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INFLUENCE OF RELATIONAL CAPITAL INITIATIVES ON VALUE CREATION IN PUBLIC UNIVERSITIES IN KENYA

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Abstract

Relational capital comprises the knowledge embedded in all the relationships an organization develops. Whether it is with customers, competitors, suppliers, trade associations or government bodies, this relations have been empirically deduced to positively influence the performance deliverable of an enterprise. The study focused on the influence of relational capital initiatives on value creation in public universities in Kenya. The concept of relational capital has been considered in relation to the intellectual capital theory of the firm which asserts the importance of three types of capital including human capital, structural capital and relational capital as being significant in driving not only performance but also delivering value to firms. Three components of relational capital indicators were considered and they were combined into a single overall index by using principal component analysis. A study was conducted on a sample of six public universities. Cronbach's alpha was used to assess the reliability or internal consistency of the set of individual relational capital indicators. The overall index of relational capital was found to be moderately associated with value creation. The overall regression model for value creation and relational capital indicators was observed to be significant. An analysis from empirical literature is in agreement with the current study's findings that there is a need for upgrading and maintaining relational capital components in which the firms may have some advantage. This is in turn expected to make substantial contribution to an enterprise's value creation.

Keywords: *Intellectual Capital, Initiatives, Value Creation, Relational capital, Public University*

Introduction

While knowledge is considered as residing in individuals, a large amount of knowledge is both produced and held collectively in institutions in the sense that such knowledge is produced when people in an organization work together in groups and communities that are glued together by the common goal. (Kamath, 2015). Social systems are viewed as being important for an institution as it serves to facilitate and enable the realization of organization's goals. It therefore becomes important for organizations to collaboratively solve problems, converse and creatively apply and generate knowledge and its associated intelligence. Organizational knowledge can then be seen as comprising of the company's experiences and company-specific knowledge embedded in its structural capital as well as human capital and fueled by the relatedness of an organization. (Chan, 2009). Organizational knowledge includes information about a company's culture, communications and

decision making style, as well as the detail of business processes (Salman, Mansor & Babatunde, 2012). This knowledge is directly and indirectly owned by the organization and is fluid in nature such that valuation carried out using different approaches at different timing yield different results (Bowman & Ambrisini, 2009). Organizational knowledge therefore implies a systemic view that sees the organization as a complex combination of component parts, where the whole is greater than the sum of the parts (Chahal, 2014). Intellectual capital theory posits that rather than dividing the components in terms of conventional hierarchy and function, the view recognizes that the whole will exhibit emergent characteristics that are not present if its constituent components are regarded separately (Ramona, 2016).

The advantage of the whole being greater than the parts stems from the management's ability to bring together organization-wide resources and competencies into capabilities that empower the organization (Fischer & Sojer, 2017). This enables the firm to adapt quickly to changing environmental elements. Curado, Henriques & Bontis, (2011) note that this convergence between individual and organizational capabilities realizes tangible business results in the form of efficiently applied resources, faster cycle times and increased customer value. (Kaveh & Bontis, 2018) observe that enhanced investment in relationships with internal and external stakeholder groups for improving performance may have ripple effects in the productivity network. Some of the sources to internal relational capital may refer to informal bonding with members of the family, relation with business partners or the workers who deal with inputs (Fischer & Sojer, 2017). On the other hand, external organizational networks may come in the form of linkages, collaborations and alliances with customers and suppliers (Ngari, 2013). Informal relations with a firm may take the form of a cluster of mutual trust, coordination of their efforts, linkages with external bodies such as local/state Govt., location of the firm as well as reputation or goodwill of the firm. Ngari, Gichira & Waititu, (2013) observed that with enhanced level of relational capital, there comes a greater likelihood of increased productivity as well as performance with better efficiency in service deliver.

Objective of the study

To evaluate the influence of relational capital initiatives on Value creation in Public Universities in Kenya.

Conceptual framework

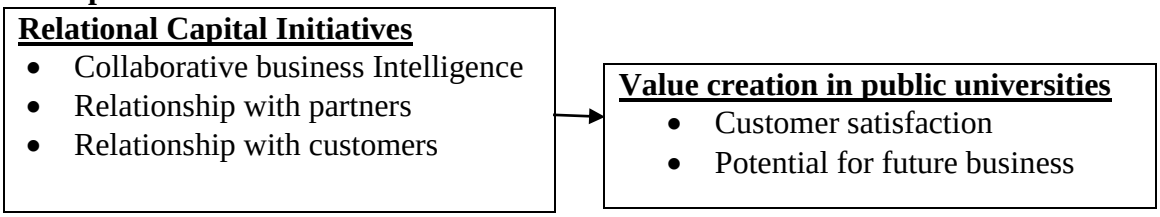

Fig.1 conceptual framework on human capital initiatives and value creation

Individual intelligence: In the model by Glynn presented in Datta, (2017), individual intelligence reflects a person's education, training, expertise and knowledge within a particular domain. It involves task-relevant domain intelligence as well as flexible rules in form of procedural knowledge that aid the development of new knowledge through recombining existing knowledge with new information and partnerships such as joint ventures and strategic alliances. This knowledge when embedded into the practices of firm then become important for organizations to realize unprecedented growth as the combined effort leverages on the sum of

combined resources and capabilities (Barney & Hesterly, 2012). This resourcefulness is embedded in the skills, knowledge, experience of individual as well as the combined capabilities of groups and the firm at large.

