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Univ. Bung Hatta

fivi anggraini <fivianggraini@bunghatta.ac.id>

Journal of Marketing for Higher Education - Invitation to review Manuscript ID WMHE-2019-0136.R1

1 message

Journal of Marketing for Higher Education <onbehalfof@manuscriptcentral.com>
Reply-To: ayoubi_rami@hotmail.com
To: fivianggraini@bunghatta.ac.id

Wed, Aug 12, 2020 at 5:53 PM

12-Aug-2020

Dear Dr Fivi Anggraini:
Many thanks in advance.
Regards
Rami

Dear Dr Anggraini,
The above manuscript, entitled "Is University Performance Embedded in University-Industry Collaboration, Marketization and Information Disclosure? Evidence from the five major states of Northern India." has been submitted again to Journal of Marketing for Higher Education.

You have already provided very useful comments to the authors who have potentially addressed them. I would be grateful if you would kindly agree to act as a reviewer and to check the modifications made by the authors for this paper. The abstract and the response to your comments appear at the end of this letter.

Please let me know as soon as possible if you will be able to accept my invitation to review. To do this please either click the appropriate link below to automatically register your reply with our online manuscript submission and review system, or e-mail me with your reply.

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I realise that our expert reviewers greatly contribute to the high standards of the Journal, and I thank you for your present and/or future participation.

Sincerely,
Dr Rami M. Ayoubi
Editor in Chief| Journal of Marketing for Higher Education|SJR2019 (Q1), IF2019 (2.375), CiteScore2019 (3.5)| Taylor & Francis| UK
Associate Professor in Business Strategy| Coventry University| UK
ayoubi_rami@hotmail.com
Ad4550@coventry.ac.uk

MANUSCRIPT DETAILS

TITLE: Is University Performance Embedded in University-Industry Collaboration, Marketization and Information Disclosure? Evidence from the five major states of Northern India.

ABSTRACT: The study explores the relationship among relational capital and performance of universities in North India.

In the first phase, the study identified the major contributors of relational capital by grounding of literature. University-industry collaboration, information disclosure and marketization emerged as major contributors which were also established empirically in the course of the study. Confirmatory factor analysis measurement model established the factor structure of the measurement items. Next, the researchers investigated the relative importance of each contributor in explaining relational capital and its association with university performance. Findings suggest that relational capital has a significant influence on university performance. A collaborative approach, relationship of reciprocity with stakeholders, disclosing relevant information, maintaining transparency and marketization of the institution are the underpinnings of university performance. The study has meaningful implications for policy makers at universities to enable them to strategize around practices conducive to the creation of relational capital and enhance performance.

Response to comments:

Dear Editor

At the outset, the authors would like to thank you and the expert reviewers for their valuable feedback. The feedback provided has definitely helped us to refine the paper further and make it a quality manuscript. The response to the issues raised is provided below. Authors have addressed all the individual points raised by both the reviewers and hope that all the queries are satisfied.

Reviewer –1

a. The questionnaire instruments has not been discussed in depth in the research methodology section. Further, it is essential to disclose the sources of questionnaire and whether it is self-developed, adopt or adapt from other previous studies.

Response : Based on reviewers advise, the questionnaire instrument has been discussed thoroughly with special focus on research methodology section under heading 4.4.

b. The references are not APA complaint.

Response : As per given advice by eminent reviewer(s), all references have been compiled according to the APA format.

Reviewer –2

Comments to the Author

This manuscript presents a study on embedded of university performances towards university-industry collaboration, marketization and information disclosure. The authors made their study based data from five states in North India. Although, I believed this study can be considered is not new, however, it is still a interesting study to be looked into. In fact, the authors have made efforts to make their study in order to be scientifically presentable. Nevertheless, I believed there are demerits of this manuscript that reduce the scientific content of the study as stated in my comments below;

Response: As per reviewer suggestions and seeking clarification, following changes have been made throughout the manuscript. Responses are as follows.

Title is modified now as below:

Is University Performance Embedded in University-Industry Collaboration, Marketization and Information Disclosure? Evidence from the five major states of Northern India

1. Tittle is inappropriate. I believed that the current title of manuscript does not reflect the contents of the study. This study did investigation on the respondents from 5 states in North India, but the tittle mentioning about an emerging Asian Economy. It seems an hyperbolic tittle.

Response: As per reviewer(s) advise, research paper title has been modified as indicated above and suggestions have been incorporated successfully w.r.t. investigations done from the five major states of North India.

2. In current abstract, the authors did not highlight the important fact of the study. I can say that the abstract does not reflect facts of research and their implications. In fact, also the crucial element of abstract was not brief concisely.

Response: As per reviewer(s) advise for paper abstract, authors have highlighted the important fact of the study in order to relate and reflect facts of the research followed by their implications, content added successfully.

3. Introduction. In the introduction there is no explanation of how is the phenomena of the Asian economic development and especially in India.

The current conditions of the Universities in India also not described clearly so it is not clear what are the problems that exist in the performance of the Universities in India. In other words, research gap is not clearly defined here. Besides that, the research contribution is unclear.

There is also no explanation why only relational capital is the focus of studying of the relationship on organizational performance. Tough we knew that the elements of intellectual capital. also included human capital and structural capital. I also found that some of the literature is outdated. Please update the literature on Relational capital and organizational performance with the latest.

In objectives, I believed that two research objectives have not been clearly written, but they are not even the same as the proposed hypothesis. There is no hypothesis 1, but suddenly there is hypothesis 2 on page 10. Information disclosure is not clear what is meant in this study.

Response: As per reviewer(s) advise for introduction section, the changes have been made and content added

successfully at appropriate places. Problems confronting India have been explained under heading 1.1. As far as research gap of the study is concerned, "Difficulties confronting Higher Education in India" section has been added and illustrated which show the current scenario of the universities in India and the associated problems that exist in the performance of Indian universities. The challenges mentioned in the manuscript confronting higher education in India, demonstrates that this exploration gap is evidently clear and dependable to lead research, where the role of relational capital is required to be explored in context to university/organizational performance.

Why the study has focused only on relational capital has been explained in detail under heading 1.2.

Relevant literature has been updated as per the observations of the reviewers and has been highlighted in the bibliography section.

Objectives and hypothesis have been well presented and discussed inside the text. They are clearly written. Hypothesis 1 is denoted by notation H1 on page number 14 and Hypothesis 2 is marked as H2 and so on. Research objectives have been reframed in context to the hypotheses.

Information disclosure has been referred to in the manuscript starting with the Introduction part and going forward, it has been discussed in detail under the heading 2.3. Kindly refer to these these sections. Appropriate places have been highlighted.

4. Methodology. The population and samples were not well reported. Need to be fixed.

The number of samples of this research is too small and need to be added so that they are able to represent the actual condition. The current number of samples can not be used to obtain ideal findings for generating a strong and acceptable scientific theory that can be used universally for this field of discipline.

This study is titled Asian Economics, but why are the samples in India only.

Let say the authors focusing India only, again the country has many universities. Why this research only took 10 universities. In addition, data collection procedures are not perfectly explained.

As well, variable definitions and measurements of each variable are not written.

Response: Keeping in mind the expert opinion, the required details have been provided and highlighted in sections 4.1,4.2,4.3 and 4.4. As per the advise by the expert reviewers, no. of samples and linked theory have been highlighted at appropriate places.

Thanks for seeking clarification on sample size. As mentioned in the title, the study belongs exclusively to India. True, India as a country has many universities, however, the present research concentrates on the five major north Indian states with 10 universities based on Stratified random sampling, which is used when the researchers/authors want to highlight a specific subgroup within the population. This technique is useful in such researches because it ensures the presence of the key subgroup within the sample in the given context followed by measurements and variables descriptions. As per the reveiwers' observation, measurements of the variables have been added under the heading "Survey Instrument" as a part of Research Methodology section.

5. Result and Discussion. I believed that the discussions of results and findings of this research was not that deep enough to answer the proposed hypothesis.

Response: Required changes have been made in the discussion and conclusion section. Please check for the proposed hypothesis H1, H2, H3, H4 and H5 followed by interpretation linking to the context of research.

6. Conclusion. In the conclusions, the author did not explain in details concerning results from the 5 hypotheses made.

Response: Explained paragraph has been added in the Conclusion section related to the 5th hypotheses of the study. It is the same as bullet point H5.

Editor's Comments to Author: Please include some more recent and relevant studies from Journal of Marketing for Higher Education

Response: Recent and relevant studies from Journal of Marketing for Higher Education (JMHE) have been discussed and added successfully at appropriate places across manuscript. They have been highlighted in the bibliography section.



