ISSN: 2278-3369

International Journal of Advances in Management and Economics

Available online at www.managementjournal.info

RESEARCH ARTICLE

Through Pains and Gains: Measures of Faculty Research Productivity at Don Honorio Ventura Technological State University

Quiambao Dolores T, Baking Enrique G, Buenviaje Laura Mirian B, Nuqui Alvin V*, Cruz Reynaldo C

Don Honorio Ventura Technological State University, Bacolor, Pampanga, Philippines, 2001.

Corresponding Author E-mail:* ***alvin_nuqui2002@yahoo.com*

Abstract

This study assessed the measures of faculty research productivity at Don Honorio Ventura Technological State University. Findings of the study suggest that there is still a need for the university to further advance the faculty members' educational experiences and background in research particularly in giving exposures to current professional literature and in the dissemination of research findings. Majority of the higher education faculty has recognized the value of scholarship as shown by their interest in doing research and taking small steps in attaining real work of research scholar. The findings of the study indicate that there is so much that can be desired in terms of improving the research productivity of the faculty members of DHVTSU. Faculty research productivity is significantly influenced by the extent of research promotion of institutions in terms of promotion of the research environment and providing mentors' assistance. Just like any other Philippine HEIs, DHVTSU is encountering similar problems and issues on research productivity such as faculty members' training, institutional support mechanism and others.

Keywords: *Research productivity, Mentors' assistance, Research promotion, Don Honorio Ventura Technological State University.*

Introduction

The National Higher Education Research Agenda [1] serves as a guide in managing researches of higher education in the Philippines. The ultimate goal is to propel higher education to produce a high level of human resource that is trained, developed and competitive to the global arena. It has been the national policy of CHED to enhance research in the Philippines. Research as required by CHED is among the four primary functions of all Higher Education Institutions (HEIs). Research productivity is also used as a criterion for university status, center of excellence, autonomous/deregulated status, institutional quality, and opening of graduate programs. (CHED Memorandum Order No. 25, Series of 1998, *Priority Research Areas*). In 2005, Hadjinicola and Soteriou [2] identified the presence of research center as the vital arm of the school in improving research productivity of faculty members. The quality and production of faculty research are significantly influenced by the existence of external funding and higher academic achievement of a faculty member. External funding necessitates the researcher to come up with a quality and relevant research proposals for funding. These expectations on researchers result in the production of more and better quality publications. It was found out by Kurtz et al [3] that quality of training on research given by the school determines the academic research productivity of a faculty member. They further opined those faculty members who have more administrative duties could not allocate the amount of time they desired to accomplish research endeavor. Betsey [4] added that faculty members become less research productive because of too much time is being allocated to teaching. The National Action Agenda for Productivity [1] identified the issues which are still needed to be addressed namely: slow transfer of and poor access to technologies due to lack of appropriate and affordable inputs inadequate public information education and campaign on research results low rate of public investments in R & D, inequitable allocation of fund and weak linkages and coordination among HEIs. This paper intends to assess the measures of faculty research productivity at Don Honorio Ventura Technological State University in aid of policy reformulation that will improve the research productivity of faculty members.

Framework

The study postulates that the faculty members' research productivity is influenced by the extent of promotion of research culture of higher education institutions (HEIs). As a study that hopes to contribute in improving the research productivity of Higher Education Institutions, this research anchors its conceptual model on the framework of the National Higher Research Agenda in Higher Education [1]. NHERA shall serve as a guide for CHED to manage all related researches in higher education as well as serve as a guidepost for the whole higher education community. It envisions that higher education shall have generated discovered and extended knowledge useful to education business industry and others and shall have developed a research culture supportive of sustained development and globally economic growth of the country. Indeed, the vision of NHERA seeks to bring out improvement in instruction and extension work in the pursuit of knowledge useful for survival in the next century'.