Relationship with Partners: Relationships established by the firm with partners are in turn used to access requisite resources, connections, intelligence and technologies that help realize the economic synergies among partner organizations (Kaveh & Bontis,2018). Relationships with external stakeholders such as customers, suppliers and business partners are built through long-(term exchanges of information, goods and services (Ngari, 2013). It follows then that a firm's innovative-capabilities rest in the way it structures its relationships among individuals, within and between groups and among organizations.

Relationship with Customers: Customer capital consists of many intangible values in the field of sales. Since customer capital is the result of firm's relationships, firms can create customer capital by using the already existing knowledge and skills of the employees to provide better services to exploit the potential and meet the needs of its clients (Mutindi, Namusonge & Obwogi, 2013). The nature of the relations established are collaborated with the individualized attention drawn to the clients, as well as drawing customer loyalty and nurturing collaborated learning for future. Customized individualized attention may serve to strengthen relations with customers as they seek to fulfill their needs and solve organizational problems (Ngugi, Gakure & Kahiri, 2012). This needs may be real as well as perceived. The firm's products and services need to be packaged in ways that fulfill stakeholder's expectations (Mutindi, Namusonge & Obwogi,2013). A building of new external communities of practices that enhance customer satisfaction may also be exploited to add to the value deliverables. Furthermore, the importance of resource pooling to achieve commonly held objectives is realized in addition to bringing on board variety of perspectives as well as shared risks and minimization of costs incurred through pooling together (Datta, 2017).

Research Methodology

This research study adopted a mixed research design. Both qualitative and quantitative approaches were used. Data was collected by means of a questionnaire. For the purpose of this study the sample frame was six public universities which were established before the year 2010. The seven public universities included Nairobi University, , Egerton University, Moi university, Maseno university, Jomo Kenyatta university of agriculture and technology and Masinde Muliro university of science and technology. Purposive sampling technique was used to obtain information because it draws data from specific types of people who can provide the desired information (Mugenda & Mugenda, 2003). The deans of schools in the public universities together with the chairpersons of departments were sampled. The researcher adopted a sample size of 30 %(Field, 2009). This translated to a total of 144 respondents who were drawn randomly from the pool of 480. A questionnaire having the Likert type of questions on a scale of one to five was used.

Data Analysis and Discussion

Principal Component Analysis on Relational Capital initiatives

The KMO and Barlett's Test was carried to test whether the sample size is good enough for Principal component Analysis.

Table 1 Barlett's test on Relational Capital

Kaiser-Meyer-Olkin Measure ofBartlett's Test of Sphericity Sampling Adequacy.	Approx. Chi-Square	Df	Sig.
.750	915.759	90	.000

The Barletts's Test of Sphericity significance value is less than the p-value of 0.05 which implied that the dataset was statistically adequate enough for further principle component analysis.

Table 2 Rotated Relational Capital initiatives Matrix

	Component		
	1	2	3
1.through institutional partnerships firms can access critical and complementary resources	.727		
2.institution's relationship with partners enables recognition of unique needs and preferences	.719		
3.there is potential for repeat business with the same customer or similar customers	.693		
4.There is reduced effect of competitors' efforts on the institution	.685		
5.Institution's data base enables identification of events that generates repeat/future business	.660		
6.Institution has minimized disputes with its partners	.619		
7Cust.omer loyalty has been attained through customer service delivery	.613		
8.Enhanced reputation accrues to the institutions that have partners	.555		
9.Instutution's established relationship leads to increased customer satisfaction	.537		
10.Through institution's partners, intelligence on the clients' unmet needs is provided	.520		
11.Generation and protection of intellectual property improves level of service delivery		.757	
12.Improving efficiency in service delivery yields better results for institution		.753	
13.Institution's resources pooling affects level of service delivery		.739	
14.Institution's access to technology advancement influences level of service delivery		.689	
15.Institution's variety of perspectives and ideas for innovation influences level of service delivery		.681	
16.Shared risks minimizes organization's cos of operation		.645	
17.Broadening the product/service offered influences level of service delivery		.613	
18.Cexchange of know-how skills and expertise influences benefits accrued to the institution		.565	
19.Institution's relationship with partners brings more perspectives and ideas			.811
20.Institution's relationship with others enable realization of economic synergy among partner organization			.765
21.Institution's Alliance partnership enables access to requisite resources			.756
22.Institution's Alliance partnership exploit resources			.713
23.Institution's shared risks with other institutions accelerates technical progress			.700
24.Institution's combined economic value of resources with others is greater than its economic value separately			.693

Note: *Factor loadings <.5 are suppressed*

Normality test on Relational Capital initiatives

Table 3 Normality test on Relational Capital initiatives

	Kolmogorov-Smirnov[a]	Shapiro-Wilk
Statistic	.151	.946
Df	90	90
Sig.	.000	.001

a. Lilliefors Significance Correction

Table 3 shows the normality test findings for relational capital. The variable was normalized using a two-step procedure, which involved carrying out a fractional ranking and Computing a normalized variable by using the inverse difference of normal (Dallal, 1986).