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Univ. Bung Hatta

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Thank you for submitting your review of Manuscript ID WMHE-2019-0136.R1 for Journal of Marketing for Higher Education

1 message

Journal of Marketing for Higher Education <onbehalfof@manuscriptcentral.com>

Tue, Aug 18, 2020 at 4:09 PM

Reply-To: ayoubi_rami@hotmail.com

To: fivianggraini@bunghatta.ac.id

18-Aug-2020

Dear Dr Fivi Anggraini:

Thank you for reviewing the above manuscript, entitled "Is University Performance Embedded in University-Industry Collaboration, Marketization and Information Disclosure? Evidence from the five major states of Northern India." for Journal of Marketing for Higher Education.

We greatly appreciate the voluntary contribution that each reviewer gives to the Journal. We hope that we may continue to seek your assistance with the refereeing process for Journal of Marketing for Higher Education, and hope also to receive your own research papers that are appropriate to our aims and scope.

Sincerely,
Dr Ayoubi
Associate Editor, Journal of Marketing for Higher Education
ayoubi_rami@hotmail.com

Is university performance embedded in university-industry collaboration, marketization and information disclosure? Evidence from an emerging Asian economy.

Reviewer Affiliation

Univ Bung Hatta, Faculty of Economics and Business

Manuscript ID:

WMHE-2019-0136

Manuscript Type

Original Article

Keywords

Relational capital, Organizational performance, University-industry collaboration, Marketization, Information disclosure

Date Assigned:

25-Mar-2020

Date Review Returned:

06-Apr-2020

As a thank you and to acknowledge the contribution of our reviewers, the journal may publish a list of the names of those who have reviewed at the end of the year. This will not be linked to any specific paper and will only be done if the list of reviewers is long enough to protect the anonymity of the review process for individual papers. If you would prefer for your name **not to be included** in a published list of reviewers, please indicate this below.

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Recommendation

Reject

Would you be willing to review a revision of this manuscript?

Yes

Confidential Comments to the Editors

This manuscript presents a study on embedded of university performances towards university-industry collaboration, marketization and information disclosure. The authors made their study based data from five states in North India. Although, I believed this study can be considered is not new, however, it is still a interesting study to be looked into. In fact, the authors have made efforts to make their study in order to be scientifically presentable. Nevertheless, I believed there are demerits of this manuscript that reduce the scientific content of the study as stated in my comments below;

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4. Methodology. The population and samples were not well reported. Need to be fixed.

The number of samples of this research is too small and need to be added so that they are able to represent the actual condition. The current number of samples can not be used to obtain ideal findings for generating a strong and acceptable scientific theory that can be used universally for this field of discipline.

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Let say the authors focusing India only, again the country has many universities. Why this research only took 10 universities. In addition, data collection procedures are not perfectly explained.

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5. Result and Discussion. I believed that the discussions of results and findings of this research was not that deep enough to answer the proposed hypothesis.

6. Conclusion. In the conclusions, the author did not explain in details concerning results from the 5 hypotheses made.

Based above--mentioned comments, I recommend this manuscript to be rejected for publication in this journal.

Comments to the Author

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Tue, Aug 18, 2020 at 4:09 PM



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Is University Performance Embedded in University-Industry Collaboration, Marketization and Information Disclosure? Evidence from the five major states of Northern India.

Journal:	<i>Journal of Marketing for Higher Education</i>
Manuscript ID	WMHE-2019-0136.R1
Manuscript Type:	Original Article
Keywords:	Relational capital, University-industry collaboration, Marketization, Information disclosure, University/Organizational performance

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3 **Is University Performance Embedded in University-Industry Collaboration, Marketization**
4 **and Information Disclosure? Evidence from the five major states of Northern India.**
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8 **Abstract**
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12 *The study explores the relationship among relational capital and performance of universities in*
13 *North India. In the first phase, the study identified the major contributors of relational capital by*
14 *grounding of literature. University-industry collaboration, information disclosure and*
15 *marketization emerged as major contributors which were also established empirically in the*
16 *course of the study. Confirmatory factor analysis measurement model established the factor*
17 *structure of the measurement items. Next, the researchers investigated the relative importance of*
18 *each contributor in explaining relational capital and its association with university performance.*
19 *Findings suggest that relational capital has a significant influence on university performance. A*
20 *collaborative approach, relationship of reciprocity with stakeholders, disclosing relevant information,*
21 *maintaining transparency and marketization of the institution are the underpinnings of university*
22 *performance. The study has meaningful implications for policy makers at universities to enable them to*
23 *strategize around practices conducive to the creation of relational capital and enhance performance.*
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43 **Keywords:** Relational capital, University/Organizational performance, University-industry
44 collaboration, Marketization, Information disclosure.
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1. Introduction

Intellectual capital is one intangible asset which has found a lot of weightage in the last decade and the amount of research is overwhelming (Andriessen, 2001; Issac et al., 2010; Jardon & Martos, 2009; Tan et al., 2008). Though financial accounting does not measure intellectual capital, markets clearly do which is why book value of companies has gone on to become just the tip of the iceberg in their overall market value. In the knowledge era human capital, organizational capital and relational capital have become the most important success factors especially for knowledge-intensive organizations. Relational capital, one of the three dimensions of intellectual capital finds an important place in majority studies (Bontis, 1998; Bontis et al., 2000; Canibano & Sanchez, 2009; Chu et al., 2006; Komnenic & Pokrajcic, 2012; Vishnu & Gupta, 2013). Relational capital has been defined as the outside structures concerning the association's relations with channel collaborators, supply chain partners and business coordinated efforts, diversifying understandings, etc (Cinquini et al., 2012).

While university-industry collaboration and the productive connect between universities and industries acts as a vehicle for societal change, information disclosure further strengthens the ties between university and its stakeholders by increasing the level of transparency. Marketization on the other hand argues for a neo-liberal approach in managing university performance and working towards stakeholder satisfaction. Due to the fast-emerging knowledge economy, intangibles now drive performance in organizations.

For the purpose of this study, authors have treated universities as organizations and by the virtue of this, university performance as organizational performance. Studies have proposed (Finney & Finney, 2010; Hashim et al., 2020; Helgesen, 2008) that universities are turning more and more

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3 neo-liberal, market driven and customer oriented in terms of their functioning. Hence universities
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5 can be equated with organizations.
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8 Quality higher education is becoming in conjunction with economic and social development.
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10 The human capital theory strongly propagates for education as the major driving factor behind
11
12 fuelling economic growth. This paradigm shift is majorly due to the emergence of knowledge
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14 economy. Learning sharing practices, knowledge - information advancement or development
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16 and systems that produce a decent picture comprise the basic achievement factors for
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18 associations today. Worldwide intensity of Indian industry and its work age potential is
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20 unmistakably reliant on the accessibility of required abilities and prepared staff. It has been
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22 noted by Yeravdekar and Tiwari (2014) that the general scenario of Indian higher education is
23
24 depressing and it represents a serious imperative on the stockpile of qualified labor.
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26 Accordingly, it is critical to ensure that our universities which are to a great extent, the
27
28 associations at the core of learning age, continually push the limits of information and
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30 advancement. University execution is turning into a significant driving component in deciding
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32 the eventual fate of a learning and knowledgeable society.
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39 ***1.1 Difficulties confronting Higher Education in India***

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42 Higher education in India faces issues running from inconsistencies in enrolment, to low
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44 quality instructing and even to a general absence of inspiration and enthusiasm among
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46 students. Faculty need to understand the importance of quality and student-oriented teaching
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48 pedagogy. Different issues which aggravate the situation include: Outdated course structures
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50 which are inconsistent with industry requirements and non-recognition of alumni strength in
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52 creating a relation of reciprocity with external stakeholders.
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3 **Deficiency of Assets and Resources:** Majority enrolment in higher education is dealt with,
4 by state colleges, universities and their subsidiary colleges. But state colleges, universities get
5 limited quantities of grants. Around sixty five percent of the higher education regulatory
6 body, UGC (University Grants Commission) budget is used by the central colleges,
7 universities and affiliates while state colleges, universities and their colleges get just the
8 staying thirty five percentage. UGC suggests that the activation of assets in state colleges,
9 universities ought to be investigated through different methods, for example, contributions
10 from industry, alumni, and so on thus again bringing out the importance of relational capital.
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13 **Educator openings:** According to UGC, out of the authorized teaching posts, 5,925 (35%)
14 professor posts, 2,183 (46%) associate professor posts and 2,459 (26%) assistant professor
15 posts are unfilled. UGC contemplates that this could be because of two reasons: (i) youthful
16 students don't discover the showing calling appealing; or (ii) the enlistment procedure is long
17 and includes such a large number of procedural conventions. The enlistment procedure should
18 begin certainly before a post is vacant. Moreover, to make the calling of teaching profession,
19 showing increasingly worthwhile, faculties ought to be urged to attempt consultancy projects
20 from industry and be offered monetary help for new companies, start-ups, joint ventures, new
21 enterprises etc. This brings out the importance of university-industry collaborations and
22 treating students as stakeholders to universities.
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25 **Absence of Employable Abilities:** Gap in industry university connect has led to lack of
26 employable aptitudes in students of higher education. Distinguishing proof of aptitude holes
27 in various segments and offering courses for improving employability in them has been
28 suggested. A few techniques in such manner can include: (i) Industry Institute Student
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3 Training Support, (ii) Industrial Challenge Open Forum, (iii) Long Term Student Industry
4 Placement Scheme, and (iv) Industrial Finishing Schools.
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8 **Private participation and information dissemination:** As per the 12th five year plan
9 document of the roadmap for higher education (2012-2017), it has been clearly highlighted
10 that it is extremely important for higher education in India to follow the corporate model,
11 private sector endowment model and a pragmatic PPP model to be able to become more
12 accountable towards its stakeholders. The report clearly brings out that one of the lacunae in
13 our system is insufficient networking and non-availability of relevant information related to
14 universities. It was proposed to create a National Educational Resource Portal where a
15 comprehensive data of all higher education institutions will be available under one roof. This
16 gives the required emphatic push to the present study on the importance of information
17 disclosure by universities.
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32 The given listed difficulties confronting higher education in India, indicates a substantial
33 research gap and a fertile ground to conduct studies, where the role of relational capital is
34 required to be explored with respect to university performance.
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40 Hence the related Research objectives (RO's) are:
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44 **RO₁:** *Do University-Industry Collaboration, Marketization and Information Disclosure have a*
45 *significant influence on university Relational Capital?*
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49 **RO₂:** *Is there a significant relation between Relational Capital and university/organizational*
50 *Performance?*
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1.2 Why Relational Capital?

