IMPACT OF HUMAN CAPITAL ON MIDDLE EAST UNIVERSITY"S BUSINESS PERFORMANCE

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Abstract:	The aim of the study is to investigate the impact of Human Capital (HC) on Middle East University's (MEU) Business Performance (BP). Practical data were collected from 167 participants out of about 3217 elements, by means of a questionnaire. Statistical techniques such as descriptive statistics, t-test, ANOVA test, correlation, multiple regressions and stepwise regressions were employed. To confirm the suitability of data collection instrument, a Kolmogorov-Smirnov (K-S) test, Cronbach's Alpha and factor analysis were used. The result of the study indicated a positive significant relationship between HC and MEU's BP. Moreover, the result showed that the L&E variable was having the highest effect, followed by E&E variable, then I&C variable. Finally, results indicated that there are strong inter-relationships among the three HC components. The use of a single organization and/or a single industry study design limits its generalisability to other organizations and/or industries. The data is also limited to Jordanian organizations. Extending the research to other settings represent future research opportunities. HC is an important source of organizations' wealth and therefore it should be taken into serious consideration when formulating the MEU's strategy. This strategy formulation process can be enhanced by fully integrating HC indicators into management practices. The data suggested that a similar set of HC indicators could be developed for other organizations and industries whether government, public or private, profitable or non-profitable organizations.

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INTRODUCTION:

People knowledge and skills are known as human capital (HC), HC is the core of intellectual capital (IC) that drive business performance (BP). Choudhury and Nayak (2011) stated: People are the organizations greatest asset, providing the IC that drives differentiation and value added. Westphalen (2009) said HC can be defined strictly within an economic context as a production factor, and Koednok (2011a) described HC as an economic term used to describe the skills and knowledge that individuals draw upon to generate outputs of value, such as innovation and productivity in job performance. Moreover, Rephann et. al. (2009) defined HC as the stock of knowledge and skills embodied in labor as a result of training and education that improves labor productivity. While, Papadimitriou (2011) stated: HC is investing in the skills and knowledge that faculty and staffs need in order to be outstanding teachers, scholars, innovators, and leaders. Finally, Enyekit et. al. (2012) pronounced that: HC is the intangible factor of the production that brings human intellect, skills and competencies in the production and provision of goods and services.

In summary HC represents individual's knowledge and skills; It is not owned by the organization, but it can be rented; It is in the minds of individuals (individual property) and finally, it goes with individual when he leaves the organization.

Strategic HC planning addresses two critical needs: (1) aligning an organization's HC program with its current and emerging mission and programmatic goals, (2) developing long-term strategies for acquiring, developing, and retaining staff to achieve programmatic goals (GAO, 2003). Without HC nothing can be accomplished, and without well-trained, well-

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developed, well-appreciated, and well-managed HC, modern organizations cannot meet the challenges of the globalization age (Farazmand 2004). People resourcing is a process concerned with ensuring that the organization obtains and retains the HC it needs and employs them productively (Armstrong 2006). Furthermore, GAO (2007) reported: NASA attracts and retains critical personnel by using tools such as recruiting and retention bonuses. Henschke (2009) pronounced: Developing and managing HC in corporations require extensive monetary investment for years. Moreover, Mehta (2011) stated: For organizations to succeed in today's rapidly changing and increasingly competitive marketplace, intense focus must be applied to aligning HC with corporate strategy and objectives. While, Kumar and Pandya (2012) said: HC information system is used to optimize workforce and HC costs, provide the organization with a glimpse of the skill gaps within the organization, help the organization to develop strategies that will support market value and make positive impact on the bottom line. Finally, Lombardi and White (2012) stated: The current economic climate demands that organizations strike the right balance between short term business agility and long term workforce planning.

Many scholars and practitioners consider the current measurement systems of HC are not suitable for further HC development such as: Bassi and McMurrer (2006) said: The measurement systems that most organizations use to evaluate and improve the effectiveness of HC and its impact on their business outcomes are grossly inadequate. Furthermore, Becca (2008) stated: Most organizations lack not only a consistent and holistic view of the work force, but also the necessary analytics to perform workforce optimization. Moreover, Wang (2010) mentioned: Performance measurement in universities has been focused on output and outcome measurement, and Shawyun (2012) pronounced: Outcome and output measures fail to catch the whole process of academic activities. Higher education institutions have a responsibility to the society to

develop the future societal HC through its educational value that they propose to the stakeholders.

Therefore, to manage and develop HC, organization has to measure it accurately, because nothing can be managed without accurate measuring. So, the current research is an attempt to measure HC which may help decision makers to develop HC within the right track.

LITERATURES REVIEW:

There is consensus among authors, scholars, academics and practitioners about the effect of HC on organizations' BP, following section will highlight the impact of HC on BP. OECD (2001) reported: HC has a positive impact on earnings, employment and economic growth. Moriones and de Cerio (2002) stated: With the use of high performance human resource management systems, organizations can improve their chances of reaching objectives. Bontis and Fitz-enz (2002) found: A negative feedback loop between BP and employee turnover, which drive BP. Ahmad and Schroeder (2003) showed: HC practices are expected to enhance performance. Wang and Chang (2005) indicated: whereas all IC elements directly affect BP, only HC directly and indirectly affects BP. Andreou and Bontis (2007) concluded: Achieving BP would drive HC. Bontis and Serenko (2007) showed: Employee capabilities and performance depend on training and development programs. Nandy and Mahapatra (2010) found: The HC is the key to the company's growth, innovation, and competitive advantage. Lucas and Messmore (2010) stated: The HC report enables agencies to systematically assess, analyze and report the results of their HC initiatives and its' impact on mission accomplishment. Gilbride et. al. (2010) said: Workforce planning identifies HC required to meet organizational goals. Ukenna et. al. (2010) key finding was that, training and skill are stronger predictors of HC effectiveness. Zhai and Liu (2010) found: A positive relationship between HC practices, and organizational