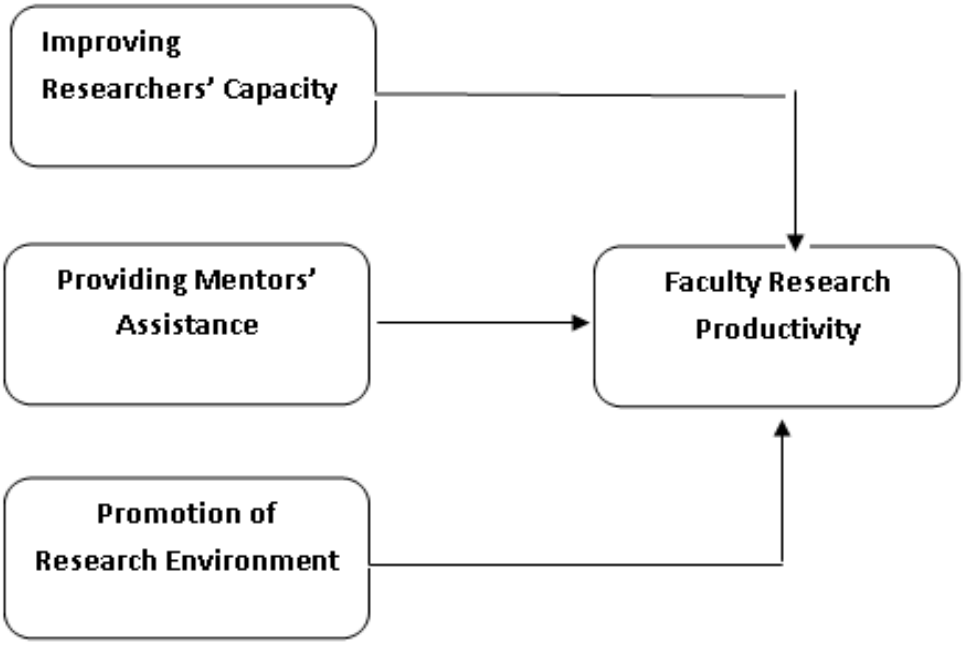

Fig. 1: Conceptual model of the study

Figure 1 presents the conceptual model that was used in identifying the determinants of faculty research productivity at Don Honorio Ventura Technological State University. The extent of promotion of faculty research productivity was assessed in the light of the institutions' efforts in improving researchers' capacity, providing mentors' assistance, and promotion of the research environment.

Improving Researcher's Capacity

The University of the Philippines has recently been mandated as the National University. This is timely in view of the significant improvement in its research performance in recent years. To function truly as such, it has to develop into a research university, the first to become one in the country. This would require some changes in faculty recruitment, in performance evaluation, and in academic programs. The principal criterion of faculty recruitment and promotion is research productivity. Valid publication is the main basis of rating qualification and performance rather than possession of an advanced degree by the applicant or the personal judgment of unpublished members of search committees.

Emphasis of the university is graduate education, where at least one valid publication is the requirement for a doctoral degree [5].

To achieve such goal, improving researcher' capacity is accomplished by the schools through advancing faculty member's educational experience and research background, uplifting researcher's cognitive competencies, technical skills, and activating characteristics.

H1. The higher the efforts of improving the researcher's capacity to do research, the higher level of faculty research productivity

Providing Mentor's Assistance

A mentor is someone who has experience with the challenges that trainees face, the ability to communicate that experience, and the willingness to do so. A mentor takes a special interest in helping another person develop into a successful professional.

One crucial role for a mentor is to assist the trainee in understanding and adhering to the standards of conduct within his or her profession. Within a small research group, this can often happen through example, impromptu counsel, and the free-flowing exchange of thoughts and ideas.

Today many research groups are too large or competitive for this to occur. Whether or not this change in scale has impeded the extent to which new scientists become aware of prevailing standards of conduct, it appears that issues of responsible conduct are not discussed frequently enough. The provision of mentors' assistance includes research conceptualization, data gathering, data analysis and interpretation, preparation of the research report, and other assistance.