There are two other dimensions of intellectual capital apart from relational, viz. human and organizational. All three dimensions have a direct and a significant effect on organizational performance and provide a fertile ground for research, but the present study has focused on the third dimension of intellectual capital: relational. Relational capital has been defined as the outside structures concerning the association's relations with channel collaborators, supply chain partners and business coordinated efforts, diversifying understandings, etc (Cinquini et al., 2012). The increasing argument in favor of a neo-liberal approach in managing universities and working towards stakeholder satisfaction has exponentially enhanced the role of relational capital when we speak of university performance in the current scenario. Approaches based on development of relationships are being reiterated increasingly. There is increasing emphasis on networking between universities and industry, alumni, collaboration through vehicles like incubators, science parks, start up ventures and increased marketization through academy-industry liaison offices on university campuses, treating students and parents as important stakeholders (Dragichi et al., 2015; Kitson, 2004; Nyerere & Friso, 2013; Siboni et al., 2013). Thus, the current study focuses on this extremely important dimension of intellectual capital.

1.3 Marketing of Higher Education

Higher education is a unique sector of education where, under graduates or post graduates courses are dealt with having a special focus on specializations, which has for quite a while been worried about student commitments, satisfaction and engagement (e.g. Clemes et al., 2008; Kuh, 2003). Debate has directed particularly towards image building so as to increase student citizenship behavior, student staff associations as a significant facilitator to more profound student commitment and involvement (Bovill & Felten, 2016; Manzoor et al., 2020; Umbach &

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3 Wawrzynski, 2005). External of higher education sector, in any case, the pattern of effectively
4 including clients inside the organization has likewise been developing (Ramaswamy & Ozcan,
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6 2014). This study will subsequently support and provide edge to unite existing co-creation
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8 literature to the current higher education framework in universities to know their performance
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10 from time to time.
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14 Then again, in the reception of a co-creation process, the organization forms an equal and offset
15 rapport with their shoppers, taking into consideration a more extensive scope of buyer voices
16 and inclinations to shape all parts of the administration, item, or potentially conveyance
17 (Prahalad & Ramaswamy, 2004). Value co-creation further takes the point of view that it is
18 superfluous to recognize items from administrations or the other way around, as all items
19 contain administration components, and inside all administrations there are item (also called
20 'products') components (Gummesson,2007). Rather, the yield of promoting activities can be
21 thought of as 'incentives' that collaborate with the buyer, in this manner making the shopper the
22 co-maker of significant worth (Gummesson,2007). By veering off from conventional
23 shopper/authoritative jobs, the maker no longer presumes to comprehend the requirements of its
24 buyers, and rather opens the once in the past shut maker procedure to take into consideration
25 more purchaser association. Buyers are permitted and urged through co-creation to impart
26 insights, whine, arrange, support, and interface with their association in new ways (Cova &
27 Dalli, 2009).
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47 Duran and Gracia (2019), emphasized on the current circumstance regarding the reputation of
48 higher education organizations (HEOs) inside the setting of social networking sites (SNSs),
49 incorporated the suggestions for HEOs' administration of reputation through internet-based life
50 and social media. The substance of this work is that HEO's can productively rely on SNSs for
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3 image and reputation building and positively engaging with its stakeholders which includes not
4 only students but parents, industry and also alumni. This clearly brings out the stakeholder
5 orientation of universities.
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10 Ganguly et al. (2019) described important role of information sharing, which has become a
11 fundamental piece of organizations' business procedures and strategies, alongside supporting
12 organizations to develop and improve, and increase competitive gain. They have focused on the
13 job of implicit knowledge partaking in encouraging innovation and development capacity of an
14 organization. In particular, the research thinks about social capital (relational, cognitive,
15 intellectual and structural) as significant antecedents to information sharing, which thusly,
16 impacts advancement ability of an association. The investigation further talks about the job that
17 information response plays in effective inferred information sharing. The connection between
18 information quality and development capacity is additionally talked about in the paper.
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33 The current day business characterized by serious rivalry, expects firms to be progressively
34 mindful of their creative abilities to set their organization apart. Compelling sharing of
35 information or data can be regarded as a fundamental segment in accomplishing this goal.
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Associations that training and sustain advancement exercises can utilize the discoveries of the
current examination as a piece of their insight the board system. Notwithstanding utilizing the
express information, which are organized in nature, associations can likewise begin utilizing
implicit information to saddle their advancement potential – and the discoveries from the current
investigation can go about as an inspirational apparatus for them to do as such.

2. Conceptual Model of Relational Capital, its dimensions and University/ Organizational Performance

2.1 University- industry collaboration

The evolution in the role of universities has been driven by certain factors. Thrust factors include changes in the higher education policies throughout the world that are encouraging universities to engage with their proximate regions; shift from elite to mass higher education and lifetime education concept created by the changing skill sets required by the labor market. All studies conducted on intellectual capital of universities have found that a focal job has been given to intellectual capital approaches in overseeing universities with a unique accentuation on viewpoints identified with the improvement of associations with external partners or collaborators, supporting that nowadays universities are contributing vigorously on the advancement of relational capital.

This is prompting a systems administration among organizations and universities in type of industry – university cooperation through the recommended University Industry Collaboration (UIC) channels like ventures, graduated class affiliations, separation learning programs, hatching units, modern warning sheets, production of new businesses and side projects and boards with business network (Dragichi et al., 2015; Kitson, 2004; Nyerere & Friso, 2013; Siboni et al., 2013). Guerrero et al. (2013) have taken an entrepreneurial perspective to universities and opine that universities serve as course of overflows, adding to economic and social advancement through their different mission of educating, investigate (research) and entrepreneurial activities. Lehmann and Menter (2015) took a different perspective in their study and tried to identify the path between UIC and regional wealth creation. They

