage of 0.453 units.

Second Hypothesis: There are statistically significant differences in study participants' responses regarding study dimensions attributable to demographic variables.

1. Gender Variable: Independent Samples t-test analysis between the two study dimensions and the gender variable yielded the following results:

Table 6: Independent Samples t-test

		Levene's Test F	Levene's Test Sig.	t	df	Sig. (2-tailed)
Human Capital	Equal variances assumed	.722	.403	-.046	28	.964
	Equal variances not assumed			-.048	20.848	.962
Competitive Advantage	Equal variances assumed	.011	.917	.827	28	.415
	Equal variances not assumed			.794	16.319	.439

Source: SPSS V.27 outputs.

The table results above show no statistically significant differences between the two groups (males and females) in human capital (t = -0.046, p = 0.964) or competitive advantage (t = 0.827, p = 0.415), with equal variances between groups. This means that any slight difference in the mean of human capital between the two groups (difference = -0.008) is a random difference and not real, and regardless of the nature of the groups (males/females), human capital levels are very similar between them. The same applies to competitive advantage, where the mean difference (0.123) is very small and does not reflect a real difference between the groups, meaning that competitive advantage is similar in both groups regardless of classification.

2. Educational Qualification Variable: One-Way ANOVA analysis between the two study dimensions and the educational qualification variable.

Table 7: One-Way ANOVA

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Human Capital	Between Groups	.652	2	.326	1.593	.222
	Within Groups	5.529	27	.205		
	Total	6.181	29			

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Competitive Advantage	Between Groups	.003	2	.001	.009	.991
	Within Groups	4.252	27	.157		
	Total	4.255	29			

Source: SPSS V.27 outputs.

The table above shows the following:

There is no statistically significant difference between educational qualification groups in the human capital variable ($p = 0.222 > 0.05$), and the small F value (1.593) indicates that the variance between groups is not large compared to the variance within groups.

There is no statistically significant difference between educational qualification groups in the competitive advantage variable ($p = 0.991 > 0.05$), and the very small F value (0.009) confirms that the variance between groups is very minimal compared to the variance within groups.

The variance within groups is larger than the variance between groups in both variables, indicating that differences within each group are greater than differences between groups, and any group classification (university, vocational training) does not significantly affect the variables studied.

Overall, One-Way ANOVA showed no statistically significant differences between groups in human capital ($F(2,27) = 1.593$, $p = 0.222$) or competitive advantage ($F(2,27) = 0.009$, $p = 0.991$), indicating similarity of groups in these variables.

3. Work Experience Variable: One-Way ANOVA analysis between the two study dimensions and the work experience variable.

Table 8: One-Way ANOVA

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Human Capital	Between Groups	.933	3	.311	1.540	.228
	Within Groups	5.249	26	.202		
	Total	6.181	29			
Competitive Advantage	Between Groups	.796	3	.265	1.994	.140
	Within Groups	3.459	26	.133		
	Total	4.255	29			

Source: SPSS V.27 outputs.

The table results show no statistically significant differences between groups in human capital ($F(2,27) = 1.54$, $p = 0.228$) or competitive advantage ($F(2,27) = 1.99$, $p = 0.140$), indicating similarity of groups in these variables.

IV- Conclusion:

Based on the research literature and the applied study, several conclusions and recommendations can be summarized as follows:

- The organization should add other elements to enhance competitive advantage, especially regarding the technological dimension.
- Build a stronger organizational culture with greater cohesion and cooperation to ensure employee loyalty.
- The organization should intensify training and development programs to provide better services and achieve customer satisfaction.
- The organization can engage in direct recruitment of competencies and motivate them to stay.

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