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performance. Shih (2010) concluded: HC performance exhibits significant influence on structural capital and customer capital, consumer capital significantly influences performance. Li et. al. (2010) found: Within the last 20 years, China's total HC increased more than three times, which improved BP and accelerated growth rate. Sharabati et. al. (2010) and Sharabati (2013) indicated: HC has a positive and direct effect on Jordanian Pharmaceutical Manufacturing Organizations' BP. The results also indicated that the "innovation and creation" was the most significant, followed by the "learning and education" then the "experience and expertise" variable.

Veltri and Silvestri (2011) showed: HC efficiency plays an indirect role in the relation between intellectual capital and market value. Mehmood et. al. (2011) concluded: Organization gets good results by focusing on the core capabilities and concentrate on the productive side of the business. Rahim et. al. (2011) indicated: HC efficiency has significant and positive relationships with firm's performance. Jamal and Saif (2011) showed: Firm's HC has a significant positive impact on organizational performance. Hasanloo (2011) proved: There is a significant relation between HC value and market values of companies. Huang and Lin (2011) suggested: Team work will enhance specific R&D human capital, and, in turn, increase higher creative performance of teams. Fan and Lee (2011) observed: R&D firm gained their innovation performance through HC. Aryanindita and Budi (2011) showed: Intellectual capital components can be used as a guide in assessing the performance of the university. Iqbal et. al. (2011) revealed: HC practice is positively correlated with employees knowledge sharing and organizational capability. Scarlat et. al. (2011) concluded: The HC is a key-resource as well as a driving force of improving the management of the higher education and research system which drive universities' performance.

Corcoles (2012) stated: In order to increase the relevance of universities' accounting statements, it is essential to provide information on HC. Zamani (2012) found: HC is the main

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source of innovation and knowledge in organizational staff and a vital factor for the performance of every company. Lacko (2012) said: Business leaders worldwide are aware that having the best talent on board provides them with a priceless competitive advantage. CGMA (2012) results claimed: Firms around the world are finding it hard to manage their talent base in the most effective manner; this is preventing organizations from meeting performance and growth targets. Lombardi and Laurano (2012) concluded: The key strategies, technologies, and human capabilities have positive impact on BP. Smuda (2012) proved: Improvements in the scope of HC should contribute to increase of local government's functioning potential on three levels: effectiveness, economy and benefits. Dodaro (2012) stated: Integrating HC planning with broader organizational strategic planning is essential for ensuring that organizations have the talent and skill mix needed to cost-effectively execute their mission and program goals. Al-Ghazawi (2012) revealed: There is a significant impact of staffing, training & development, incentives, and retention policy on the effectiveness of HC, HC return on investment and HC value added. Wisikoti et. al. (2012) stated: The HC function would be high performance by becoming a strategic partner through spending less time on administrative activities and participating more effectively in the university processes and activities that define its strategy.

Researchers, scholars, and authors have agreed upon that: to acquire, develop and retain HC, organizations will face many challenges: SHRM (2007) reported: Succession planning is the biggest HC challenge that will be faced by companies in the future, regardless of company size. Soltani and Poursina (2008) defined and measured five drivers of HC: Learning capacity, availability of knowledge, people participation, optimizing work force, leadership practices. Henson (2009) found: There is significant alteration in the pool of available talent related to both measurable demographics and accompanying worker attitudes and preferences. Perry (2010) concluded: There are five criteria to develop HC: direct compensation, motivation, culture and

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political context, efficacy and effectiveness, and training and development. Wang (2010) suggested: Input and process measures should be included in the performance measurement in addition to output and outcome measures. Aberdeen Group (2010) revealed: One of the keys to success was empowering employees and managers. Koednok (2011b) concluded: To implement a leadership strategy for HCM management, there are four main partners concerned to achieve the goal: The education sector, the business sector, the science & technology sector and the government sector. Bloomberg Businessweek Research Services (2011) claimed: In the next two years HC management will be a major focus for integration, as companies increasingly need to evaluate, develop, promote and compensate talent on a global basis. Goddard (2011) stated: Knowledge transfer partnerships are about encouraging the mobility of HC between the university and local businesses. Othman (2011) showed: There is a wide gap exists between the universities and the industries. Congressional Requesters (2012) reported: High-performing organizations identify their current and future HC needs.

In summary, acquiring, managing and retaining HC is the major challenge for each and every organization. This can be done by defining, identifying, evaluating, measuring and developing HC and comparing it with BP indicators and benchmarks including competitors.

PURPOSE AND OBJECTIVES:

This study investigates the effect of HC on the MEU's BP. For this purpose, the current study attempts to find the impact of HC elements (learning & education, experience & expertise and innovation & creation) on MEU's BP. The main objective of this research is to provide sound recommendations about performance measurement within HC context by identifying and defining the main attributes of quality and productivity of HC, i.e. to point out critical factors of HC and find suitable ways for HC measurement and management.