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3 concluded unlike many others that it is not that university-industry connection solely leads to
4 regional wealth or that regional development leads to emergence of universities but that these
5 two are interlinked, substantiating the idea that economic development and university are in
6 conjunction of each other.
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13 Yeravdekar and Tiwari (2014) worked on regional development and capacity building and
14 brought out India's potential as the source of enhancing human capital base for Asia and
15 Africa through its higher education system. Our work will take this thought ahead and try
16 to explore that how will the creation of these knowledge networks affect the performance of
17 Indian universities. Work has also been done in university-industry collaboration in context to
18 newly industrialized countries as far as the nature of the industry partner is concerned i.e.
19 whether the industry partner is emergent or mature because that is what affects the nature,
20 specificity and the dynamics of the partnership (Freitas et al., 2013).
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32 It gives further impetus to our research as India being one of the NICs, it will further explore
33 the possibilities of the impact of relational capital created by university-industry collaboration
34 on the performance of universities. Another set of studies (Abramo et al., 2010;Perkmann
35 et al., 2011) investigated how a university's research quality shapes their commitment with the
36 business and the parameters that impact the decision of university partners by ventures and
37 enterprises. It was presumed that the connection between faculty/research quality and industry
38 commitment varies crosswise over orders thus indicating that customized approach towards
39 UIC needs to be pursued by the policy makers of the universities. Additionally, concentrating
40 on the size of the university, its geographic area and the logical brilliance of its specialists
41 is of most extreme significance while picking industry partners.
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3 Another concept that has come up repeatedly in the literature review is the Triple Helix and
4 associated concept of entrepreneurial universities which emphasizes on a third mission of
5 universities that is economic development through university- industry- community
6 collaboration. (Abramo et al., 2011; Elena et al., 2015; Etzkowitz et al., 2000; Looy et al., 2011;
7 Leydesdorff & Etzkowitz, 1998; Strier, 2010). These studies are based on the assumption that
8 universities are key storehouses of knowledge and human capital and have the potential to
9 significantly influence the economic well-being of the regions in which they are located.
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20 The transition towards knowledge economy has created the need to include knowledge
21 intensive institutions in the domain of industrial interests and increasing the contribution of
22 universities towards national innovation system. UIC is also conducive as research funding is
23 not increasing proportionately at the same pace at which the number of fund seekers is
24 increasing. This concept was further extended in studies where researchers studied the
25 practical applications of the role of universities in generating knowledge and formation of
26 new collaborative environments (Flores et al., 2009). Since universities can be viewed as the
27 point of convergence for the advancement and scattering of new learning and innovations for
28 the improvement and commercialization of new items and procedures, this research study took
29 the assistance of three contextual investigations where three unique universities or institutions
30 created successful collaborative environments including the Indian Institute of Technology
31 (Madras) and the Telecommunications and Computer Networks Group (TeNeT). From the
32 previous theoretical studies, this study presented a practical example of how universities
33 can act as catalysts in socio- economic development of their regions.
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3 Taking the context of the “open data” rule of the Human Genome Project, Perkmann and
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5 Schildt (2015) tried to overcome the challenges of publishing the research results of university-
6
7 industry collaboration conceptualizing the idea of a boundary organization thus substantiating
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9 the importance of publishing the results of industry- university collaboration.
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13 A study has introduced an orderly systematic review of research on academicians' contribution
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15 in industry- university collaboration and termed it as “academic engagement”, differentiating
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17 and comparing the concepts of academic engagement with commercialization. The study
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19 concludes that academic engagement is more closely aligned with traditional academic
20
21 research activities and takes forms like collaborative research, contract research and
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23 consulting. The study took a consequential angle to academic engagement and gave a fresh
24
25 perspective to researchers to study the impact that academic engagement has on other
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27 university activities such as research and teaching (Perkmann et al., 2012).
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34 Present study has been done to support the concept of university- industry collaboration by
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36 arguing that for universities to be relevant they need new ways to interact with the industry
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38 focusing on learning that occurs in and through work (Garrick et al., 2003). Classroom based
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40 training is not sufficient to deal with the new skill sets required by the industry today. This
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42 orientation provides fresh opportunities for universities to benefit from industry
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44 collaboration and accumulate relational capital. A holistic perspective as been taken towards
45
46 “research collaboration” and the work done so far in the field while categorizing collaboration
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48 into knowledge- focused and property-focused collaborations (Bozemann et al., 2013). The
49
50 study considers attributes of collaborators, collaboration process and organizational
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52 characteristics as they affect the collaboration choices and the outcomes.
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Hence the related hypothesis is:

H1: University- Industry Collaboration has a significant positive influence on Relational Capital of a University.

2.2 Marketization

Off late many studies (Choi & Kim, 2020; Hashim et al., 2020; Koc & Celik, 2015; Klement, 2015) have been focusing on student-teacher relationship, students' psychological ties as the focus in brand relationship strategy and student centric learning. Mostly studies have focused on the contribution of the teacher-student relationship to the achievement of students, their perseverance, dropout prevention, motivation and attitude related concepts. Some studies talk about student- centered learning in terms of the use of technology while teaching with the objective of understanding how the use of student centric communicative technologies contribute to the quality of training while others talk about the impact that student to teacher ratio has on student achievement.

Unlike these studies Finney and Finney (2010) took a customer centric approach to the association among students and universities. It discusses the understudy as-client model and speculates that if understudies see themselves to be the clients of university, they are progressively inclined to have sentiments of privilege and practices that are not helpful for progress. While in the event that they think about themselves as member during the time spent creating information, they are bound to take part in proper conduct. Thus, it can conclude that whatever be the perception of students, as a customer or as a co-producer, there is surely a relation of reciprocation between the two.

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3 Present work of research will take forward the thought and try to explore that does treating
4 students as customers/stakeholders result in creation of relational capital? If yes, how does
5 relational capital affect the university's performance? It is an established phenomenon that in
6 the wake of increasing competition, higher education institutions need to market themselves
7 rigorously and develop a student driven organization culture focusing on the quality of service
8 (Hemsley & Oplatka, 2010). With the advent of academic capitalism, customer orientation in
9 policy matters of universities is becoming increasingly important.

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20 Alfy et al. (2020) highlighted perceived service quality in higher education, which is vibrant
21 and relevant. Utilizing subjective and qualitative approach, revealed four components of
22 service quality including scholarly services (course-related and faculty related), regulatory
23 administrations-services, scholastic amenities (library and teaching innovation) and student
24 administration-service job (positive service job and negative assistance-service job). Things to
25 gauge the recently recognized builds were created dependent on interviewee reactions. Being
26 in a human-concentrated setting like higher education makes students' sure and negative
27 service jobs in service quality doesn't show up as astonishment. Essentially, with the
28 inevitability of innovation in postgraduates students' bustling life, the role of teaching
29 innovation as a necessary piece of service quality mirror the impact of innovation as an
30 ecological factor on advanced education organizations just as the dynamic idea of value and
31 what it speaks to. Dynamic and versatile learning and new instructing approaches clarify the
32 uplifted significance of training and teaching innovation as a part of service quality. Liu and
33 Crossley (2010) tried to address the issue of marketing higher education in China through the
34 case study of its three premier universities. It analysed the benefits that a university can gain
35 from creating and advancing official and expert training and education courses. The more
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3 extensive issue tended to here was the marketization of advanced education and it presumed
4 that on the positive side marketization of advanced education betters get understudies'/client
5 needs, connect the official training division with the business and network, go about as an
6 apparatus to help assemble a solid brand and help construct a positive long haul association
7 with partners. This study paves the way for exploring how Indian universities can build on
8 their relational capital by marketization, having customer orientation and in the process end up
9 positively affecting performance. Hence the related hypothesis:

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20 **H2: Marketization of Higher Education has a significant positive influence on**
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22 **Relational Capital of a University.**
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28 *2.3 Information Disclosure*

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30 Dissemination of relevant information has been another important stream of research when we
31 think of universities and relational capital. Many of studies have been directed on detailing of
32 data in the university bookkeeping framework with the target of making universities
33 increasingly transparent, accountable and responsible. (Corcoles et al., 2011; Dagiliene &
34 Mykolaitiene, 2015; Leitner, 2004; Sanchez & Elena, 2006; Spaziale, 2012). This is in line
35 with the intensely talked about neo-liberal policies in universities and adoption of a managerial
36 style of governance. Reporting information includes not only the tangible but intangible
37 information such as intellectual capital, information related to social responsibility and
38 sustainability.
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51 Giving clients access to significant data for educated basic leadership establishes a sound
52 exercise for the straight forwardness of an organization. This concept equally applies to
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3 universities and is depicted in studies (Achua & Alabar, 2014; Shore & Wright, 2004) which
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5 talk of internal auditing in universities. This research upholds the view that internal audit is an
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7 effective investment towards ensuring transparency between universities and its
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9 stakeholders to ensure that key risks are being managed effectively and highlight the areas of
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11 value-added operations. This concept is the subset of a bigger concept of “coercive
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13 accountability” that can be linked to the new form of managerialism based on transparent
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15 governance techniques and wayouts. Our research goes a step further to study “access to
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17 information” as an important emerging variable contributing to relational capital of universities
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19 and how it is further associated with performance.
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25 When we talk of information dissemination in this age of technology, one of the prominent
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27 platforms is the institutional websites. Studies have shown that corporate websites are
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29 becoming one of the most significant tools of communicating with stakeholders in order
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31 to create successful value proposition from the corporate sustainability perspective (Salehi et
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33 al., 2012; Siano et al., 2015). The same applies to Universities as well. Generally, University
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35 websites have become an important source of relationship building with all past – present and
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37 future stakeholders.
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42 A number of studies (Else & Crookes, 2015; Katiliute & Daunoriene, 2015; Pinto et al., 2014;
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44 Utulu & Okoye, 2010; Zhang & Halloran, 2013) support the idea. Another study talks about
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46 the visibility of teaching and learning taking place in the university to the stakeholders and
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48 suggests that websites are one great medium through which they can be made visible to the
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50 external world since there is a strong link between value, perceived worth, marketability and
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52 visibility. Through their websites, universities are repositioning themselves in front of the
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54 global community from a mere education provider to a place where students are to be fine-
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3 tuned to the new kinds of market demands. A study on Nigerian university websites
4 clearly states that since the academic and non academic contents were not available, inter-
5 university web links, web collaboration and electronic social networking was non-existent.
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10 This is in line with the intensely talked about neo-liberal policies in universities and adoption
11 of a managerial style of governance with the target of making universities increasingly
12 transparent, accountable and responsible. Since corporate websites have become one of the
13 most significant tools of communicating with stakeholders in order to create successful
14 value proposition, the same has been applied to universities and the present study has tried to
15 validate the construct of information disclosure against the backdrop of universities making use
16 of their web-sites as a means of disclosing relevant information.
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28 Hence the hypothesis:

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31 **H3: Information disclosure has a significant positive influence on Relational Capital**
32 **of a University.**
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36 *2.4 University/Organizational Performance*

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40 There is expanded accentuation on ceaseless improvement in working gauges of foundations
41 and learning based businesses. Internationalization of advanced education is quick picking up
42 consideration (Yonezawa et al., 2015). It has been noted by Eriksson and Forslund (2014) that
43 work is most prominent in districts with high convergence of aptitudes that can apply
44 information made in universities. While Kaplan and Norton (1992) acquainted another
45 measurement with assess execution of associations from a fair viewpoint, the Baldrige training
46 criteria for execution greatness adjusted the idea of Balanced score card (BSC) to instruction.
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3 While Kumar and Idris (2006) investigated the relationship between the components of
4 learning association and information execution of private higher learning establishments in
5 Malaysia, Umashankar and Dutta (2007) applied the idea of BSC to advanced education
6 programs/organizations in the Indian setting.
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13 Certain performance measurement indicators were also developed to promote, enhance and
14 measure the operating standards and performance levels of universities (Chen et al., 2009). A
15 few works (Bigliardi & Dormio, 2010; Karathanos & Karathanos, 2005; Zangouinezhad &
16 Moshabaki, 2011) have depicted the utilization of BSC and its application in estimating
17 execution of universities. This study intends to concentrate especially on setting up a
18 relationship between relational capital and execution of universities. The present investigation
19 regards universities as associations. Adjusted score card has been received to see hierarchical
20 execution from a fair viewpoint. Writing audit features that there isn't sufficient work covering
21 these connections in university setting.
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35 Ramirez and Gordillo (2013) developed a set of indicators to measure Intellectual capital in
36 universities while other studies tried to explore the way these indicators in the Knowledge
37 Balance Sheets are being interpreted by the various stakeholders within and outside the
38 universities (Habersam et al., 2013). Not just as far as extension of the learning part yet
39 additionally the developing spotlight on data and information in different segments,
40 proposes that the job of universities will just turn out to be increasingly significant with
41 time (Charles, 2006). Up until this point, less studies have been led on Intellectual capital
42 or its measurements in setting to University training and execution. Still lesser writing is
43 accessible as far as Indian universities. The intent therefore is to propose a model that
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3 establishes an association between relational capital of universities and their performance.

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5 Hence the hypotheses:

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8 **H4(a): Financial Perspective is a significant predictor of University Performance.**

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12 **H4(b): Customer Perspective is a significant predictor of University Performance.**

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16 **H4(c): Learning Perspective is a significant predictor of University Performance.**

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20 **H4(d): Process Perspective is a significant predictor of University Performance.**

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24 **H5: Relational Capital has a significant positive influence on university/organizational**
25 **performance.**

26 27 28 29 30 **3. Rationale of study**

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34 The major areas of focus for the Indian Government that have emerged lately are e-
35 governance, e-education and e-healthcare. Particular emphasis has been given to creating e
36 libraries and state of the art IT infrastructures in universities which shows that higher
37 education is on the priority list of the Government today. Other than this, The Ministry of
38 Human Resource Development has issued guidelines for the establishment of Centre for
39 Fostering Social Responsibility and Community engagement in Universities. The idea behind
40 the engagement is to promote “academic citizenship” central to which is the idea that a
41 university is a collective entity rather than a collection of individuals thus emphasizing on
42 connect between university industry and community at large. A conference in France in 2005
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3 gave rise to the Talloires Declaration on the Community Roles and financial Responsibilities
4 of Higher Education.
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8 All signatories including India have submitted their foundations to instruct for the commitment
9 and to reinforcing the utilization of university assets to the necessities of nearby and worldwide
10 economy. This shows the Indian Government's commitment towards the triple helix model
11 concept and promoting the role of universities as conduits of socio-economic development
12 through industry and community engagement.
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20 This commitment of the Indian Government provides a potential ground for research in
21 the area of universities and industry/community collaboration and how universities can
22 augment their performance by the virtue of this relationship and vice versa. Few studies have
23 analyzed how relational capital affects the university's performance by taking a consequential
24 perspective. Moreover as per the researcher's knowledge there are negligible studies in
25 context to the Indian higher education system. Henceforth this examination will be a novel
26 endeavor to comprehend the Indian advanced education framework from this situation.
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37 38 **4. Research Methodology**

39 40 ***4.1 Sampling design and data collection procedure***

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44 The sampling design of study is such that the authors selected 5 major North Indian states of
45 Punjab, Haryana, Delhi NCR, Uttar Pradesh and UT of Chandigarh. One state owned and one
46 private university was selected from each state. Since UT of Chandigarh does not have any
47 state or private university, the reputed Punjab university that happens to be a central university,
48 was selected for the purpose of data collection. In order to increase the representation of central
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3 universities in the total sample, another renowned central university, Allahabad university was
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5 selected from the largest state of Uttar Pradesh to keep the sample balanced.
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9 In order to get accurate responses and reduce ambiguity, a preliminary questionnaire was
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11 distributed to a pilot group of 100 people. The pilot group answered the questions and also
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13 suggested some changes. Their suggestions were incorporated to refine the final questionnaire
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15 which had close-ended questions on a 5-point Likert scale. Data was collected through the
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17 process of a field survey after taking prior approval of the concerned academic authority for
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19 every university. Researchers conducted the process personally and no one was recruited for
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21 collecting the data. Stratified random sampling was used since the population comprised of sub
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23 groups like lecturers, assistant professors, associate professors, professors and visiting
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25 professors. Authors targeted 25% of each stratum of respondents.
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30 ***4.2 Sample selection***

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33 Based on stratified random sampling, the sample comprises of 10 universities from five North
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35 Indian states: Punjab, Haryana, Uttar Pradesh, UT of Chandigarh and Delhi NCR. 4 out of the
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37 10 universities canvassed in the investigation to be specific Allahabad university, Indraprastha
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39 university, Maharishi Dayanand university and Punjab university, were highlighted in the best
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41 100 universities list by the National Institutional Ranking Framework (NIRF) by the Ministry
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43 of Human Resource Development (2018). Thapar institute, in Punjab was positioned eighth
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45 among the best 15 private universities according to the overview led by India today and Global
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47 Human Resource Development Center (GHRDC) in 2013 and has recently raged into the QS
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49 World University Rankings 2019 where it has been put among the top 80% universities of the
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51 world. GLA University was positioned as the best rising private university in North India by an
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3 overview led by Times of India in the year 2017. Different Universities, viz. Galgotias
4 University and Maharishi Markandeshwar University, Haryana were highlighted in the
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6 rundown of top 100 engineering colleges by India today and GHRDC and are in this way
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8 included for the examination. In this manner, exertion was made to cover the Universities that
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10 have great rating and positioning.
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14 15 **4.3 Sample size**

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18 The sample population was about 3000. Since the targeted percentage in each stratum was 25%,
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20 the targeted sample size was 750. Out of 900 questionnaires distributed and 620 received, a total
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22 of 471 usable questionnaires were retained for analysis. Also, an appropriate sample size was
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24 calculated using the following formula:
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28 $n = z^2 * \sigma^2 / M.E^2$ where

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31 $n =$ sample size

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34 $z =$ standard normal random variable (z score)

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37 $\sigma =$ variance

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41 $M.E =$ Margin of error

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44 So, the calculations at 95% level of confidence works out as under:
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47 $n = [(1.96)^2 * (0.24)^2] / (0.03)^2$

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50 $n = 245.89$

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53 Hence it can be said that the study has used a pretty good and representative sample size.
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4.4 Survey instrument

Most items of the scale have been adapted and modified from previous studies while there are also certain new scale items that have been studied and validated through this research. All the 10 items of the construct of information disclosure have been adapted (Utulu & Okoye, 2010) to suit the needs of the study. The construct of marketization includes a new scale item: “Interaction with parents” while the rest have been adapted (Corcoles et al., 2011; McDearmon, 2013; Weerts et al., 2010) and modified. Items of university industry collaboration have been adapted from the same studies mentioned above. In the construct of performance, the items of financial, customer, learning and process perspectives have been directly adapted (Karathanos & Karathanos, 2005; Leitner, 2004; Sayed, 2013; Umashankar & Dutta, 2007) and modified from all these studies which are very important studies on application of the concept of balanced score card in educational institutes. There is literature support available (Leana & Pil, 2006; McCarron & Inkelas, 2006) for the importance of interaction with parents as a contributor towards relational capital. The study has taken parents as direct external stakeholder of schools. The item has been refined according to the requirement of the study and faculty parent interaction has been studied as a contributor to marketization.

