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THE MEDIATING EFFECT OF DYNAMIC CAPABILITY ON THE HR INFORMATION SYSTEMS AND THE ATTAINMENT OF COMPETITIVE ADVANTAGE IN JORDANIAN HIGHER EDUCATION INSTITUTIONS

Abstract: This paper aims to investigate the relationship between the use of a Human Resource Information System (HRIS) and the attainment of Competitive Advantage (CA) through the mediating effect of Dynamic Capability (DC) at Higher Education Institutions (JHEIs) in Jordan. Data were collected from 416 full-time academic staff at 13 universities in Jordan. The research adopted a quantitative statistical approach and used Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the obtained data. The findings showed that the HRIS has both a direct and indirect significant impact on CA in JHEIs. The HRIS applications and benefits showed a direct and positive influence on CA. As for the indirect effect, all the HRIS applications were positively related to DC, which, in turn, was positively related to CA. Thus DC was shown to play a mediating role between HRIS and CA. In addition, the paper highlights that the education sector in Jordan consists of many institutions which are attempting to implement new, innovative working mechanisms such as the HRIS and utilize it to make a valuable contribution to CA. Moreover, the effect on DC of applying HRIS supports JHEIs in bringing about innovations to attain CA.

Keywords: Human Resource Information System (HRIS); Dynamic Capability (DC); Competitive Advantage (CA); Jordanian Higher Education Institution (JHEI).

1. Introduction

Recently, organizations have faced challenges in meeting the needs of their customers, suppliers, and stakeholders. Therefore, they have been attempting to add value by creating distinctive resources and capabilities and establishing Competitive Advantage (CA) in relevant markets to create value for customers (Griffiths & Finlay, 2004; Ireland, Reutzel, & Webb, 2005), CA can direct to improve customer relationship effectiveness, satisfaction, and loyalty, and enhance organization performance. Organization-Brands with higher consumer loyalty face less competitive switching in their target segments, which thereby enables them to increase their sales and profitability (Aggarwal & Kapoor, 2012). Moreover, if an organization has a cost advantage it is

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able to offer products and services at lower prices, thereby attracting more customers and gaining higher returns (Abuhjeeleh, Shamout, Sleimi, & Harazneh, 2019; Krell&Matook, 2009). Products with greater CA offer more innovative features and greater quality to customers. These products should provide greater returns to the developing company for a given level of investment in product development. Hence product CA provides a realistic picture of a company's ability to meet customer needs (Swink & Song, 2007) .

In light of the above, the need and acceptance of new technologies have been emerging at a hastening rate, and enterprises are becoming more flexible in terms of using various technologies to support more complex-strategic decisions and attain CA (Al-Dmour & Zu'bi, 2014; Jahan, 2014; Sleimi&Davut, 2015). Several types of Human Resource Information System (HRIS) have been developed to provide self-service for HR (e.g. computer-based HRM practices online recruitment, selection, training and developing) (Hendrickson, 2003), there are many important benefits of the HRIS include effective HR decision making, reduced process and administration costs, fast-tracked transaction handling, reduced information errors and improved tracking and control of HR actions (Lengnick-Hall and Lengnick-Hall & Moritz, 2003). Moreover, Kaur & Kapoor, (2015) stated that an HRIS supports HR management to create high-quality strategic decisions in human capital. On the other hand, Sadri & Chatterjee, (2003) suggested that a HRIS strengthens an organization's character. Kolachi, (2013) has concluded that the HRIS is considered to be one of the best systems to have emerged in recent years, especially in the context of the higher education sector. The use of a HRIS can lead to the gaining of a better reputation, a higher level of stakeholder satisfaction and enhanced institutional CA. This is particularly important because universities in the current global hypercompetitive

marketplace need strong tools such as the HRIS to compete at a high enough level to meet client expectations (Sadiq, Khan, Ikhlaq, & Mujtaba, 2013).