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SCOPE AND IMPORTANCE:

The current study presents the necessary components of HC definitions. It partially focuses on managerial norms, and partially on social norms. A better understanding of the effect of HC elements on the MEU's BP draws conclusions that can be beneficial not only for Jordanian Universities but also to other organizations, institutions and policy makers. The content also may be of an interest to academic studies related to the reporting and decision making concerning HC.

The current study might be considered as initiative that presents the effect of HC on MEU's BP, and it may be an initiative study that investigates the relationship between HC and Universities' BP in Arab countries. This research is also an important one, in terms of the analysis of the situation of HC in Jordanian universities, as well as in determining some of the relevant HC indicators used by those universities.

PROBLEM STATMENT:

Many authors, scholars and practitioners considered the current measurement systems that most organizations use to evaluate and improve the effectiveness of HC and its impact on their BP are inadequate such as Bassi and McMurrer (2006) and Becca (2008). While, Wang (2010) clearly stated: Universities should use both quantitative and qualitative indicators to measure both HC and BP. Accordingly, the purpose of this research is to investigate the effect of HC elements on MEU's BP, through examining the employees and students' perceptions regarding significance and potential use of HC indicators to leverage MEU's BP.

Problem Elements:

Based on the mentioned above problem statement, the study problem can be perceived by having detailed and scientific answers to the following questions:

Main question: 1. Is there a direct impact of the HC on MEU's BP?

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According to the HC elements the main question can be further divided into three questions, as follows:

1.1 . Is there a direct impact of learning and education (L&E) variable on MEU's BP?

1.2. Is there a direct impact of experience and expertise (E&E) variable on MEU's BP?

1.3. Is there a direct impact of innovation and creation (I&C) variable on MEU's BP?

STUDY HYPOTHESES:

Based on the mentioned above problem statement and its elements (questions), the following hypotheses can be developed:

Main Hypothesis:

H0: HC variables do not have a direct impact on MEU's BP, at ($\alpha \leq 0.05$).

According to HC elements the main hypothesis can be further divided into three hypotheses:

H0.1: L&E variable does not have a direct impact on MEU's BP, at ($\alpha \leq 0.05$).

H0.2: E&E variable does not have a direct impact on MEU's BP, at ($\alpha \leq 0.05$).

H0.3: I&C variable does not have a direct impact on MEU's BP, at ($\alpha \leq 0.05$).

STUDY MODEL:

According to HC definitions, the current study classified HC into three elements: Learning and Education (L&E), Experience and Expertise (E&E) and Innovation and Creation (I&C).

Insert Figure (1): Study Basic Model

The current research studies the effect of HC variables on MEU's BP as shown in the study model figure (2).

Insert Figure (2): Study Model

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METHODS AND PROCEDURES:

Study Design:

The current study is considered as a casual study. It aimed at investigating the cause/effect relationship between HC elements and MEU's BP. The data that have been used for fulfilling the purposes of the study can be divided into two groups: secondary and primary data. Secondary data were collected from university annual reports, journals, books, researches, thesis, dissertations, articles, working papers, and the Worldwide Web. Primary data flowed to the researchers from expert interviews, content analysis, panel of judges, and the survey. A questionnaire was designed and developed in contrast with hypotheses. Then the questionnaire was validated through expert interviews and panel of judges. Practical data were collected from MEU staffs and students. The collected data were verified through the SPSS 20.

Population, sample and unit of analysis: The Middle East University (MEU) is a Jordanian private university inaugurated its first phase on June 30, 2005. At the time of the study, the total number of its staffs were about 200 (Academics and Administrative Staffs) and about 3017 students (Master and Bachelor), the entire population was targeted to explore the topic of HC, thus negating any need for sampling. The survey unit of analysis was composed of all Academics, Administrative staffs, and Master & Bachelor students in MEU.

The questionnaire: One of the main tools in actualizing a research project is the development of a tested instrument. Initial items to measure various constructs were developed depending on prior researches. With the help of experts the questionnaire was designed and developed in contrast with hypotheses and research model. Then the questionnaire was validated through expert interviews and a panel of judges.

Variables: Independent variables (HC): Through literature review, the researchers have identified three important independent variables of HC that contribute to MEU' BP: learning and education; experience and expertise; and innovation and creation. Each was tested by 7 questions. Dependent variable of the study is related to MEU' BP. BP was measured through the following 10 indicators: industry leadership, future outlook, overall response to competition, success rate in new product launches, overall BP and success, employee productivity, process (transaction) productivity, sales growth, profit growth, company's market valuation (stock value). All variables were measured by five-point Likert-type scale to tap into the individual's perceptions, ranging from value 1 (strongly disagree) to value 5 (strongly agree) used throughout the questionnaire.

DATA COLLECTION AND ANALYSIS:

Questionnaires were delivered to 220 out of about 3217 staffs and students. This resulted in sample rate of about 7% of the total population. The researchers gathered only 180 questionnaires. The actual number of questionnaires analyzed was only 167 (31 Academics, 30 administrative staffs, 61 Master and 44 Bachelor students) representing 5% of the total unit of analysis.

Normal Distribution (Kolmogorov-Smirnov Z Test): Table (1) shows that all the independent and dependent variables are normally distributed because significance level was more than 5 percent (Bollen et. al. 2005) and Sharabati et. al. (2010).