H2. The higher the efforts of providing mentor's assistance, the higher level of faculty research productivity

Promotion of Research Environment

According to Clemena and Acosta [6], a supportive research environment is indicated by the presence of the following:

Institutional Research Policies and Agenda

This includes the presence of the research agenda based on the institution's philosophy, goals, mission and vision, as well as its research emphasis and strategies for supporting and promoting research.

Departmental Culture and Working Conditions

This refers to departmental research programs and strategies designed to encourage and sustain research productivity among the faculty (full time and part-time) and graduate students.

Budget for Research

This pertains to the funds allotted by the institution for research. This also takes into account the ability of the institution and its departments to tap external sources (e.g., international donor agencies, non-profit organizations, industry) and obtain research grants.

Infrastructure

This includes the provision of a research unit, adequate research services, and facilities in different disciplines for the conduct of research.

Collaboration with and access to Research Professionals in other Institutions

This refers to the ability to provide means for linkages with other institutions, local or international, in order to create intellectual synergy.

Policies and Guidelines on Research benefits and Incentives

This pertains to rules and procedures on the granting of financial and nonfinancial (e.g. professional recognition) rewards for research.

Research Committee

This refers to the research monitoring body that screens the types of research conducted and looks into ethical dilemmas involved, especially in sensitive fields.

Publications

This consists of the quality and quantity of research produced by the faculty members. This is evident in the number of published researches in local and international journals, awards attained by faculty, and patents, among others.

H3. The higher the efforts of promoting research environment, the higher level of faculty research productivity

Objective of the Study

The main objective of the study is to assess the measures of faculty research productivity at Don Honorio Ventura Technological State University. Specifically, the study sought to give light to the following objectives:

- To assess the extent of the university's promotion of research productivity in terms of improving researchers' capacity, providing mentors' assistance, and promotion of research environment;
- To describe the research productivity profile of faculty members in terms of the number of scientific research, publication, citation, and patents; and
- To identify whether the extent of research promotion at DHVTSU affect the faculty research productivity.

Materials and Methods

Design

The researcher utilized the descriptive correlational method of research. The interest is examining the extent of promotion of research at DHVTSU, as measures of faculty research productivity.

Scales and Measures

The instrument used was composed of two parts. The first part elicited information on the extent of research promotion at DHVTSU, in terms of improving researchers' capacity, providing mentors' assistance, and promotion of research the environment. Part two of the instrument assessed the research productivity of full-time faculty members.

The Content Validity Procedure was utilized in validating the instrument. The experts invited were (a) a long time research director experienced in managing the institutional and consortium research; (b) a President in one of the universities in Region III who is actively involved in research management; and (c) a research director and graduate school professor handling research in educational management.

A validated semi- structured questionnaire was used as a primary data gathering tool. Documentary analysis was also used extensively in determining the level of research productivity of faculty members. The extent to which research productivity is being promoted was identified in the light of the institutions' efforts to improve researchers' capacity, providing mentors' assistance, and promotion of the research environment.

Respondents

The respondents of the study were the faculty members of Don Honorio Ventura Technological State University who were purposively selected based on the following inclusion criteria: (1) Full-time faculty member; (2) teaching in the college level; and (3) have at least three years of service in the institution. Using the criteria, a total number of 64 full time faculty members were made part of the study.

Data Analysis

The data collected were tabulated and processed using Statistical Packages for the Social Sciences. In order to analyze and interpret the data gathered, the following statistical measures were used:

Rating Scale	Range	Analytical Description	Interpretation
5	4.50-5.00	Research Promotion is very extensive and functioning excellently	Promoted to a Very Great Extent
4	3.50-4.49	Research Promotion is moderately extensive and functioning very well	Promoted to a Great Extent
3	2.50-3.49	Research Promotion is adequate and functioning well	Promoted to a Moderate Extent
2	1.50-2.49	Research Promotion is limited but functioning	Promoted to a Least Extent
1	1.00-1.49	Research Promotion is limited and functioning poorly	None at all

- The extent of faculty research promotion at DHVTSU was quantified using the following the scale.
- The research productivity of the faculty members was analyzed using frequency counts and percentage procedures.
- Regression analysis was used, in identifying the measures of faculty research productivity.