Dynamic capability (DC) represents one of the most important tools for attaining better CA. As shown in the literature on and around the issue of DC in recent years, it is a complex factor that can make a valuable contribution to the outputs of a firm. In regard to the antecedents of the growth of DC, (Diaz-Fernandez, Bornay-Barrachina, & Lopez-Cabrales, 2015) adopted a specific HR perspective to look at the extent of the direct impact of the role of leadership patterns on the HRIS and, in turn, on company capabilities. Prior to that, (Jahan, 2014) confirmed that HRIS is an important variable that helps firms to attain better DC that then leads to the gaining of CA. Furthermore, Iris & Vikas, (2011) demonstrated that companies can gain significant DC by using e-learning techniques to improve participation and learning. They also stated that using e-learning to develop channels for knowledge sharing across the organization helps to ensure excellence and competitiveness by increasing the level of much-needed DC (Albalawi, Naugton, Elayan & Sleimi, 2019; Masum, Bhuiyan & Kabir, 2013).

DC has an effect on the HRIS and the attainment of CA. In evaluating the effect of DC, Markova (2012) proposed that HRIS is a key factor in building DC through fostering codification and dissemination of path-dependent processes and assuring firm success. The study concluded through strategic DC, a highly-customised HRIS is established that leads to a firm competitiveness. This is identified by Lopez-Cabrales, Bornay-Barrachina & Diaz-Fernandez, (2017) as being elicited by the fact that through DC, efficiency of implementation of changes in HRIS is possible hence driving new product development for the purpose of integrating prevalent processes with new ones without losing efficiency hence CA. The DC effect

on HRIS and CA attainment can also be viewed in Resource-Based View (RBV) context (Festing & Eidems, 2011). In this case, Hanseth & Lyytinen, (2016) noted that HRIS is a reflection of the firm, social complexity and path dependency. This means that HRIS is a source of value creation for instance to facilitate development of firm-specific competencies, tacit organisational knowledge development and social relationships development. Hence, the level of DC integration in an organisation operation would have an effect of HRIS which eventually contributes to CA. Integrating RBV and Dynamic Capability Theory (DCT) (Shan, Luo, Zhou & Wei, 2019), distinct dimensions of DC have effects on competitive advantage with their levels of influence being dependent on how change and innovation is embraced. Resources such as HRIS ensures that dynamic capabilities are transforming organisations performance hence leveraging on competitive advantage. However, Al-Dmour, Masa'deh & Obeidat (2017) noted that this can only be possible if the implementation of HRIS takes into account of all the firms' environmental factors being viewed holistically. According to (Gao & Gao, 2016) these factors would lead to an establishment of a holistic system of recruitment and selection, HR training strategies for establishing top-down development systems. A reasonable performance evaluation and compensation systems, appropriate corporate HR systems and flexible organisation strategies for enhancing dynamic capability of enterprises are also prioritised. Ultimately, sustainable competitive advantage is maintained in these organisations.

Owing to the identified main issue, this paper aimed is to investigate the mediating effect of DC on the relationship between the HRIS and CA in the context of Jordanian Higher Education Institutions (JHEIs). The next section begins with a display of the literature to cover the conceptualization of HRIS, CA and the effect of DC as mediator.

2. Literature Review

This section provides the theoretical base for this research. It highlights the previous studies on the HRIS and its contribution to attaining CA in the context of the higher education sector. In addition, it reviews DC and its effects on the HRIS and CA.

2.1. HRIS

According to (Poutanen & Puhakka, 2012), the original concept of the HRIS stretches back to the 1960s, when HR data were first separated from payroll systems. Then, in the 1980s, researchers and practitioners became more interested in the idea of the HRIS, and in the 1990s several studies, user experiences, opinions and descriptions were published in journals, magazines and on the internet. However, it was in 1982 that Alfred Walker articulated the first major conceptualization of the HRIS as a kind of computer-based information system for collecting, storing, maintaining, retrieving, and validating certain data needed by an organization about its employees, applicants, and earlier employees (Walker, 1982). A few years later, DeSanctis, (1986) conceived the HRIS as an IS that could help organizations in various ways from allowing better administration and planning to enabling more efficient decision-making and control activities in the domain of human resource management (HRM). Kavanagh, Gueutal, & Tannenbaum, (1990), and Haines & Petit, (1997) combined previous definitions and defined the HRIS as a system used to acquire, store, manipulate, analyze, retrieve, and distribute pertinent information about an organization's human resources.