<center>Insert Table (1): Normality Test: One-Sample Kolmogorov-Smirnov (Z) Test</center>

Reliability Test: Bontis (2001) stated that Alpha coefficients above 0.7 are accepted, while Bollen et. al. (2005) and Sharabati et. al. (2010) said: If Alpha Coefficients are below 0.60,

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they should be removed. Table (2) shows that Cronbach's Alpha coefficients were registered acceptable; because Cronbach's Alpha results were between 0.698 and 0.855.

Insert Table (2): Cronbach's Alpha for Research Variables:

Validity: Two methods were used to confirm content validity: First, multiple sources of data were used to develop and refine the model and measures. Then, factor analysis (Pearson's Principal Component Analysis) was carried out for all items included in the questionnaire. Tables (3&4) show that all dependent and independent variable items were valid, since their factor loading values were more than 0.4. This result matches with previous studies, such; as Bontis (2001), Bollen et. al. (2005), Bin Ismail (2005) and Sharabati et. al. (2010). The "Lowest cost/transaction" item recorded 0.097, which should be removed from the list.

Insert Table (3): Factors Loading for HC & BP Variables

Insert Table (4): Factors Loading for HC & BP Variables Items

DATA ANALYSIS AND RESULTS:

Study Variables Analysis:

Human capital variables: Table (5) showed that the average means of respondents' perception about the implementation of HC variables were ranging from 2.85 to 3.12, with standard deviation that ranges from (0.630 to 0.664). Such results indicate that there is a varied agreement on the implementation of HC variables. The overall result indicates that there is no significant implementation of the HC variables among MEU, where the total average mean is 2.99 with standard deviation 0.520 and (t=-0.262 < 1.645).

Insert Table (5): Mean, Standard Deviation and One-Sample T-Test Results for HC Variables.

Tables (5,6,7,&8) showed that the average means of respondents' perception about the implementation of L&E variable were ranging from 2.66 to 3.68, with standard deviation that ranges from (0.955 to 1.169). While for E&E variable were ranging from 2.78 to 3.23, with

standard deviation that ranges from (0.938 to 1.150). Finally, for I&C variable were ranging from 2.72 to 3.00, with standard deviation that ranges from (0.820 to 1.012). Such results showed that there is a varied agreement on the implementation of L&E, E&E and I&C variables items. The results also indicated that there is a significant implementation of the L&E variable, where its total average mean is 3.12 with standard deviation 0.630 and (t=2.439 > 1.645). While there is no significant implementation of the E&E variable and I&C, where E&E total average mean is 3.00 with standard deviation 0.640 and (t=0.052 < 1.645) and I&C total average mean is 2.85 with standard deviation 0.664 and (t=-2.982 < 1.645).

Insert Table (6): Mean, Standard Deviation and One-Sample T-Test Results for L&E Variable Items.

Insert Table (7): Mean, Standard Deviation and One-Sample T-Test Results for E&E Variable Items

Insert Table (8): Mean, Standard Deviation and One-Sample T-Test Results for I&C Variable Items

Business Performance Indicators: Table (9) shows that the average means of the respondents' perception about the role of BP indicators were ranging from 3.01 to 3.59, with standard deviation that ranges from (0.817 to 1.011). The result indicates that there is a significant role of BP indicators, where its total average mean is 3.25 with standard deviation 0.602 and (t=5.414 > 1.645).

Insert Table (9): Mean, Standard Deviation and One-Sample T-Test Results for BP Indicators

Relationships between the Study Variables:

Before testing the hypotheses, Pearson correlation (r) was carried out to test the correlation among the responses of HC variables, then between them and BP indicators. The table (10) shows that the relationships among HC variables are strong where r ranges from 0.421 to 0.575, and the relationships between the HC variables (L&E, E&E and I&C) with MEU's BP are strong, where r equals 0.495, 0.499 and 0.418 respectively. For the HC r equals 0.582 indicates a

very strong relationship between the HC and MEU's BP. Results show that the HC variables significantly and strongly related to each other, and to MEU' BP.

Insert Table (10): Pearson's Correlation (r) Among Independent Variables and With Dependent Variable

Hypotheses Testing:

To test hypotheses, a multiple regression analysis was used to analyze the relationship between the HC variables and MEU's BP. Regression analysis is robust against non-normality, multi-collinearity and independence of error, therefore, applicable in the case at hand.

Multi-collinearity: Table (11) shows that VIF value is less than 10 and the Tolerance value is more than 0.2. This indicates that there is no Collinearity within the independent variables of the study.

Insert Table (11): Multi-Collinearity Test for Main Hypothesis

Independence of errors: Durbin Watson test is conducted, where (d=1.823), which approximately equals two. This indicates that the residuals are not correlated with each other; therefore, the independence of errors is not violated.

Multiple Regressions:

The R square value is 0.343; therefore, the model is regarded as being suitable to be used for multiple regressions with the data.

Insert Table (12): Results of Multiple Regression Analysis: Regressing HC Variables against BP

Main Hypothesis:

H0: HC variables do not have a direct impact on MEU's BP, at ($\alpha \leq 0.05$).

Table (12) shows the results of the multiple regressions analysis that regress the three variables of HC together explained 34.3 percent of the variance, where (R^2 =0.343, F=28.380, Sig. =0.000). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which states that the HC variables affect MEU's BP, at ($\alpha \leq 0.05$).

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Table (13) shows the significant effect of each HC variable within the HC. It shows that the L&E variable has the highest effect on MEU's BP, where (Beta=0.278, sig.=0.000), followed by the E&E variable, where (Beta=0.266, sig.=0.001), finally, the I&C variable has the lowest effect, where (Beta=0.174, sig.=0.020).