Table 1 and 2 show the breakup of the data collected and Table 3 lists the construct wise Cronbach alpha scores of research variables. The alpha score was close to 1 (Nunnally, 1978) for both the constructs.

Table 1. here

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10 ***4.5 Data Analysis*** 11 12 13

14 Data analysis has been done in two stages. The first is the stage of confirmatory factor analysis
15 which confirms the factor structure of the measurement items of the two second order
16 variables of relational capital and organizational performance. The second stage covers the
17 investigation of the relative importance of each independent variable in explaining the
18 two second order variables. Exploratory factor analysis was not required for organizational
19 performance as we had the theoretical support for the same that emerged from the literature
20 review and the already established model of balanced score card.
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30 31 *4.5.1 First order confirmatory factor analysis* 32 33

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35 The proposed measurement model was confirmed using first order confirmatory factor
36 analysis. Three constructs of Information disclosure (10), marketization (5) and university-
37 industry collaboration (3) that emerged from the extensive literature review were defined by
38 the items which had already been retained due to good factor loadings while performing the
39 exploratory factor analysis for the construct of relational capital. These three variables
40 were retained for further analysis. For the construct of organizational performance, financial
41 (6), customer (9), learning (7), and process (9) were retained for further analysis. Table 4
42 below reports the measurement model.
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4.5.2 Reliability and validity statistics

University- industry collaboration, marketization and information disclosure were conceptualized as the three, first order independent variables to measure relational capital in the model. Similarly, finance, customer, learning and process were the three first order dependent variables to measure organizational performance. To validate the structure a first order CFA was performed for all the constructs. These three factors of marketization, information disclosure and university-industry collaboration measured by a total of 18 items converged into the second order construct of relational capital. Similarly the four factors of finance, customer, learning and process measured by a total of 32 items converged into the second order variable of organizational performance. The standardized estimates of all the items were above 0.5, the threshold limit. This established the convergent validity condition of the survey instrument. Composite reliability of all the factors was way above the acceptable threshold of 0.7 which confirmed the reliability of the instrument. Finally a supplementary test of discriminant validity was conducted by calculating the average variance extracted (AVE). Values of AVE for all the seven factors were more than 0.5 and the correlation matrix proved that the correlation between the factors is less than the square root of the AVEs.

Table 5. here

4.5.3 Structural Modeling

After the measurement model was established, structural modeling was conducted to confirm the major relationships of the proposed model, between relational capital and its three factors and organizational performance and its four factors. Table 6 establishes the model relationships along with the regression weights and fit indices. Fit indices (CMIN/df= 1.483, GFI=0.993, NFI=0.995, TLI=0.996, CFI=0.998, RMSEA=0.032) establish the strength and acceptability of the proposed model.

Table 6. here

4.5.4 Path analysis

The next step involved was testing of the major path relationship proposed within the model that is relational capital and organizational performance. This would answer the second research question of the present study which is the influence of relational capital of universities on their performance. The hypothesized model was analysed by structural equation modeling (SEM) using AMOS 20. The overall fit indices of the model are shown acceptable. (CMIN/df=1.483, GFI=0.993, NFI=0.995, TLI=0.996, CFI=0.998, RMSEA=0.032). Results depict that the hypothesized model is quite close to the true model and that the hypothesized model is a reasonable presentation of the structures underlying the observed data. The proposed model with the path analysis is shown in table 7 and figure 1 below.

Table 7. here

Fig. 1 here

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5 These results support H1, H2 and H3 that university- industry collaboration, marketization
6 and information disclosure respectively have significant positive influence on relational capital
7 of a university. Results also provide support to H4(a), H4(b), H4(c) and H4(d) that
8 financial, customer, learning and process aspects are significant predictors of a university's
9 overall performance. Relational capital has a significant positive effect on organizational
10 performance (standardized regression weight= 0.931, $p < 0.001$) thus supporting H5.
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20 **5. Discussion and Conclusion**

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24 The standardized regression loadings of the three first order independent variables of
25 information disclosure, marketization and university-industry collaboration indicate that they
26 significantly affect the creation of relational capital of a university. Marketization of its
27 programs and adopting a customer centric approach towards students in terms of teaching,
28 use of technology and pedagogy is becoming an important predictor in measuring the
29 relational capital of a university. Universities, especially private are in a competition to pit
30 themselves against their competitors and emerge as a better brand. Both, information
31 disclosure and marketization are sources of goodwill and a long-term relationship with the
32 stakeholders.
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45 A variable that emerged as a significant influence on relational capital was university- industry
46 collaboration. The standardized regression loading of university-industry-community
47 collaboration (0.756) indicates that out of the three variables, university- industry-community
48 collaboration emerged as the one having the strongest influence on relational capital of a
49 university closely followed by marketization.
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3 Many studies (Guerrero et al., 2013) have taken an entrepreneurial perspective to universities
4 and opine that universities serve as a channel of overflows adding to financial and social
5 improvement through its various missions of educating, look into and entrepreneurial activities.
6
7 This thought is further extended in the works which talk about the role of universities in
8 entrepreneurial development and overcoming poverty in developing countries (Anna et al.,
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10 2015). Role of alumni is becoming significant as a result of the growing demand of private
11 funds in the wake of reduced government funding.
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20 Universities have found a new source of funding in terms of marketization efforts.
21 Moreover, alumni can prove to be a strong interface between industry and academics and help
22 in bringing about productive collaborations in addition to political advocacy and
23 volunteerism. Importance of alumni has been substantiated in previous studies (Mc Dearmon,
24 2013; Weerts et al., 2010).
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32 This study also brings out that marketization and information disclosure has a significant
33 impact on relational capital of universities. This indicates that in order to connect with the
34 stakeholders universities are relying heavily on a commitment to top class education, treating
35 students and their parents as major stakeholders and banking on a strong network of alumni.
36 Studies (Choi & Kim, 2020; Koc & Celik, 2015; Klement, 2015) have also focused on student
37 centric learning and student- teacher relationships and their effect on student achievement
38 levels.
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49 Finney and Finney (2010) took a customer centric approach to the relationship between
50 students and universities. Thus, contemplates have been led on announcing of data in the
51 university bookkeeping framework like university accounting system with the goal of making
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3 universities progressively adaptable, straightforward, aggressive and practically identical and
4 responsible (Spaziale, 2012; Sanchez et al., 2013; Sanchez & Elena, 2006; Leitner, 2004;
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6 Dagiliene & Mykolaitiene, 2015; Corcoles et al., 2015). This is in line with the intense
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8 transformation processes which universities are undergoing for the development of knowledge
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10 economies and modern societies in general but earlier studies failed to categorize relational
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12 capital and cover the individual relationship between the dimensions and relational capital,
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14 which the present study tries to bridge.
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20 This provides potential grounds for research in India especially in the backdrop of the Indian
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22 government's commitment towards the triple helix model concept and promoting the role of
23
24 universities as conduits of socio economic development. The novelty of this research will help
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26 in enhancing and stimulating relationship between universities and industry and understanding
27
28 how universities can benefit out of this relationship and vice-versa. Yervdekar and Tiwari
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30 (2014) talk of India's potential to contribute to regional capacity building through its higher
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32 education system.
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37 It was concluded from the study that India has emerged as the source for enhancing the human
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39 capital base for countries of Asia and Africa and create knowledge networks. This work will
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41 take this thought a step ahead and try to explore how the creation of these knowledge
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43 networks effect the relational capital of Indian universities and are related with their
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45 performance.
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49 Out of the four performance predictors of university performance the most important indicator
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51 which emerged was process with a regression loading of 0.877 followed by customer (0.873),
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53 learning (0.861) and financial (0.747). This evidence indicates that while assessing the
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3 performance of a university, administrators are unlikely to use all the four perspectives equally
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5 available to them in their decision making and this can be used to support arguments by Vicky
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7 Rich (2007).
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11 Customer perspective with a regression loading of 0.873 though indicates that customer
12
13 orientation is a significant predictor of a university's performance, so much so that it emerged
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15 almost as important as the process aspect which is a fundamental element of an organization
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17 like a university. This is an indicator that universities are highly banking on stakeholder
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19 orientation and this marks an era of neo liberalism in Indian universities where university
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21 is treated as an organization and students, parents and industry, its customers. Process and
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23 learning emerged as strong predictors of performance which indicates that the traditional
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25 parameters of learning and streamlining of processes are still fundamental to university
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27 performance while also having a stakeholder orientation. Following is the explanation linked to
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29 all five hypotheses of the study.
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35 • H1, the significance of relational capital for the university has developed hugely as of
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37 late. Thus, university-industry collaboration has a significant positive influence on
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39 relational capital of a university. Truth be told, relational capital permits universities to
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41 advance and accentuate the adequacy of the third strategic. Study shows that the
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43 making of relational capital for the host universities was the consequence of a
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45 procedure of move and change of the individual relationships of the observatory's
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47 advertisers.
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51 • H2, marketization of higher education has a significant positive influence on relational
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53 capital of a university because marketization is not marketing rather; marketing theory
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3 and doing rather depend on an assistance put together prevailing rationale which
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5 centers with respect to esteem co-creation and long haul returns on showcasing
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7 ventures through relational capital base.
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11 • H3, information disclosure has a significant positive influence on relational capital of a
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13 university; information disclosure leads to transparency between a university and its
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15 stakeholders, viz. students, parents, industry, government and society at large. This
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17 transparency, aids in the creation of a relation of mutual reciprocity between university
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19 and the stakeholders which in the long run is beneficial for both.
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23 • H4, signifies four perspectives (financial, customer, learning, and process) is a
24
25 significant predictor of university performance. Each one of the four perspectives is
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27 considered under different boundary conditions and achieved well, which is responsible
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29 for university performance.
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33 • H5, shows relational capital has a significant positive influence on performance of a
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35 university. It thus brings out a comparative facet and the more significant aspects of
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37 relational capital and analyses their effect on performance of a university. Moreover
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39 this has not been explored in Indian context.
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43 This study paves the way for exploring how Indian universities and universities in
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45 other developing economies can build on their relational capital by marketization,
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47 having a stakeholder orientation and providing stakeholders, access to relevant
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49 information about the university.
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6. Implications of the study