Normalization of Relational Capital

Table 4 Normality Test of the Normalized Relational Capital

Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Statistic	Df	Sig.	Statistic	Df	Sig.
	89	.200*	.994	89	.019
.055					

*. This is a lower bound of the true significance.
a. Lilliefor's Significance Correction

Table 4 presents findings for the normalized relational capital variable with lilliefors significance correction. The normality test on Normalized relational Capital shows that on both Kolmogorov-Smirnov and Shapiro-Wilk the significance value is less than 0.05. From the findings, this implies that the normalized structural capital is statistically approximately normally distributed.

Descriptive Statistics on Relational Capital

Relational capital was operationalized as a composite of collaborative business intelligence, relationship with partners and relationship with customers. Descriptive statistics consisting of percentage distributions, means and standard deviations are provided below.

Table 5 Descriptive statistics on relationship with partners

Relationship with partners factors	**SD**	**D**	**N**	**A**	**SA**	**M**	**SD**
Our institution's relationship with partners brings more perspectives and ideas	0	5.6	10.0	67.8	16.7	3.96	.702
Our institution's Alliance relationships enable access to requisite resources	1.1	4.4	20.0	60.0	14.4	3.82	.773
Our institutions' Alliance partnerships exploit resources complementarily	0	3.3	30.0	53.3	13.3	3.77	.720
Combined economic value of resources owned by our institution and others is greater than their economic value separately	0	10.0	12.2	54.4	23.3	3.91	.870
Our Alliance relationships with other institutions enable realization of economic synergy among partner organizations	0	10.0	20.0	48.9	21.1	3.81	.886
My institution's Shared risks with other institution's accelerates technical progress	0	7.8	18.9	55.6	17.8	3.85	.811

Table 5 shows the percentage, mean and standard deviation distributions among respondents when asked to respond on their organization's relationship with partners. On whether the institutions relationship with partners brings more perspectives and ideas, 67.8% agreed, 16.7% totally agreed while only 10.0% disagreed and 5.6% totally disagreed to more ideas and perspectives being generated. A mean of 3.96 and standard deviation of .702 was recorded indicating a fairly good distribution of responses around the mean. When asked to respond to the institutions' alliance relationships enabling access to requisite resources, 60.0% agreed and 14.4% totally agreed forming the majority. Minority group consisting of 20.0% neutral, 4.4% disagreed while 1.1% totally disagreed. This implies that most of the respondents agreed to alliance partnerships enabling access to resources. On institutions alliance partnerships exploit resources complementarily, 53.3% agreed while 13.3% totally agreed. 30.0% remained neutral on the item while only 3.3% disagreed. More than average the number (66.6%) agreed to complimentary exploitation of resources with a mean of 3.77 and a standard deviation of .720. On whether the combined economic value of resources owned by the institution and others is greater than their economic value separately, 54.4% agreed, 23.3% totally agreed, 12.2% were neutral on the matter while 12.2% disagreed. Majority (77.7%) agreed to the combined economic value of resources being greater than separate economic values with a mean of 3.91 and standard deviation of .870 which is less than 1 indicating a fairly good distribution of respondents around the mean. On alliance relationship with institutions enabling realization of economic synergy among partner organizations 48.9% agreed, 21.1% totally agreed, 20.0% remained neutral while 10.0% disagreed. A fairly large number, (70.0%) agreed to realization of economic synergies among member organizations with a mean of 3.81 and a standard deviation of .886. This was indicative of a good distribution of the responses around the mean. Lastly, on the institution's shared risks with other institutions accelerating technical progress, 55.6% agreed, 17.85 totally agreed, 18.9% remained neutral while 7.8% disagreed. Majority of the respondents (82.91%) agreed to accelerate technical progress being realized from shared risks with other institutions. A mean of 3.81 and standard deviation of .811 indicated a fairly good distribution around the mean.

Table 6 Descriptive statistics on Collaborative Business Intelligence and value creation

Collaborative Business Intelligence factors	SD	D	N	A	SA	M	SD
Our Resource pooling affects the level of service delivery in my institution	1.1	2.2	13.3	67.8	15.6	3.94	.693
Our shared risks have minimized the overall cost for organizational operations	1.1	3.3	26.7	48.9	20.0	3.83	.824
Our Long-term exchange of know-how, skills and expertise influences benefits accrued to the institution	0	7.8	40.0	42.2	10.0	3.54	.781
My institution's Variety of perspectives and ideas for the innovative product/service influences level of service delivery	0	3.3	21.1	58.9	16.7	3.89	.710
The institution's access to technological advancements influences level of service delivery	0	6.7	27.8	55.6	10.0	3.69	.744
Broadening the product/service offered influence level of service delivery	0	5.6	26.7	52.2	15.6	3.78	.776

Generation and protection of intellectual property improves level of service delivery	2.2	4.4	31.1	43.3	18.9	3.72	.900
Efforts made in Improving efficiency in service delivery yields better results for the institution	1.1	7.8	24.4	52.2	14.4	3.71	.851
The institution's ability to Cutting down on company costs affects level of profit margins to the institution	0	8.9	24.4	52.2	14.4	3.72	.821