Insert Table (13): Un-standardized and Standardized Coefficients of Multiple Regression Model for HC Variables

The relationship between the dependent and independent variables derived by this model can thus be expressed as:

Human capital = 1.223 + 0.278 (L&E) + 0.266 (E&E) + 0.174 (I&C)

Sub-hypothesis 1:

H0.1:   L&E variable does not have a direct impact on MEU's BP, at ($\alpha \leq 0.05$).

Table (13) shows that there is a positive direct effect of the L&E variable on the MEU's BP, where (Beta=0.278, sig.=0.000). Since (t=3.586, $p < 0.05$), the null hypothesis is rejected and the alternative hypothesis is accepted, which indicates that the L&E variable affects the MEU's BP, at α =0.05.

Sub-hypothesis 2:

H0.2:   E&E variable does not have a direct impact on MEU's BP, at ($\alpha \leq 0.05$).

Table (13) shows that there is a positive direct effect of the E&E variable on the MEU's BP, where (Beta=0.266, sig.=0.001). Since (t=3.336, $P > 0.05$), the null hypothesis is rejected and the alternative hypothesis is accepted, which indicates that the E&E variable affects the MEU's' BP, at α =0.05.

Sub-hypothesis 3

H0.3:   I&C variable does not have a direct impact on MEU's BP, at ($\alpha \leq 0.05$).

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Table (13) shows that there is a positive direct effect of the I&C variable on the MEU's BP, where (Beta=0.174, sig.=0.020). Since (t=2.358, $P < 0.05$), the null hypothesis is rejected and the alternative hypothesis is accepted, which indicates that the I&C variable affects the MEU's BP, at α =0.05.

Stepwise Regression

From table (14), the first stepwise regressions model (ANOVA) shows the importance of the E&E variable, where ($R^2=0.249, F=54.760, Sig.=0.000$). The second stepwise regression model shows the importance of the E&E variable plus L&E variable, where ($R^2=0.321, F=38.714, Sig.=0.000$). Therefore, it is concluded that the second model increases R^2 with 0.072, this means that the E&E variable alone explains 24.9% of the variance in the MEU's BP. While the second model explains 32.1% of the variance, this means that L&E variable adds 7.2% to the first model. The third stepwise regression model shows that the three variables are important, where ($R^2=0.343, F=28.380, Sig.=0.000$). The third model explains 34.3% of the variance; this means that I&C adds only 2.2% to the second model.

Insert Table (14): Stepwise Regressions (ANOVA) for HC Variables

Table (15) shows the relation between the HC variables and MEU's BP. The first stepwise regression model shows that there is a positive direct relation between the E&E variable and MEU's BP, where beta equals 0.499. The second stepwise regression model shows that there is a positive direct relation between the E&E variable plus L&E variable with MEU's BP, where beta equals 0.327 and 0.318, respectively. The third stepwise regression model shows that there is a positive direct relation between the E&E variable and L&E variable plus I&C with MEU's BP, where beta equals 0.266, 0.278, and 0.174 respectively. Such results indicate that the L&E variable is the most important variable, followed by the E&E variable, while the I&C variable has the lowest impact the MEU's BP.

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RESULTS DISCUSSIONS:

Study Variables Analysis

Human capital variables: The overall result indicates that there is no significant implementation of the HC variables among MEU staffs. It also shows that there is a significant implementation of the L&E variable, while there is no significant implementation of the E&E and I&C variables. The results seem to suggest that either the respondents are unaware about the role of HC variables in MEU's BP, or they do not believe that HC is important for MEU's BP, or they believe that the MEU's management is not interested in developing HC. Respondents strongly believe that the L&E variable is important and implemented, while they do not believe that the E&E and I&C are implemented in MEU. The current study results are contradicting with previous studies results such as: current study rated (2.99), Sofian et. al. (2004) study rated (3.94), Bin Ismail (2005) study rated (3.36), Moslehi et. al. (2006) study rated (3.15), Salleh and Salamat (2007) study rated (3.71), Sharabati et. al. (2010) study rated (3.43).

Learning and education variable: The average mean of respondents' perception about the implementation of L&E was 3.12. The results indicated that there is a significant implementation of the L&E variable. It seems that the respondents are aware of the role of the L&E in MEU's BP. Evidence seems to suggest that respondents have varied agreement about the implementation of the L&E variable items: Respondents believe that: their qualifications are within education industry average, they cooperate when they work in team tasks, and they try to improve the market share when they are performing their jobs. However, they believe that: They do not have enough continuous learning, training, knowledge and skills development which

negatively impacted employee's competences. In general this result is supported by Sharabati et. al. (2013) study which rated (3.58).

Experience and expertise variable: The average mean of respondents' perception about the implementation of E&E was 3.00. The results showed that there is no significant implementation of the E&E variable. It seems that either respondents are unaware of the role of E&E in MEU's BP, or they strongly believe that E&E variable is not implemented within MEU. However, evidence seems to suggest that the employees are not in agreement on the implementation of the E&E variable items: Respondents believe that: Employees are expert and efficient and trying to perform their best when doing their jobs. They try to work hard to make their organization different. However, respondents indicated that: The employees' turnover is high, staffs are not professional and the MEU does have lowest cost per transaction. This may be due to the lack of management support and to the weaknesses of employees' loyalty. The above result is supported by Bin Ismail (2005) study regarding the employees' expertise when they perform their jobs, also supported by Sharabati et. al. (2010) regarding employees turn over. The Jordanian pharmaceutical industry rated (3.45), much more than higher education industry (Sharabati et. al. 2013).