Other definitions were also put forward, including that by Broderick & Boudreau, (1992; Broderick) , who described the HRIS is a composite of databases, computer applications, and hardware and software that are used to collect, store data in the database from all departments of the organization and deliver, manipulate data in order to produce

the required information on demand to HR personnel. On the other hand, Kovach and Kovach & Cathcart Jr, (1999) adopted the definition in Walker, (1992) and stated that a HRIS is a systematic procedure for collecting, storing, maintaining, retrieving, and validating data needed by an organization about its HR [human resources, personnel activities, and organization unit characteristics.

Hendrickson, (2003) found that the HRIS is the success base of HRM and that the effective utilization of technology in combination with policies and people can give a competitive edge to an organization. Hence the HRIS supports decision-making processes to achieve CA Broderick & Boudreau, (1992). More interestingly, in the context of the present paper, the results of a study by Al-Tarawneh & Tarawneh, (2012) indicated that Jordanian universities mainly adopt the HRIS to automate HRM activities in order to achieve some general administrative routine purposes in the areas of employee information, absence monitoring and payroll services. In addition, Ngai & Wat, (2006) suggested that the greatest benefits that can be gained from the application of a HRIS are the fast reaction period and easier access to data, and it has transformed to the more technical-strategic applications of an firm such as staffing, performance appraisal and compensation and rewards (Eleyan, 2020; Hendrickson, 2003; Lengnick-Hall & Moritz, 2003; Panayotopoulou, Vakola, &Galanaki, 2007; Elayan &Shamout 2020) .In addition, Thite, Kavanagh, & Johnson, (2012) identified the components of HRIS as hardware, software, people, forms, policies and procedures, and data. According to Beckers & Bsat, (2002), a HRIS is a set of internally constant practices designed and implemented to ensure that a firm's HR contributes to the achievement of the firm's strategic objectives. On the other hand, Aggarwal and Aggarwal & Kapoor, (2012) defined the HRIS as a high-tech system that supports in the handling of data related to

HRM and they stated that it has become a key tool for all organizations.

2.2. Competitive Advantage

Klein, (2001) argued that, in 1965, although Ansoff Igor used the term "Competitive Advantage" in his book, *Corporate Strategy*, he

used it to describe what a company needed to compete effectively. Almost two decades later, according to Ankli, (1992) , MichaelPorter developed the concept of CA and innovated in this domain when he published his book, *Competitive Strategy*, in 1980, which is a work that takes an in-depth look at business strategy. Moreover, as highlighted by Cockburn, Henderson, & Stern, (2000) , Porter added to this work by developing the concept of the five forces that influence a company's performance. These forces are potential entrants, suppliers, buyers, substitutes, and industry competitors. Barney, (2000) argued a company that enjoys sustained CA is able to do so by implementing a strategy that is not simultaneously being implemented by any of its current or potential competitors.

Theoretically, the CA concept has been linked with several positive business outcomes. For example, it can lead to the enhancement of a firm's profit, generate value for firms, enhance the quality of services provided, and increase a firm's overall performance (Naidoo, 2010). Li & Zhou, 2(009) argued that CA is based on two types of positional superiority: cost advantage and differentiation advantage. Cost advantage, or cost leadership, which arises when a company operates at a lower cost than its competitors but offers a comparable product. The primary drivers of cost include economies of scale, capacity utilization, and process management. Differentiation advantage is achieved when customers consistently perceive a company's offerings as superior to those of its competitors. A company can differentiate itself in various ways, such as by providing a

superior service, offering innovative features, developing a strong brand name, launching effective promotions, and so on.