Table 6 provides sampled distributions among responses on collaborative business intelligence. On resource pooling affects level of service delivery, 67.8% agreed, 15.6% totally agreed while only 13.3% remained neutral and another 3.3% disagreed and 1.1% totally disagreed. Most of the respondents (83.4%) agreed that resource pooling affects service delivery with a mean of 3.94 and standard deviation of .693. On whether shared risks have minimized the overall cost for organizational operations, 48.9% agreed with the statement, 20.0% totally agreed representing a total of 68.9% agreement that shared risks minimize overall cost on organizational operations. 26.7% were neutral while 3.3% disagreed and 1.1% totally disagreed representing minority of the respondents' opinions with a mean of 3.83 and standard deviation .824. On whether long term exchange of know-how, skills and expertise influences benefits accrued to the institution, 42.2% agreed, 10.0% totally agreed, a total of 52.2% which is above the average number of respondents on agreement. On the other hand, considerable number consisting of 40.0% remained neutral while only .1.1% disagreed. A mean of 3.89 and standard deviation of .710 indicated that the responses were not far from the mean.

On whether the institution's variety of perspectives and ideas for the innovative product/service influences level of service delivery, 58.9% agreed and 16.7% totally agree summing up a total of 75.6 % in agreement that a variety of ideas influence level of service delivery. 21.1% were neutral while 3.3% disagreed. A mean of 3.89 and standard deviation of .710 indicated that responses were fairly distributed around the mean. When asked to react to if the institutions access to technological advancement influences level of service delivery, 52.2% agreed, 15.6% totally agreed, 26.75 were not sure and only 5.6% disagreed with a mean of 3.69 and standard deviation of .744. Majority of the respondents (67.8) agreed that access to technological advancement influences level of service delivery. On whether generation and protection of intellectual property improves level of service delivery, 43.3% agreed, 18.9% totally agreed summing up to 62.1% agreement on property rights influencing level of service delivery. 24.4% were neutral on the matter, 7.8% disagreed while 1.1% totally disagreed a mean of 3.72 and standard deviation of .900. On whether efforts made in improving efficiency in service delivery yields better results, majority at 52.2% agreed and 14.4% totally agreed making up a total of 66.6% agreed that efforts to improve service delivery yield better results for the institution. 24.4% remained neutral on the item while7.8% disagreed and 1.1% totally disagreed. A mean score of 3.71 and standard deviation of .851 indicated that the responses were not far away from the mean. Finally, on whether the institutions ability to cutting down on costs affects level of profit margins to the institution, majority consisting of 52.2% agreed and 14.4% totally agreed summing up to 66.6% agreement with the statement. On the other hand, 24.4% were neutral while 8.9% disagreed. A mean of 3.72 and standard deviation of .821 indicated that data was far away from the mean.

Table 7 Descriptive statistics on Relationship with Customers and value creation

Relationship with Customers Factors	SD	D	N	A	SA	M	SD
Our relationship with partners enables recognition of unique needs and preferences	0	5.6	21.1	58.9	14.4	3.82	.743
Through the institution's partners, intelligence on the clients' unmet needs is provided	0	6.7	41.1	45.6	6.7	3.52	.722
There is an Increased customer satisfaction based on the institution's established relationships	0	11.1	23.3	55.6	10.0	3.64	.812
An enhanced reputation accrues to the institutions that have partnerships	0	10.0	28.9	47.8	13.3	3.64	.839
There is a general reduced effect of the competitors' efforts on our institution	0	7.8	30.0	51.1	11.1	3.66	.871
Customer loyalty has been attained through customer service delivery process	0	11.1	32.2	45.6	11.1	3.57	.835
There is a general Potential for repeat business with the same customer or similar customers	0	7.8	22.2	45.6	24.4	3.87	.877
My institution has greatly minimized of potential disputes with its partners	0	12.2	32.2	43.3	12.2	3.56	.863
My institution's data base Enables identification of events that could generate repeat/future business	1.1	7.8	35.6	47.8	7.8	3.53	.796
Through institutional partnership firms can access critical and complementary resources	3.3	7.8	25.6	55.6	7.8	3.57	.875

Table 7 provides the descriptive distributions among respondents on relationship with customers. On whether relationship with partners enables recognition of unique needs and preferences, 58.9% agreed, 14.4% totally agreed, and this summed up to 73.3% agreement to the statement that partnerships enable recognition of unique needs and preferences. 21.1% were neutral while only 5.6% disagreed. A mean of 3.82 and standard deviation of .743 was within the acceptable range of response distribution around the mean. When respondents were asked whether through the institution's partners, intelligence on the clients' unmet needs is provided, 445.6% agreed and 6.7% totally agreed. On the other hand, 41.1% were neutral and 6.7% disagreed. This indicated mixed reactions and a lack of consensus on providing intelligence to the client's unmet needs. A mean of 3.52 and standard deviation of .722 indicated that the response distribution around the mean was acceptable. On whether there is an increased customer satisfaction based on the institution's established relationships, 55.6% agreed, 10.0% totally agreed 23.3% were neutral and 11.1% disagreed. These finding implies that customer satisfaction is to a large extent derived from the institution's established relationships with a mean of 3.64 and standard deviation of .839 as acceptable distribution of the response around the mean.