Innovation and creation variable: The average mean of respondents' perception about the implementation of I&C was 2.83. The results indicated that there is no significant implementation of the I&C variable. It appears that either the respondents are unaware of the role of the I&C in MEU's BP, or they strongly believe that the MEU does not implement I&C variable. Evidence might suggest that employees have some agreement on the lack of I&C variable implementation: Respondents believe that the employees are not creative and bright, do not voice their opinion. They are not encouraged to bring new ideas or come up with new ideas; at the same time they have low motivation and commitment to share new ideas. Employees also

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do not launch high number of new programs compared to others, and they are not satisfied with innovation policies and programs. This may be due to the lack of management support, and the culture that generally does not support innovation and creation. The above result is supported by Bin Ismail (2005) study regarding the employees idea sharing and practicing creativity, but it is contradicted regarding the employees' innovation and creation when they perform their jobs. The current results are contradicting with Sharabati et. al. (2013) study which rated (3.27).

Business performance indicators: The average mean of respondents' perception about the implementation of BP indicators were 3.25. Results showed that there is an agreement among respondents about the role of BP. The result indicated that there is a significant role of BP indicators. Evidence seems to suggest an improvement in MEU's BP. Therefore, the MEU is directed and strongly leaning toward performance improvement, and the respondents are aware of the role of BP indicators. The current study results are in line with previous studies such as: Sofian et. al. (2004) study rated (3.20), Bin Ismail (2005) study rated (3.01), and Moslehi et. al. (2006) study rated (2.4), Sharabati et. al. (2013) study rated (3.58).

Relationships between the study variables: Pearson correlation matrix showed that the relationships between the HC variables: L&E, E&E and I&C with MEU's BP are strong. The matrix also showed that the relationships among the HC variables are strong. These results are supported by Bollen et. al. (2005) and Bin Ismail (2005), Moslehi et. al. (2006), Salleh & Salamat (2007) and Sharabati et. al. (2013).

Multiple and Stepwise Regressions:

Results of the multiple regressions analysis showed that the HC variables directly and positively affect MEU's BP. It also showed that the L&E variable has the highest effect on MEU's BP, followed by the E&E variable, while, the I&C variable has the lowest effect. The

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stepwise regressions supported the mentioned above results with little modification; model1 and model two indicated that E&E variable was the most important followed by L&E variable, while model 3 supported multiple regressions. The results are matching with previous studies such as: OECD (2001), Moriones and de Cerio (2002), Wang and Chang (2005), Shih (2010), Li et. al. (2010), Sharabati et. al. (2010), Veltri and Silvestri (2011), Mehmood et. al. (2011), Rahim et. al. (2011), Jamal and Saif (2011), Huang and Lin (2011), Al-Gazawi (2012), Wisikoti et. al. (2012) and Kumar and Pandya (2012)…etc.

LIMITATIONS AND RECOMMONDATIONS:

The use of a single organization and/or industry study design limits its generalisability to other organizations and/or industries. The data is also limited to Jordanian organizations; therefore, generalizing results of a Jordanian setting to other countries may be questionable. Extending the analyses to other settings represent future research opportunities, which can be done by the following ways: Further testing with larger samples within same industry is important, and including other industries will help mitigate the issue of generalizing conclusions on other organizations and industries. Moreover, further empirical researches involving data collection over diverse countries especially Arab countries are needed.

CONTRIBUTIONS/PRACTICAL IMPLICATIONS:

The research makes significant theoretical and empirical contributions to literature regarding influence of HC on the MEU's BP. The research results might help both academics and practitioners to be more ready to understand the components of HC and provide insight into developing and increasing them within their organizations. HC is an important source of organizations' wealth and therefore it should be taken into serious consideration when formulating the Jordanian Universities' strategy. This strategy formulation process can be

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enhanced by fully integrating HC indicators into management practices. Jordanian Universities should coordinate different perspectives of HC to improve MEU's BP and should assign scales for each of the three components of HC. Finally, the data suggest that a similar set of HC indicators could be developed for other organizations and industries whether government, public or private, profitable or non-profitable organizations.

CONTRIBUTION/SOCIAL IMPLICATIONS:

Nation's Intellectual Capital (Social capital) is the capacity of the society to create and develop entrepreneurs, inventors, innovators and leaders. Social capital improves the capabilities of individuals, organizations and society for future benefits. Social capital is about high co-operation among society, government, academic institutions, organizations and individuals (basic research and secondary research). Therefore, defining, measuring, managing and developing the social capital at a country level is necessary.

Individual's Intellectual Capital (Brainpower): Brain-energy can be defined as the capacity to do work, and brainpower is the capacity to solve problems per unit time. Brainpower (intelligence) is an individual property. Brainpower programs are about changing the individual paradigm i.e. changing performance: Behavior and attitudes, to increase the individual's efficiency and productivity to be one of the core capabilities or core competences for organizations and society. Therefore, defining, measuring, managing and developing the individual's intellectual capital is necessary. This can be done by using the Brainpower test and 360° test, which will help in selection, evaluation, development and training. These programs also help to capture the most talented people to appoint them or prepare them to be future leaders.