Furthermore, Barney, (2000) noted that Ansoff suggested that companies sustain CA through implementing strategies that exploit their internal strengths and by responding to environmental opportunities while neutralizing external threats and avoiding internal weaknesses. Uyterhoeven, Ackerman, & Rosenblum, (1973) defined CA as the factor that an organization relies on to attain remarkable benefits against its costs by using its resources and skills. According to Cockburn et al., (2000), CA is a complex phenomenon that depends heavily on the active involvement of leadership. Flamholtz & Hua, (2003) showed that CA is at the heart of a company's performance in competitive markets. Moreover, Weerawardena and O'Cass (2004) argued that the creation and maintenance of CA is a critical issue because the competitive environment is very complex. This view was reinforced by S. Li, Ragu-Nathan, Ragu-Nathan, & Rao, (2006), who stated that CA is the extent to which an organization is able to create a defensible position in the face of its competitors. In their conception, CA comprises the capabilities that allow an organization to differentiate itself from its competitors and is an outcome of critical management decisions.

Stavrou, Charalambous, & Spiliotis, (2007) suggested that successful HRM can contribute to superior performance as a source of CA by making organizations more effective. According to Royer, Waterhouse, Brown, & Festing, (2008) , HR are very important when it comes to realizing CA, especially if managers can link valuable HR to company activities. This viewpoint is supported by Bong Lee & Wong, (2010), who argued that HR play an important role in the achievement of CA. Sikora, Thompson, Russell, & Ferris, (2016)who suggested that a company has CA if it is implementing a value-creation strategy not simultaneously being implemented by any

current or potential competitors. This idea supports the assertion by Al-Rfou & Trawneh, (2009) suggested that HR are a key source of CA because of causal ambiguity and systematic information, which makes them inimitable.

2.3. Dynamic Capability

Dynamic capability can be defined as a "firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely decisions, and to implement strategic decisions and changes efficiently to ensure the right direction" (D. Li & Liu, 2014, p.1-7). In spite of its importance, it is difficult to determine how firms can attain better effectiveness though HRM practices by depending on the best DC mechanisms (Kareem & Mijbas, 2019).

The integration of DC and knowledge management has been studied by Oliva, Couto, Santos and Bresciani (2019) and they found that in order to attain a suitable level of DC, firms require organizational agility (Kareem and Mijbas 2019).(Lee & Chih, 2013), who conducted a study on Jordanian pharmaceutical companies, showed that DC has a positive effect on gaining better market-responsiveness and on the firm's regulatory agility. However, another study by Jurksiene & Pundziene, 2016), which examined the relationship between DC and the firm's CA through organizational ambidexterity as a mediator, did not find any direct or indirect impacts.

2.4. DC, HRIS and Attaining in CA JHEIs

According to (de Haan, 2015), the type of competition experienced by HEIs is not just pure competition within the educational sector; rather, it is a combination of normal market competition in parallel with traditional academic competition. Indeed, several scholars have admitted that the probable consequences of the competition

between them have not been addressed in a sufficient manner (Eleyan, 2020; Larsen, Maassen, & Stensaker, 2009; Luijten-Lub, der Wende, & Huisman, 2005; Marginson, 2007).;As HEIs still depend on old-fashioned modes of economic rationality in their daily business activities (such as economies of scale) to maintain CA (Pratt, Poole, & others, 1999; Welch, 2002; Shamout & Elayan, 2020), this results in an unfavorable level of theoretical development, which means that there is a general weakness in the education sector in terms of competitive strategizing (Lovegrove & Clarke, 2008).

Wong & Karia, (2010) indicated that CA in public HEIs is related to several internal elements, such as attaining higher academic standards and recording better academic excellence which then leads to the building of a better international reputation. Salonen, Gabrielsson, & Al-Obaidi, (2006)stated that a company can sustain CA through the appropriate use of resources. This viewpoint was supported by Newbert, Gopalakrishnan, & Kirchhoff, (2008), who argued that only when resources are simultaneously valuable and rare can a company achieve competitiveness through those resources. Likewise, Griffith, Yalcinkaya and Calantone (2009) suggested that a company can achieve CA through the combining of these resources. In this regard, Werbel & DeMarie, (2005) found that HR are very important assets providing the company with CA because it is difficult for competitors to sustain the same HR. Moreover, Ferris et al., (2007) suggested that, in order to remain profitable in the long run, organizations must have a sustainable CA.