In response to enhanced reputation accrues to the institutions that have partnership, 47.8% agreed, 13.3% totally agreed summing up to 61.1% agreement to the statement. On the other 28.9% remained neutral while 10.0% disagreed that enhanced reputation may not accrued to organizations that have partnerships with a mean of 3.66 and standard deviation of .781 which was acceptable distribution of responses around the mean. On the question of there being reduced effect of the competitors' efforts on institution, 51.1% agreed to the statement, 11.1% totally agreed and this made majority agreement that there is reduced competitor effect on institution. 30.0% were neutral while 7.8% disagreed with a mean of 3.57 and a standard deviation of .835. On Customer loyalty having been attained through customer service delivery process, 45.6% agreed, 11.1% totally agreed. A majority(56.7%) agreed that customer loyalty is attained through customer service delivery. 32.2% were neutral and 11.1% disagreed with a mean score of 3.87 and a standard deviation of .877 indicating that data was not far from the mean. On there being Potential for repeat business with the same customer or similar customers, majority of respondents, 45.6% agreed, 24.4% totally agreed and this made up a total of 70.0% agreement of repeat business. On the other hand, 24.2% were neutral while only 7.8 % disagreed with a mean of 3.56 and a standard deviation of .863. On the question of the institution greatly minimizing potential disputes with its partners, 43.3% agreed, 12.2% totally agreed, 32.2% were neutral and 12.2% disagreed. This implied that there are efforts to reduce disputes among partners with a mean of 3.53 and standard deviation of .796, an acceptable range of response distribution around the mean. On whether the institution's data base enables identification of events that could generate repeat/future business, 47.8% agreed, 7.6% totally agreed, 35.6% were neutral, 7.8 % disagreed and 1.1% totally disagreed. An above average number (55.3%) agreed their data bases enable identification of events that could generate repeat business.

Finally on whether through institutional partnerships firms can access critical and complementary resources, 55.6% agreed, 7.8% totally agreed making up to 63.4% of agreement with the statement. On the other hand, 25.6% were neutral, 7.8% disagreed while 3.3% totally disagreed with a mean score of 3.57 and standard deviation of .875 indicating that data was within range on distribution around the mean.

Table 8 KMO and Bartlett's Test of Sphericity for Value Creation

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	Bartlett's Test of Sphericity		
	Approx. Chi-Square	Df	Sig.
.755	391.508	105	.000

Table 11 Rotated Component Matrix for Value Creation

	Component			
	1	2	3	4
1.The services offered by the institution achieve high levels of customer satisfaction	.748			
2.The institutions brand is comparably competitive in the market	.730			
3.The quality of compliance with regulatory standards such as CUE is way above that of competitors	.695			
4.There is profit generation from intellectual property rights	.523			
5.The organisation's enhanced reputation can be illustrated with articles in trade journals, patents etc.				

6.The organization has pooled variety of perspectives and ideas for innovative products/services	.745		
7.The services offered by the institution facilitate learning for future efforts	.717		
8.There is strategic positioning through innovation	.572		
9.The effectiveness of deployed intellectual capital has resulted in value creation for the organization			
10.There is strategic positioning through technological leadership		.791	
11.There has been cost reduction based on the available organisational intelligence resulting in institutional value creation		.725	
12.The activities, processes and operations of the institution produce higher output that results in value creation		.649	
14.The institution's intellectual resourcefulness has contributed to enhancing its reputation			.747
15.Customer loyalty has resulted from the organisation's enhanced intellectual capital			.678
16.The institution's services to a large extent meet their revenue goals			.536

Note: *Factor loadings <.5 are suppressed.*

Table 9 Normality Test for Value Creation

Statistics	Value Creation	
	Kolmogorov-Smirnov[a]	Shapiro-Wilk
Statistic	.149	.945
Df	90	90
Sig.	.000	.001

Table 10 Test of Normality of Value Creation with lilliefor's significance correction

Test item	**Value Creation**	
	Kolmogorov-Smirnov[a]	**Shapiro-Wilk**
Statistic	.097	.979
Df	90	90
Sig.	.035	.153

a. Lilliefors Significance Correction

There was an improvement with the data transformation given that the significance value improved in both tests.

Descriptive Statistics on Value Creation

Value creation was presented as a composite of customer satisfaction, potential for future business and revenue growth. The means, standard deviations and percentage distribution are indicated in the tables' ensuing together with a description.

Table 11 Descriptive findings on value creation

Statement	SD %	D %	N %	A %	SA %	M	SD
1.There is profit generation from intellectual property rights	0	0	0	58.9	41.1	4.41	.495
2.There is strategic positioning through innovation.	0	0	1.1	81.1	17.8	4.17	.404
3.There is strategic positioning through technological leadership	0	0	0	82.2	17.8	4.18	.384
4.The institutions brand is comparably competitive in the market	0	0	0	76.7	23.3	4.23	.425
5.The activities, processes and operations of the institution produce higher output that results in value creation	0	0	0	71.1	28.9	4.29	.456
6.The quality of compliance with regulatory standards such as CUE is way above that of competitors	0	0	5.6	66.7	27.8	4.22	.536
7.There has been cost reduction based on the available organizational intelligence resulting in institutional value creation	0	0	0	47.8	52.2	4.52	.536
8.The effectiveness of deployed intellectual capital has resulted in value creation for the organization	0	0	0	48.9	51.1	4.51	.503
9.The institution's services to a large extent meet their revenue goals	0	0	1.1	55.6	43.3	4.42	.519
10.The services offered by the institution achieve high levels of customer satisfaction	0	0	6.7	75.6	17.8	4.11	.484
11.The organization's enhanced reputation can be illustrated with articles in trade journals, patents etc.	0	0	0	61.1	38.9	4.39	.490
12.The services offered by the institution facilitate learning for future efforts	0	0	0	68.9	31.1	4.31	.466
13.The organization has pooled variety of perspectives and ideas for innovative products/services	0	0	0	74.4	25.6	4.26	.439
14.The institution's intellectual resourcefulness has contributed to enhancing its reputation	0	0	7.8	92.2	0	3.92	.269
15.Customer loyalty has resulted from the organization's enhanced intellectual capital	0	2.2	24.4	73.3	0	3.71	.503