EXPECTED VALUE:

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The current research may be considered as initiative study that highlights the effect of HC on MEU's BP. Moreover, it could be an initiative study that divided HC into three variables and focusing on the role of each variable on Universities' BP. The empirical results of this study built on the previous researches on the relationship between HC and organizations' BP. This study also extends prior research's viewpoint about the linear relationship between HC and organizations' BP with empirical evidence. The results can provide the reference for further research about the relationship between HC and BP.

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TABLES AND FIGURES:

Figure (1): Study Basic Model

```
          ┌─────────────────────┐
          │  Human  Capital     │
          │      (HC)           │
          └─────────────────────┘
             │        │        │
   ┌─────────────┐ ┌─────────────┐ ┌─────────────┐
   │ Learning &  │ │ Experience &│ │ Innovation &│
   │Education(L&E)│ │Expertise(E&E)│ │Creation(I&C)│
   └─────────────┘ └─────────────┘ └─────────────┘
```

Figure (2): Study Model

Dependent Variable	**Independent Variables**
Human Capital	**Business Performance**
Human Capital: Learning and Education (L&E) Experience and Expertise (E&E) Innovation and Creation (I&C)	**Business Performance**
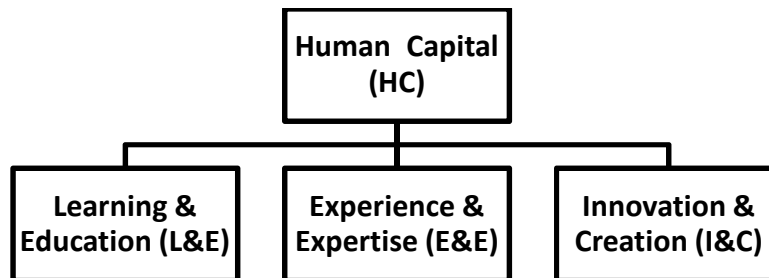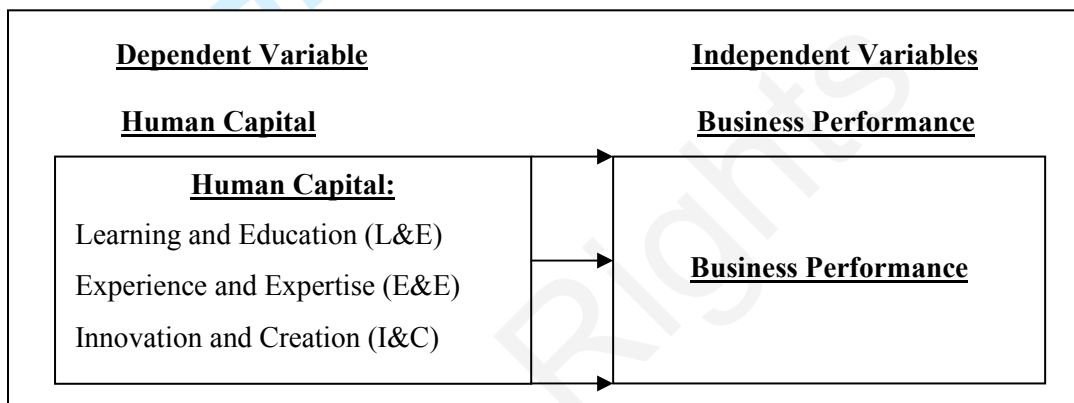
Table (1): Normality Test: One-Sample Kolmogorov-Smirnov (Z) Test

Variables	(K-S)Z	Sig.
L&E	0.774	0.587
E&E	1.068	0.204
I&C	0.949	0.309
HC	0.532	0.940
BP	0.794	0.554

Insert Table (2): Cronbach's Alpha for Research Variables:

Variables	Alpha
L&E	0.698
E&E	0.708
I&C	0.813
HC	0.855
BP	0.847

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Table (3): Factors Loading for HC & BP Variables

Variables	Factor 1	Extraction
L&E	0.803	0.644
E&E	0.826	0.683
I&C	0.758	0.575
HC	0.985	0.970
BP	0.627	0.393

Extraction Method: Principal Component Analysis

Table (4): Factors Loading for HC & BP Variables Items

No.	Items	L&E	E&E	I&C	BP
1	Employee's competence	0.555			
2	Team work	0.646			
3	Continuous training	0.613			
4	Continuous learning	0.626			
5	Education average	0.586			
6	Knowledge & skills development	0.629			
7	Market share improvement	0.520			
8	Employees are expert		0.783		
9	Perform at best		0.740		
10	Make it different		0.750		
11	Turn over		0.405		
12	University efficiency		0.633		
13	Staff professionalism		0.742		
14	Lowest cost/transaction		**0.097**		
15	Employees are creative			0.544	
16	Voice their opinion			0.717	
17	New ideas			0.680	
18	New programs launched			0.694	
19	Knowledge sharing			0.716	
20	Satisfaction with innovation.			0.731	
21	Motivation & commitment			0.718	
22	Industry leadership				0.680
23	Future outlook				0.702
24	Overall response to competition				0.688
25	Success rate in new launches				0.707
26	Overall business performance				0.695
27	Employee productivity				0.515
28	Process productivity				0.595
29	Sales growth (No. of students)				0.611
30	Profit growth				0.647
31	University market valuation				0.627

Extraction Method: Principal Component Analysis.

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Table (5): Mean, Standard Deviation and One-Sample T-Test Results for HC Variables.