Furthermore, Matthews & Shulman, (2005) and Atuahene-Gima, Li, & De Luca, (2006) argued that differences in performance across companies results from the variance in their resources and from the presence of capabilities that are rare, valuable and inimitable. Kareem & Mijbas, (2019) showed that HR development has a direct and indirect significant impact on

organizational effectiveness. Moreover, Torres, Sidorova, & Jones, (2018) capture the types of DC that can contribute to a company's performance by enabling business change and clarifying the relationship between analyzes, business intelligence and performance relying on the mediated role of business process change capabilities . In a study conducted in (da Silva Souza & Takahashi, (2019) explored how DC is related to organizational learning in HEIs as well as how this relationship affects organizational ingenuity,

In the specific context of Jordan, Al-Tarawneh & Tarawneh, (2012) stated that the HRIS is one of the sub-systems within the IS domain that is concerned with providing all the historical, present and future information related to HR, and also with presenting such information to the parties interested in these resources whether they are internal or external, in order to identify those aspects of HR that have the greater value in relation to economic units particularly in the case of service and industrial projects. They also found that there is a significant link between the quality of the output of an HRIS and institutional performance in the banking sector in Jordan. In another study conducted in Jordan, Al-Dmour & Zu'bi, (2014) and Elayan (2020) found that the most frequent applications of the HRIS in business organizations in the country relate to employee records, followed by payroll and recruitment and selection. In addition, they found that the benefits of the HRIS include quicker response time, more accurate HR information, a reduction in the amount of paperwork and human resources required, and more efficient tracking and control.

However, in respect of the higher education sector, Masum et al., (2013) identified the existence of a gap between the expected applications of the HRIS and the present level of use in selected private universities in Bangladesh. They also found that there is a lack of infrastructure, a lack of expertise in this field and insufficient training of

employees and a high cost. Nevertheless, Sadiq et al., (2013) indicated that the HRIS is positively used as a tool to achieve greater administrative efficiency by adding value to educational context. Furthermore, Kumar & Parumasur, (2013) concluded that managers have a fairly positive view of the impact of the HRIS on organizational effectiveness with the greatest degree of confidence being placed in the impact of HRIS on time management and on HR functions.

Based on the above literature review, the research hypotheses developed, which are:

H1: HRIS Applications positively influences DC.

H2: HRIS Applications positively influences CA.

H3: DC positively influences CA.

H4: DC mediates the relationship between HRIS Applications and CA.

3. Conceptual Model

To investigate the relationship between HRIS Applications and attaining CA through the mediating effect of DC in the context of JHEIs, the researchers relied on a review of the relevant literature and mostly their observations in building the proposed model. See Figure 1.
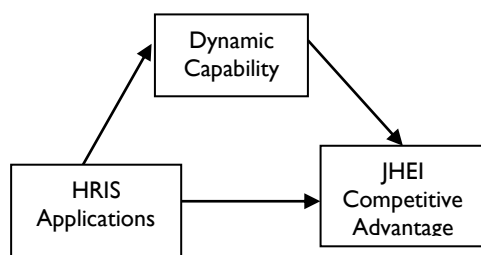
Figure 1. Conceptual model

4. Research Methodology

The researchers used a quantitative statistical approach to collect data. To attain the validity of gathered research data, the

authors showed particular regard to the correct structure of the survey. The survey dimensions and sentences were intended on the basis of the theoretical knowledge of the addressed issue besides in conformity with the basics pronounced in the literature and allowing for the reducing potential errors which are associated with their interpretation. For the survey reliability procedure, the authors used the reliability test depending on the Cronbach's Alpha result for estimating survey reliability. The result of this test was over r=0.70 for all main variables and their dimensions, which states a high internal consistency of measurement. During the survey validation procedures, a pilot study was also utilized in 4 of the examined universities, which was followed by necessary adjustments. The authors also gave important attention during the distribution process for ensuring the right choice of respondents. The main point here was to be sure that all respondents capable regarding the points included by the study and having knowledge of needed pieces of information.