The table 11 provides descriptive findings on value creation in public universities in Kenya. in Kenya. On whether here was profit generation from intellectual property right, 58.9 %agreed while 41.1 totally agreed with a mean of 4.41 and a standard deviation of .495.from the table, all organizational members agreed that profit is generated through intellectual property rights, findings echoed by Ngari et al., (2013). When respondents were asked whether there was strategic positioning through innovation, only 1.1% remained neutral while the rest agreed that there was strategic positioning through innovation.(81.1% agreed while 17.8% totally agreed) with a mean of 4.17 and a standard deviation of .404. On whether there was strategic positioning through technological leadership, 82.2% agreed while 16.7% totally agreed with a mean score of 4.18 and a standard deviation of .384. This were high scores indicating an affirmation that institution had deliberately positioned themselves strategically through technological leadership. Technology is therefore considered an important tool to enable this institutions to create and deliver value to their customers, a statement that is congruent with the research done by Karanja et al., (2012).

In response to the institutions brand being comparably competitive in the market, 76.7% agreed while 23.3% totally agreed. From the sampled institutions, it was clear that the deans and chairpersons of departments strongly felt that their institution's brand was comparably competitive in the market. With a mean of 4.23 and a standard deviation of .425. When asked whether the activities, processes and operations of the institution produced higher output that resulted in value creation, 71.1% agreed and 28.9% totally agreed with a mean of 4.29 and a standard deviation of .456. These were high scores indicating that the organizational outputs resulted in value creation. The institutions are therefore encouraged to continually institutionalize their activities, processes and operations as they result in higher output to the organization.

On whether the quality of compliance with regulatory standards such as Commission of University Education is way above that of competitors, 66.7% agreed, 27.8% totally agreed while only 5.6% remained neutral on the matter with a mean of 4.22 and standard deviation .536. The findings indicate a strong commitment by universities in compliance with regulatory institutions. This implies that the organizations provide accountability and openness to recommendations from the regulatory framework and a readiness to address flows in order to meet stakeholder expectations.

On whether there had been cost reduction based on the available organizational intelligence resulting in institutional value creation, 47.8% agreed and 52.2% totally agreed with a mean score of 4.52 and a standard deviation of .502. Members agreed that their institutions had realized cost reduction through utilization of the available organizational intelligence that resulted in value creation. The need to build on the use of organizational intelligence is therefore encouraged in order to enable informed decision making that result in value creation for the institutions. On the effectiveness of deployed intellectual capital resulting in value creation for the organization, 48.9% agreed and 51.1% totally agreed with a mean score of 4.51 and a standard deviation of .503. The importance of intellectual capital in creating value is underscored from the findings such that as these resources are deployed, they are able to realize gains through value creation.

In response to the institution's services to a large extent meeting their revenue goals, 55.6% agreed, 43.4% totally agreed and 1.1% was neutral on the matter with a mean of 4.42 and a standard deviation of .519. the relevance of institutional services were underscored with a high level percentage agreement that they are self-sustaining in meeting their revenue goals. This implies that most of the service offered in public universities generated value. On the question of the services offered by the institution achieving high levels of customer satisfaction, 75.6% of respondents agreed, 17.8% totally agreed and 6.7% remained neutral with a mean of 4.11 and a standard deviation of .484. Value generated to the customers as echoed by the respondents implied

that the institutions created value which answers the question that intellectual capital initiatives create value for public Universities. When respondents were asked if the organization's enhanced reputation can be illustrated with articles in trade journals, patents etc.61.1% agreed and 38.9% totally agreed with a mean of 4.39 and a standard deviation of .490.

These findings are in agreement with the research findings of Karanja et al., (2012) and Ngari et al., (2013) that intellectual property rights were positively correlated with performance of firms. In response to the services offered by the institution facilitating learning for future efforts, 66.6% agreed and 33.3% totally agreed with a mean of 4.31 and a standard deviation of .466. Members in overall agreed that their institution's services facilitated learning for future, an indication of the readiness among organizations to innovate in order to remain relevant. On the universities having pooled variety of perspectives and ideas for innovative products/services, 74.4% agreed and 25.6% totally agreed with a mean of 4.26 and a standard deviation of .439. This statement affirms that universities consult widely and draw perspectives from a wider network as to innovate their products and services, an indication of the commitment to future growth and relevance of the products and services offered. On whether the institution's intellectual resourcefulness has contributed to enhancing its reputation, 7.8% were neutral while 92.2% agreed with a mean of 3.92 and a standard deviation of .269.