Findings of the present study are useful for university administrators and policy makers. They can get valuable insights on the various approaches to take in order to strengthen ties with stakeholders and influence relational capital. The study provides an empirically tested and practically feasible framework to the university planners and decision makers to help them narrow down on the approach that they have to follow: collaboration, information disclosure or marketization or all of them and in what proportions to use each approach to create relational capital. As clearly suggested going for a collaborative approach and a relationship of reciprocity with stakeholders including alumni and industry has a direct bearing on the relational capital of the university. This implies that university policies should be made keeping in mind the students, parents and industry as their stakeholders and there should be element of accountability towards these stakeholders in those policies.

As results highlight that industrial collaboration and marketization have an edge over information disclosure, policy makers can ponder upon and work out productive collaborations with industry thus enhancing university performance on one hand and also working in line with the federal policy of “The Triple Helix”. The study also provides a perspective to the administrators on how to increase visibility by carefully choosing to disclose relevant information through websites and in the process accumulate relational capital and enhance university performance in the long run.

This study provides an empirically tested model for universities in India as well as other developing economies around the world. On the basis of literature review the study proposes three relatively unconventional areas of focus for university planners: Industrial

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3 collaboration, marketization and information-disclosure. This study provides a conceptual base
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5 for further research that can be conducted to figure out certain other contributors of relational
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7 capital. Also this study will provide a platform to practically implement the three concepts that
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9 have been proposed theoretically in the study.
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19 **Disclosure statement**

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23 No potential irreconcilable situation was accounted for by the creators. This exploration didn't
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25 get a particular award from subsidizing offices in people in general, business or not-revenue
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27 driven divisions.
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TABLES

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TABLE 1
State wise Sample distribution

Name of University	State
Allahabad University	Uttar Pradesh
Galgotia University	Delhi/NCR
GLA University	Uttar Pradesh
Indraprastha University	Delhi/NCR
Maharishi Dayanand University	Haryana
Maharishi Markandeshwar University	Haryana
	U.T of
Punjab University	Chandigarh
Punjabi University	Punjab
Thapar University	Punjab
U.P Technical University	Uttar Pradesh

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TABLE 2.
Strata wise sample description

Job Title	Number of responses
Lecturer/ Assistant Professor	340
Associate Professor	74
Professor/ Visiting Professor	57
Total	471

TABLE 3.

Construct wise reliability statistics

Name of the construct	Number of items	Cronbach Alpha
Relational capital	21	0.931
Organizational Performance	33	0.964

TABLE 4. 1st order CFA with reliability and validity statistics

Variable	Items	S.Estimates	Composite reliability	AVE
Marketization	Commitment to good education	0.775	0.841	0.521
	Students as stakeholders	0.634		
	Interaction with parents	0.798		
	Interaction with students	0.832		
	Having a strong alumni network	0.525		
Information disclosure	Information about faculty	0.706	0.92	0.536
	Information regarding upcoming events	0.716		
	Adequate information on law & handbooks	0.732		
	Supports an academic paper repository	0.791		
	Information on upcoming conferences/seminars	0.757		
	Information on teaching resources	0.821		
	Online Public Access Catalogue	0.761		
	Information on research funding	0.728		
	Information on academic regulations	0.682		
	Information about university	0.602		

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4	University-industry	Making use of the alumni	0.77	0.797	0.571
5	collaboration	network as an interface between			
6		industry and academia.			
7		Utilizing the archived knowledge			
8		of faculty to facilitate industry	0.865		
9		consulting.			
10		Active participation in			
11		conducting MDPs/FDPs/EDPs.	0.61		
12					
13	Finance	Quality internal auditing system	0.7	0.861	0.509
14		finance from teaching	0.765		
15		finance from research	0.782		
16		student scholarship	0.671		
17		Professional development			
18		allowance	0.683		
19					
20		TA/stipends	0.671		
21					
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23					
24	Customer	Corporate funding for projects	0.625	0.917	0.553
25		Delivery of projects on time	0.591		
26		Curriculum consistent with			
27		industry	0.687		
28		Student satisfaction-pedagogy	0.794		
29		Student satisfaction-infrastructure	0.785		
30		Student word of mouth	0.846		
31		Parents' word of mouth	0.809		
32		Placements	0.748		
33		Internship/training	0.765		
34					
35	Learning	Organise STP/FDP	0.67	0.878	0.509
36		Involved in consultancy	0.793		
37		Promote entrepreneurial			
38		initiatives	0.77		
39		Financial support for attending			
40		STP/FDP	0.652		
41		Adequate classroom facilities	0.718		
42		Financial support for			
43		hardware/software	0.673		
44		Assess teaching performance	0.705		
45					
46	Process	New courses	0.764	0.922	0.569
47		Session plans	0.742		
48		Quality degree completion rate	0.677		
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Student measurement scale	0.764
Unique courses	0.778
Facilities to promote staff productivity	0.823
System to enhance quality(regular students)	0.856
System to enhance quality(part time)	0.682
Quality accreditation system in place	0.679

Table 5. Correlation Matrix

	Marketization	Information disclosure	University industry collaboration	Finance	Customer	Learning	Process
Marketization	<i>0.721</i>						
Information disclosure	0.548**	<i>0.732</i>					
University industry collaboration	0.72**	0.482**	<i>0.755</i>				
Finance	0.504**	0.537**	0.548**	<i>0.713</i>			
Customer	0.626**	0.582**	0.615**	0.662**	<i>0.743</i>		
Learning	0.561**	0.617**	0.606**	0.632**	0.712**	<i>0.713</i>	
Process	0.63**	0.95**	0.624**	0.596**	0.736**	0.706**	<i>0.754</i>

** . Correlation is significant at the 0.01 level (2-tailed). Notes. Figures in italics are the square roots of AVE.

Table 6. Structural model with regression weights

Factors	Constructs	Estimate	S.Estimates	S.E.	C.R.	P
Marketization <---	Relational capital	1	0.754			
Information disclosure <---	Relational capital	1.029	0.733	0.068	15.241	0.000***
University-industry collaboration <---	Relational capital	1.253	0.756	0.064	19.487	0.000***

Finance	<---	Performance	1	0.747			0.000***
Customer	<---	Performance	1.043	0.873	0.054	19.196	0.000***
Learning	<---	Performance	1.036	0.861	0.055	18.72	0.000***
Process	<---	Performance	1.035	0.877	0.058	17.973	0.000***

*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$. Goodness of fit CMIN/df= 1.483, GFI=0.993, NFI=0.995, TLI=0.996, CFI=0.998, RMSEA=0.032.