Data collection process started by distributing 500 surveys for full-time academic staff in 13 universities in Jordan, 416 valid for analysis surveys were collected, PLS-SEM technique was used to analyze the data (Nitzl, 2016). The survey that was used to collect the data contained 29 items; one item recorded a low loading (less than 0.4) while the remaining 28 items attained the desired loading values and were thus analyzed to attain the research objectives. The following section describes the statistical techniques that were used in the data analysis.

5. Data Analysis

This section describes the various statistical techniques that were used to test the proposed model. First, the skewness and kurtosis coefficients were tested to determine whether the data were normally distributed. In line with the literature, the kurtosis cut-off

point value was set as 2 and the skewness cut-off point value was set as 1 (Sarstedt, Ringle, Smith, Reams, & Hair, 2014; M. Sleimi, 2020). As can be seen from Table 1, all the values for the three variables of interest were lower than the cut-off point values. Thus, it was confirmed that the data gathered for this research were normally distributed.

Table 1. Variance inflation factor

Variable	Skewness	Kurtosis
HRIS	-.354	-.353
DC	-.287	-.305
CA	-.292	.138

Next, a Variance Inflation Factor (VIF) test was performed to find out whether the issue of multicollinearity was present in the data. According to Hair, Sarstedt, Ringle, & Mena, (2012), all the VIF values must be less than 10 in order to. However, according to Wong (2013), values that range between 5 and 10 are considered to be too high and are therefore undesirable. Table 2 shows the VIF values for the latent variables considered in this research. It can be seen that none of the values is greater than 5. Consequently, the multicollinearity of the research data was confirmed.

Table 2. Multicollinearity (VIF)

Variable	CA	DC	HRIS
CA			
DC	2.689		
HRIS	2.689	1.000	

Then the reliability and validity of the constructs and the coefficients of the outer loadings of the retained item measurements were assessed. First, all the Average Variance Extracted (AVE) values were greater than 0.5 and, secondly, all the values of Composite Reliability (CR) were greater than 0.7 (see Table 3). Lastly, after deleting one item with a low loading value, all the loading values of the retained items were higher than the recommended cut-off point of 0.4 (Nitzl, 2016). All the previous results

have been approved statistically (Nitzl, 2016). See Table 2.

Table 3. Composite Reliability and Average Variance Extracted

Variable	CR	AVE
CA	0.918	0.588
DC	0.926	0.611
HRIS	0.932	0.538

Finally, the Fornell–Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio tests were conducted. In the Fornell–Larcker criterion test, the AVEs recorded lower values than the construct correlations (Garson, 2016) (see Table 4). On the other hand, all the HTMT ratio values did not exceed the recommended cut-off point of 0.9 (Henseler & Sarstedt, 2013; M. T. Sleimi & Emeagwali, 2017) (see Table 5). Therefore, in sum, the discriminant validity of the research data was confirmed.

Table 4. Fornell–Larcker Criterion

Variable	CA	DC	HRIS
CA	0.833		
DC	0.801	0.793	
HRIS	0.767	0.782	0.734

Table 5. Heterotrait-Monotrait Ratio Test

Variable	CA	DY	HRIS
CA			
DY	0.915		
HRIS	0.875	0.867	

5.1. Path Coefficients

The PLS-SEM technique was used to examine the direct and indirect effect of the exogenous variable on the endogenous variable. The results of applying this technique revealed the following: First, HRIS has a positive significant effect on CA (β = .378, ρ = .000). This could be interpreted as 12.2% of firms' CA happens due to HRIS. Second, HRIS has a strong significant positive effect on DC (β = .793, ρ = .000). This could be interpreted as 79.3% of the firms' DC happens due to HRIS.