The resourcefulness endowed in institutions of higher learning was therefore found to be invaluable to enhancing the reputation of the organizations. This is evidenced through retention strategies employed by these institutions in with some institutions offering better incentive strategies as they benchmarked with competitors in order to retain their human capital (Wanza et al., 2017). On whether customer loyalty had resulted from the organization's enhanced intellectual capital, 2.2% disagreed, 24.4% were neutral while 73.3% totally agreed. The findings reinforce the relevance attached to intellectual capital theory by agreeing that customer loyally can be derived by deliberate efforts instituted through intellectual capital initiatives to create value for the institutions.

Inferential analysis on Relational capital and Value Creation

The objective of the study was designed to assess the influence of relational capital initiatives on value creation in public universities in Kenya. The hypothesis was stated as follows.

Ho1; Relational capital initiatives has no significant influence on value creation in public Universities in Kenya.

Ha1; Relational capital initiatives has a significant influence on value creation in public universities in Kenya.

Table 12 linear regression for relational capital and value creation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.369[a]	.136	.127	.22471

a. Predictors: (Constant), Relational Capital.
b. Dependent Variable: Value Creation.

As shown in table 12, Relational Capital has R^2-value of .127 indicating a significant positive relationship between Relational Capital and Value creation. This is satisfactory to the objective of the study: to assess the influence of relational capital initiatives on value creation in public universities in Kenya. The p values are below α=.05, (.01). This leads to rejection of null hypothesis that there is no significant relationship between

relational capital initiatives on value creation in public universities in Kenya, at 5% level of significance. The study failed to reject the alternative hypothesis which states that relational capital initiatives have a significant influence on value creation in public Universities in Kenya. This therefore implies that enhancing relational Capital of an institution is positively correlated to Value Creation. The findings concur with those of Chu, Lin, Hsiung, & Liu (2006) who found that relational capital includes relationships with customers and the government and refers to development and maintenance of important relationships such as those with customers and suppliers of goods and services, as well as the degree of partner satisfaction and customer loyalty.

Table 13 ANOVA Table for Relational Capital and Value Creation

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	.694	1	.694	13.752	.000[b]
1	Residual	4.393	87	.050		
	Total	5.087	88			

a. Dependent Variable: Value Creation

b. Predictors: (Constant), Relational Capital

The ANOVA table 13 shows the results on how good the model fits. The F-test findings are significant since its p-value < 0.05, (F (1, 88) =13.752). This suggests that the overall model is a good predictor of the outcome. This lead to rejection of null hypothesis that there is no significant relationship between relational capital initiatives and value creation in public universities in Kenya, The study failed to reject the alternative hypothesis which stated that relational capital initiatives has a significant influence on value creation in public universities in Kenya at 95% confidence level.

Table 14 Coefficients for Relational Capital and Value Creation

Model	**Unstandardized Coefficients**		**Standardized T Coefficients**		**Sig.**	**Collinearity statistic**	
	B	Std. Error	Beta				
(Constant)	3.318	.243		13.637	.000	Tolerance	VIF
1 Relational Capital	.241	.065	.369	3.708	.000	O.894	2.08

The coefficients table 14 shows the intercept for the linear equation is 3.318 and the gradient is 0.369. The t-test of each of these parameters is significant since their p-value < 0.05. The intercept value represents the score of value creation when relational capital score is 0. The gradient value tells us that with every increase of a single score in relational capital, the value creation will increase by .369. In summary, the model equation is as shown below: $Y= \beta 0+\beta 1X$ w where

Y= Value capital.

X= Relational Capital

Y= RC (.369) + 3.318

Value creation=3.318 +0.369 Relational capital

The findings indicate that relational capital has a positive significant linear relationship with value creation, with a Pearson correlation coefficient of 0.369 and a p-value below 0.05 at 95% confidence interval. This implies that there is fairly strong positive correlation between relational capital and value creation in public universities in Kenya. This findings conform to the studies undertaken by Khalique et al., (2011) Saari, (2011) and Ngari, (2015) with a positive significant contribution by relational capital on firm performance. The table 4.47 indicates that the p-value is less than 0.05. Therefore, in this case the study rejected the null hypothesis and failed to reject the alternative hypothesis which implies that relational capital has a significant influence on value creation in public universities in Kenya.

Conclusion

This research provides a different dimension for the study on relational capital by analyzing the influence of relational capital initiatives on value creation in public universities in Kenya. The analysis was done using principal component for no normal distributions in population. The model gives support for the underlying theoretical underpinnings on relational capital as a sub-component of intellectual capital. The model fit was good and this served to reinforce the theoretical underpinning theoretical to the conceptual model. This study findings suggests that those theories and practices that place high value to relational capital among other intellectual capital components realize their intended goals. Moreover this study provides evidence that the conceptual model is a valid tool for decision making in measuring intellectual capital. It is evident from the findings that for knowledge intensive industries, relational capital is crucial and affects the corporate performance and value creating efforts. This study breaks the monotony of assessing institutions through the lens of financial figures alone but that many factors which are intangible can impact corporate Value creation deliverables in a big way. This study is highly relevant for a country like Kenya as this paper proves that relational capital is one of the key factors that contributes towards the intellectual capital leverage. Evidence presented in literature asserts that fixed assets, intangibles assets – especially Intellectual capital as relational capital have now become the value drivers of organizations. More transparent measurement and reporting of relational capital will help organizations and stakeholders to value the firm better. The research findings indicate that relational capital influences value creation in public Universities in Kenya. The results indicated that relational capital explains 37.8% of the variance of value creation in public Universities in Kenya. Correlation results indicated that relational capital has a positive significant relationship with value creation in public universities. The regression was significant since the objective supported the alternative hypothesis. This was an indication that relational capital influences value creation in Public Universities in Kenya.