Table 7. Path analysis, relational capital and organizational performance

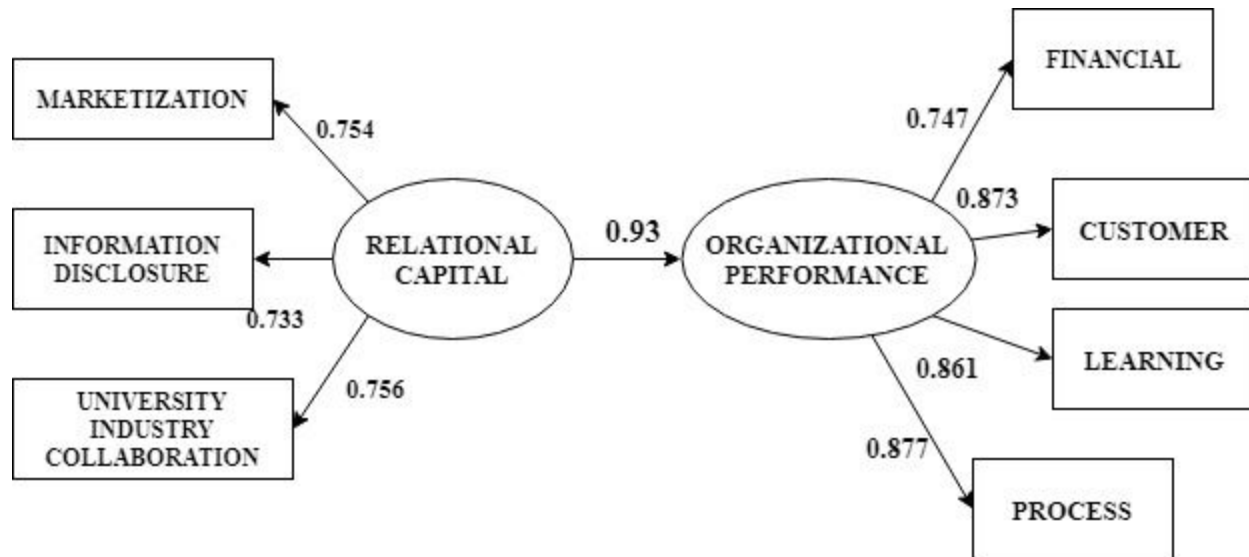
Construct	Path	Construct	S.Estimate	S.E	C.R	P
Organizational performance	<---	Relational capital	0.931	0.088	13.159	***

*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$. Goodness of fit CMIN/df= 2.314, GFI= 0.988, NFI=0.991, TLI=0.988, CFI=0.995.

P.T.O

FIGURE

Figure 1. Proposed model of Relational capital and University/Organizational performance



Reviewer Comments - Response

Dear Editor

At the outset, the authors would like to thank you and the expert reviewers for their valuable feedback. The feedback provided has definitely helped us to refine the paper further and make it a quality manuscript. The response to the issues raised is provided below. Authors have addressed all the individual points raised by both the reviewers and hope that all the queries are satisfied.

Reviewer –1

- a. The questionnaire instruments has not been discussed in depth in the research methodology section. Further, it is essential to disclose the sources of questionnaire and whether it is self-developed, adopt or adapt from other previous studies.

Response : Based on reviewers advise, the questionnaire instrument has been discussed thoroughly with special focus on research methodology section under heading 4.4.

- b. The references are not APA complaint.

Response : As per given advice by eminent reviewer(s), all references have been compiled according to the APA format.

Reviewer –2

Comments to the Author

This manuscript presents a study on embedded of university performances towards university-industry collaboration, marketization and information disclosure. The authors made their study based data from five states in North India. Although, I believed this study can be considered is not new, however, it is still a interesting study to be looked into. In fact, the authors have made efforts to make their study in order to be scientifically presentable. Nevertheless, I believed there are demerits of this manuscript that reduce the scientific content of the study as stated in my comments below;

Response: As per reviewer suggestions and seeking clarification, following changes have been made throughout the manuscript. Responses are as follows.

Title is modified now as below:

1 Is University Performance Embedded in University-Industry Collaboration, Marketization and
2 Information Disclosure? Evidence from the five major states of Northern India
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8 1. Title is inappropriate. I believed that the current title of manuscript does not reflect the
9 contents of the study. This study did investigation on the respondents from 5 states in North
10 India, but the title mentioning about an emerging Asian Economy. It seems an hyperbolic
11 title.
12

13 **Response:** As per reviewer(s) advise, research paper title has been modified as indicated above and
14 suggestions have been incorporated successfully *w.r.t.* investigations done from the five major
15 states of North India.
16
17

18 2. In current abstract, the authors did not highlight the important fact of the study. I can say
19 that the abstract does not reflect facts of research and their implications. In fact, also the
20 crucial element of abstract was not brief concisely.
21
22

23 **Response:** As per reviewer(s) advise for paper abstract, authors have highlighted the important fact of the
24 study in order to relate and reflect facts of the research followed by their implications, content
25 added successfully.
26
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28

29 3. Introduction. In the introduction there is no explanation of how is the phenomena of the
30 Asian economic development and especially in India.
31

32 The current conditions of the Universities in India also not described clearly so it is not clear
33 what are the problems that exist in the performance of the Universities in India. In other words,
34 research gap is not clearly defined here. Besides that, the research contribution is unclear.
35 There is also no explanation why only relational capital is the focus of studying of the
36 relationship on organizational performance. Tough we knew that the elements of intellectual
37 capital. also included human capital and structural capital.
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41 I also found that some of the literature is outdated. Please update the literature on Relational
42 capital and organizational performance with the latest.
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45 In objectives, I believed that two research objectives have not been clearly written, but they are
46 not even the same as the proposed hypothesis. There is no hypothesis 1, but suddenly there is
47 hypothesis 2 on page 10. Information disclosure is not clear what is meant in this study.
48

49 **Response:** As per reviewer(s) advise for introduction section, the changes have been made and content
50 added successfully at appropriate places. Problems confronting India have been explained under
51 heading 1.1. As far as research gap of the study is concerned, "*Difficulties confronting Higher
52 Education in India*" section has been added and illustrated which show the current scenario of the
53 universities in India and the associated problems that exist in the performance of Indian
54 universities. The challenges mentioned in the manuscript confronting higher education in India,
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1 demonstrates that this exploration gap is evidently clear and dependable to lead research, where
2 the role of relational capital is required to be explored in context to university/organizational
3 performance.
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6 Why the study has focused only on relational capital has been explained in detail under heading
7 1.2.
8

9 Relevant literature has been updated as per the observations of the reviewers and has been
10 highlighted in the bibliography section.
11

12 Objectives and hypothesis have been well presented and discussed inside the text. They are
13 clearly written. Hypothesis 1 is denoted by notation H1 on page number 14 and Hypothesis 2 is
14 marked as H2 and so on. Research objectives have been reframed in context to the hypotheses.
15

16 Information disclosure has been referred to in the manuscript starting with the Introduction
17 part and going forward, it has been discussed in detail under the heading 2.3. Kindly refer to
18 these these sections. Appropriate places have been highlighted.
19
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23 4. Methodology. The population and samples were not well reported. Need to be fixed.
24

25
26 The number of samples of this research is too small and need to be added so that they are
27 able to represent the actual condition. The current number of samples can not be used to obtain
28 ideal findings for generating a strong and acceptable scientific theory that can be used
29 universally for this field of discipline.
30

31 This study is titled Asian Economics, but why are the samples in India only.
32 Let say the authors focusing India only, again the country has many universities. Why this
33 research only took 10 universities. In addition, data collection procedures are not perfectly
34 explained.
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38 As well, variable definitions and measurements of each variable are not written.
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42 **Response:** Keeping in mind the expert opinion, the required details have been provided and highlighted in
43 sections 4.1,4.2,4.3 and 4.4. As per the advise by the expert reviewers, no. of samples and linked
44 theory have been highlighted at appropriate places.
45

46 Thanks for seeking clarification on sample size. As mentioned in the title, the study belongs
47 exclusively to India. True, India as a country has many universities, however, the present
48 research concentrates on the five major north Indian states with 10 universities based on
49 Stratified random sampling, which is used when the researchers/authors want to highlight a
50 specific subgroup within the population. This technique is useful in such researches because it
51 ensures the presence of the key subgroup within the sample in the given context followed by
52 measurements and variables descriptions. As per the reveiwers' observation, measurements of
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1 the variables have been added under the heading "Survey Instrument" as a part of Research
2 Methodology section.
3

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6 5. Result and Discussion. I believed that the discussions of results and findings of this research
7 was not that deep enough to answer the proposed hypothesis.
8

9 **Response:** Required changes have been made in the discussion and conclusion section. Please check for
10 the proposed hypothesis H1, H2, H3, H4 and H5 followed by interpretation linking to the context
11 of research.
12

13
14
15 6. Conclusion. In the conclusions, the author did not explain in details concerning results from
16 the 5 hypotheses made.
17

18 **Response:** Explained paragraph has been added in the Conclusion section related to the 5th hypotheses of
19 the study. It is the same as bullet point H5.
20

21
22
23 Editor's Comments to Author: Please include some more recent and relevant studies from
24 Journal of Marketing for Higher Education
25

26
27 **Response:** Recent and relevant studies from Journal of Marketing for Higher Education (JMHE) have been
28 discussed and added successfully at appropriate places across manuscript. They have been
29 highlighted in the bibliography section.
30

31 -----X-----X-----
32
33

34
35
36 **Yours Sincerely**

37
38 **Dr Niti Chatterji (First/Corresponding author)**

39
40 **Dr Rudra Rameshwar (Second author)**

41
42 **Dr Ravi Kiran (Third author)**
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