Third, DC has a positive significant effect on CA (β = .534, ρ = .000). This could be interpreted as 50.4% of firms' CA occurs because of DC. Fourth, HRIS has a significant positive indirect effect on CA (β = .423, ρ = .000). This could be interpreted as 42.3% of firms' CA occurs due to the indirect effect of HRIS. See Figure 2 and Table 6.

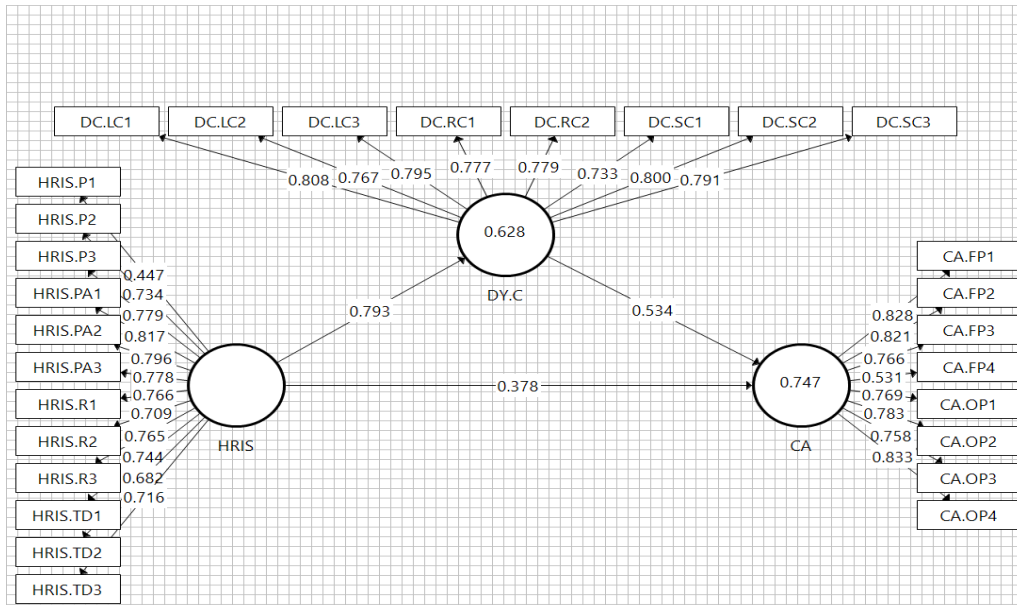**Figure 2.** Path coefficients

Table 6. Direct and Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Direct effects					
DY → CA	0.534	0.536	0.056	9.484	.00
HRIS →CA	0.378	0.377	0.060	6.341	.00
HRIS → DC	0.793	0.792	0.024	32.762	.00
Indirect effect					
HRIS → CA	0.423	0.424	0.045	9.440	.00

6. Discussion, Contribution, and Conclusion

The results of the analysis showed that the main exogenous variable HRIS had the largest effect on DC when compared to all the other variable relationships within the research model, showing an effect of 79.3%. Moreover, DC also had a positive impact on CA with an effect of 53.4% which is considered to be a significant effect. Finally, HRIS exerted a positive direct impact on CA, which could be interpreted as 37.8% of firms' CA occurs due to the use of a HRIS. Refer to Figure 2 in Section 4 above.

In the JHEI context, HRIS was also the variable that affected CA the most when the direct and indirect effects were combined

together. The analysis showed that the highest indirect effect was produced by HRIS on CA, with a value of 0.423, which means that HRIS directly affected CA by 42.3%. In addition, the value of the indirect effect of HRIS was 0.378, which means that HRIS indirectly affected the same endogenous variable by 37.8%.

From the analysis, the relationships between the variables were affected both directly and indirectly by each other. As shown in Table 6 in Section 4 above, it is obvious that HRIS Applications had a favorable direct effect on DC, with the highest value of 0.793. At the same time, HRIS had a direct and positive effect on CA, with the lowest value of 0.378. On the other hand, HRIS also had an indirect and positive effect on CA, with a slightly higher value of 0.423. Lastly, DC had a good direct effect on CA, with a value of 0.534.