Recommendations

The following recommendations were derived from the results and findings. Public universities may utilize the resourcefulness of its partners to gain a competitive advantage in the market and its associated dynamics. The results and findings indicated that university management can improve their market value propositions through the specific relational capital components of collaborative business intelligence, partnerships with customers and other alliances. Overly, the analysis suggests that relational capital is connected with value creation in institutions of higher learning particularly the public universities in Kenya.

Areas for further studies

Based on the literature reviewed and findings of this study, more qualitative methods are needed to study the phenomenon intellectual capital utilizing multiple sources of information and respondents. Thus, future studies should take into account more respondents to avoid potential biases that may arise from key informant approaches. The study population was small and targeted a limited category of academic staff. It would be

appropriate that future studies should include more respondents or study different settings like Private sector organizations as well as other industries apart from the higher education sector in Kenya.

References

Barney, J. & Hesterly, W. (2012). Strategic Management and Competitive Advantage Concepts and Cases. New Yolk: Pearson Education inc.

Barney, J. (2010). Firm Resources and Sustained Competitive Advantage. Journal of Management, 17(1), 99-120.

Bontis, N. & Fizenz, J. (2012). Intellectual Capital ROI: A Current Map to Human Capital Antecedents and Consequences. Journal of Intellectual Capital, 3(3), 223-247.

Bontis, N., Keow, W. C., & Richardson, S. (2008). Intellectual Capital and Business Performance in Malaysian Industries. Journal of Intellectual Capital, 1(1), 85-100.

Bowman, C. & Ambrosini, V. (2007). Firm Value Creation and Levels of Strategy. Journal of Management Decision, 45(3), 360-371.

Chan, K. (2009). Impact of Intellectual Capital on Organizational Performance: An Empirical Study of Companies in Hang SengIndex. International Journal of Learning Organization, 16(1), 4-21.

Chahal, H. & Bakshi, P. (2014). Effect of Intellectual Capital on Competitive Advantage and Business Performance: Role of Innovation and Learning Culture. International Journal of Learning and Intellectual Capital, 11(1), 52-70.

Chung-Jen, C., Huang, J. & Hsiao,Y. (2010). "Knowledge Management and Innovativeness: The Role of Organizational Climate and Structure". international journal of manpower, 13(8), 848-870.

Curado, C. H. (2011). Intellectual capital disclosure Payback. Journal of management decision, 49(7), 1080-1098.

Datta, S.K., (2017). Role of Relational Capital and Firm Performance: Analysis of a Cluster of Bell-metal Enterprises in a Rural Region in West Bengal, India. Journal of Entrepreneurship Organization and Management 6(1): 204- 210.

Field, A. (2009). Discovering Statistics using SPSS (3rd ed.). London: SAGE publications.

Fischer, T. &. (2017). On the relationship of value creation and value capture. journal of general management, 41(2), 79-106.

Kamath, B. (2015). "Impact of Intellectual Capital on Financial Performance and Market Valuation of Firms in India". International Letters of Social and Humanistic Sciences, 48, 107-122.

Kaveh, A.R. & Bontis,N. (2018). Intellectual Capital and Performance Measurement systems in Iran. Journal of Intellectual Capital, 19(2), 294-320.

Mutindi, M. N. (2013). Effects of Strategic Management Drivers on Organizational Performance. International Journal of Arts and Commerce, 2(11), 50-62.

Ngari, J. (2013). Relational Capital and Business Performance of Pharmaceutical Firms in Kenya. International Journal of Science and Research, 7(1), 1-14.

Ngari, J. Gichira, R. & Waititu, A. (2013). Analysis of The Relationship Between Intellectual Capital Accounting anf Business Performance of Pharmaceutical Companies in Kenya. International Journal of Innovative Research Studies, 3(1), 1-12.

Ng'ethe M.J, Namusonge, G.S., & Iravo, M.A. (2013). Determinants of Academic Staff Retention In Public Universities In Kenya. Unpublished Doctoral Dessertation.

Ngugi, J.K., Gakure, R.W. & Kahiri, J. (2013). Influence of Intellectual Capital on the Growth of Small and Medium Enterprises in Kenya. International Journal of Arts and Entrepreneurship(Special Issue).

Ramona, D.L. (2016). Intellectual Capital-Source of Competitiveness. International Journal of Learning and Intellectual Capital, 13(2), 149-166.

Salman, R. T., Mansor, M. & Babatunde, D. A. (2012). Impact of Intellectual Capitalon Return on Assets in Nigerian Manufacturing Companies. Interdisciplinary Journal of Research in Business, 2(4), 21-30.

Sekaran, U. &. (2010). Research Methods for Business: A skill building approach. New Yolk: John Wiley & Sons Inc.