Variables	Mean	Std. deviation	T value	T tabulated
L&E	3.12	0.630	2.439	1.645
E&E	3.00	0.640	0.052	1.645
I&C	2.85	0.664	-2.982	1.645
HC	2.99	0.520	-0.262	1.645

Table (6): Mean, Standard Deviation and One-Sample T-Test Results for L&E Variable Items.

No.	Items	Mean	Std. Deviation	T value	T tabulated
1	Employee's competence	3.02	1.032	0.223	1.645
2	Team work	3.43	1.169	4.765	1.645
3	Continuous training	2.66	0.955	-4616	1.645
4	Continuous learning	2.89	0.996	-1.475	1.645
5	Education average	3.32	1.043	4.007	1.645
6	Knowledge & skills development	2.83	1.057	-2.051	1.645
7	Market share improvement	3.68	1.131	7.803	1.645
	Mean total L&E	**3.12**	**0.630**	**2.439**	**1.645**

Table (7): Mean, Standard Deviation and One-Sample T-Test Results for E&E Variable Items

No.	E&E Items	Mean	Std. Deviation	T value	T tabulated
8	Employees are expert	3.23	1.085	2.711	1.645
9	Perform at best	3.11	1.083	1.357	1.645
10	Make it different	3.08	1.094	0.990	1.645
11	Turn over	2.78	1.038	-2.759	1.645
12	University efficiency	3.13	1.021	1.667	1.645
13	Staff professionalism	2.89	0.938	-1.485	1.645
14	Lowest cost/transaction	2.79	1.150	-2.354	1.645
	Mean total E&E	**3.00**	**0.640**	**0.052**	**1.645**

Table (8): Mean, Standard Deviation and One-Sample T-Test Results for I&C Variable Items

No.	I&C Items	Mean	Std. Deviation	T value	T tabulated
15	Employees are creative	2.86	0.820	-2.018	1.645
16	Voice their opinion	2.87	0.939	-1.731	1.645
17	New ideas	2.83	0.982	-2.286	1.645
18	New programs launched	3.00	1.012	0.000	1.645
19	Knowledge sharing	2.81	0.935	-2.565	1.645
20	Satisfaction with innovation.	2.72	0.998	-3.567	1.645
21	Motivation & commitment	2.83	0.973	-2.226	1.645
	Mean Total I&C	**2.85**	**0.664**	**-2.982**	**1.645**

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Table (9): Mean, Standard Deviation and One-Sample T-Test Results for BP Indicators

No.	Statement	Mean	Std. Deviation	T value	T tabulated
22	Industry leadership	3.07	0.967	0.961	1.645
23	Future outlook	3.47	1.011	5.972	1.645
24	Overall response to competition	3.22	0.906	3.075	1.645
25	Success rate in new launches	3.24	0.920	3.365	1.645
26	Overall business performance	3.28	0.967	3.680	1.645
27	Employee productivity	3.01	0.829	0.187	1.645
28	Process productivity	3.03	0.817	0.473	1.645
29	Sales growth (No. of students)	3.37	0.959	4.921	1.645
30	Profit growth	3.59	0.995	7.618	1.645
31	University market valuation	3.26	0.891	3.732	1.645
	Mean Total BP	**3.25**	**0.602**	**5.414**	**1.645**

Table (10): Pearson's Correlation (r) Among Independent Variables and With Dependent Variable

	L&E	E&E	I&C	HC	BP
L&E		.541**	.421**	.804**	.495**
E&E			.475**	.830**	.499**
I&C				.790**	.418**
HC					.582**
BP					

*Correlation is significant at 0.01 levels (2-tailed)

Table (11): Multi-Collinearity Test for Main Hypothesis

HC Variables	Multi-Collinearity Statistics	
	Tolerance	VIF
L&E	0.637	1.486
E&E	0.633	1.580
I&C	0.736	1.358

Dependent Variable: Business Performance

Table (12): Results of Multiple Regression Analysis: Regressing HC Variables against BP

Variable	r	R^2	ANOVA F- Value	Sig.
HC Variables	0.586	0.343	28.380	0.000

Table (13): Un-standardized and Standardized Coefficients of Multiple Regression Model for HC Variables

HC Variables	Un-standardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t-value	p
(Constant)	1.223	0.224		5.464	0.000
L&E	0.265	0.074	0.278	3.586	0.000*
E&E	0.250	0.075	0.266	3.336	0.001*
I&C	0.158	0.067	0.174	2.358	0.020*

*Calculate is less than 0.05

Table (14): Stepwise Regressions (ANOVA) for HC Variables

Model	r	R^2	F	Sig.	HC Variables
1	0.499(a)	0.249	54.760	0.000	E&E
2	0.566(b)	0.321	38.714	0.000	E&E plus L&E
3	0.586(c)	0.343	28.380	0.000	E&E and L&E plus I&C

Table (15): Stepwise Regressions Model for HC Variables

HC Variables	Model 1 Un-standardized Coefficients B	Model 1 Standardized Coefficients Beta	Model 2 Un-standardized Coefficients B	Model 2 Standardized Coefficients Beta	Model 3 Un-standardized Coefficients B	Model 3 Standardized Coefficients Beta
Constant	1.842		1.380		1.223	
E&E	0.470	0.499	0.308	0.327	0.250	0.266
L&E	-		0.304	0.318	0.265	0.278
I&C	-				0.158	0.174

*sig. <0.05

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