However, when considering the above findings, it is important to bear in mind the main limitations of this research. First, the variables were evaluated by utilizing direct and indirect effect measurements based on specific calculations. Therefore, in future studies researchers may wish use other types of measurement to assess the relationships among the variables in order to compare the results with those presented in this work. Second, the researcher used a questionnaire that had been used previously in order to evaluate the impact of the variables on each other and the questionnaire applied a subjective measurement. Many scholars assume that these measurements are good for social science studies, but it would be preferable to apply this type of questionnaire in parallel with some objective measurements. This may then lead to some affirmative outcomes in respect of convergent and discriminate validity (CHUANG & Liao, 2010). Third, in the review of the literature the researcher found that there was a shortage of articles on the effect of HRIS on CA, so extra efforts are needed to fill this gap and to enrich this

domain. Lastly, the researchers examined the effect of the HRIS from the senior management perspective, yet there is a wide domain of classifications and sections of it. Therefore, in the future researchers may wish to explore more types of HRIS.

The contribution of this paper is twofold; One, it is the first experimental examination of the mediating effect of DC on the relationship between HRIS and CA in HEIs in Jordan. The research findings show that it is not possible for top management to achieve a suitable level of CA without considering DC as a complementary variable in the main relationship between the HRIS and CA. Two, it adds to the field of technological HR view by using the PLS-SEM technique in addition to statistical techniques in order to discover the relationships between the research variables.From a researcher point of view, being a practitioner in the education sector directly contributes to the existing body of knowledge. Limited literature has focused on evaluating the effect of DC on the HRIS and achievement of CA in education institutions. A wide array of available literature has focused on private sector organisations. Also, as a practitioner in higher education sector, a foundation has been established for institutions to appreciate the need of putting in place relevant systems essentials for generating value in their operations. For the institutions, attainment of DC would mean that there prevails a favorable condition for HRIS in meeting their staff expectations and dissemination of complex managerial knowledge.

6.1. Practical Implications

These paper findings provide practical implications for HR managers and administrators of Higher Education Institutions. The varying mediation effect of DC in the relationship between HRIS in achievement of CA inform on the need of adopting different HR systems for

leveraging on employee behaviours that lead to achievement of varying dynamic capabilities. Through this, the HR managers and administrators of the learning institutions would appreciate their department strategic contribution as they guide the implementation of HRIS for developing desirable dynamic capabilities that mediate the institution competitive advantage.

The findings in this research also note that HRIS has the most implication on DC as compared to all the other variables. Institutions intending to implement HRIS must also consider seizing overall capabilities by developing skills-oriented strategies. As such, the HR managers and administrators would ensure they implement collaborative strategies with all departments. The administrators working independently cannot be in a position of increasing DC if they do not work in collaboration with HR and other departments. This is due to failure of committing the HR professionals who are involved in designing and implementing job-oriented HR strategies. Therefore, this paper provides an improved understanding and reinforcement of the dynamic capability as a critical factor of the HR function.

6.2. Conclusions

This paper has investigated the relationship between the use of a Human Resource Information System (HRIA) and the achievement of Competitive Advantage (CA) through the mediating effect of Dynamic Capability (DC) at the Higher Education Institutions (JHEIs) in Jordan. In order to achieve the intended findings, quantitative statistical approach and Partial Least Squares Structural Modeling (PLS-SEM) for analysis of obtained data. Based on the study findings, it is evident that HRIS has direct and indirect significant impact on CA in JHEIs. The HRIS applications and benefits evidence a directive and positive influence on DCA. In regard to indirect effect, the entire HRIS applications are related positively with DC which in turn has a positive impact on CA. Hence, DC plays a mediating role between HRIS and CA. This is evident in Jordan education sector which is comprised of multiple higher education institutions which are focused on implementing new and innovative strategies. These include the HRIS and other enterprises which contribute to their ability to leverage on CA. Additionally, the DC effect in HRIS application elicit a direct support on JHEIs in contributing to innovativeness for achieving CA.

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