Results and Discussion

Improving researchers' Capacity

The University exert deliberate effort to advance faculty members' educational experience and background through seven different indicators: (1) sending faculty members to seminars, workshops, conferences on research [3.16], (2) encouraging faculty members to become active members in research/professional organization [3.11], (3) requiring research appropriateness of major field of specialization [3.86], (4) supporting/motivating faculty members to publish their research outputs [3.98], and (5) promoting consistency in demonstrating professional integrity [3.72], (6) disseminating current researches and literature specific to the researcher's field [3.33] and (7) encouraging the faculty members to seek reviews of current professional literature [3.13].

It may be implied from the data that there is still a need for DHVTSU to further advance the faculty members' educational experiences and background in research particularly in encouraging faculty members to become active members in research/professional organization, giving exposures to current professional literature and in the dissemination of research findings. This may be done by instituting research trainings that will enhance the faculty members' capacity in conducting a review of current professional literature. The institution may send faculty members to research workshops that will motivate them to publish their research outputs in refereed journals

Williams et al., [7] believe that given the right nurturing, many people can become highly productive researchers. Research excellence comes by relentlessly training oneself in the right conditions. With this model, it could be far more economical to grow many different highly productive researchers. The result of the study suggests the university's exertion to uplift researchers' cognitive competencies was to a great extent manifested by the (1) knowledge of methodologies [4.02], (2) working knowledge of statistics [3.64], (3) knowledge of existing literature of the problem [3.84], and (4) knowledge of research linkages [3.80]. Meanwhile, moderate extent of promotion was recorded as evidenced by the (5) functional knowledge of the research process [3.30], (6) knowledge of the research content [3.48], (7) awareness of current literature in the field [3.19], and (8) scholarship of thesis [2.36]. This means that the provision for research promotion at DHVTSU is adequate and is functioning well.

In the words of Levine [7], faculty members with longstanding success or integrity in research are often admired by other faculty and students as being on the cutting edge of their career and are regarded as knowledgeable about most issues in their field. These faculty members are seen as more powerful educators and often serve as a frame of reference for junior faculty members or others who are developing their own research agenda.

In terms of the institutions extent of honing the researchers' technical skill, great extent of promotion was noted as evidenced by the faculty members' (1) familiarity with documentation [3.92], (2) correct choice of words and organizations of ideas [4.22], (3) knowledge in the use of research design, techniques, and measuring devices [3.78] and (4) skill in selecting statistical design appropriate to the problem [4.0]. Moderate extent of promotion was recorded in honing the faculty members' (5) familiarity with the use of library resources [2.97], and (6) familiarity with standards, format and technical writing style including organization [2.97]. Least extent of promotion was noted in (7) improving the researchers' style of writing among DHVTSU faculty members [2.27].

The extent of the institution research promotion in terms of developing the researchers' activating characteristics was to a very great extent as shown by the faculty members' (1) commitment to scholarship [4.89], (2) alertness/enthusiasm [4.53], (3) professionalism in dealings [4.63], (4) constructiveness in criticism [4.73], and (5) monitoring his own progress [4.91]. Great extent of promotion was evident in the following activating characteristics of the faculty members' (6) patience and perseverance [3.88], (7) real concern [4.05], (8) intellectual

honesty [3.81], and (9) willingness to go out of his way when needed [3.47].

This means that indicators with noted low extent of research promotion in terms of improving the researcher capacity may consider developing research programs that will further improve the faculty members' capacity to do research and programs that will enhance the abilities of individuals, organizations and systems to undertake and disseminate high quality research efficiently and effectively.

Providing mentors' Assistance

The research promotion in terms of providing assistance in research conceptualization was perceived to a very great extent as shown by the mentors' care in going over the research title, major and specific problems, theoretical and conceptual frameworks, and methodology of the study submitted by the faculty member (4.78). This finding indicates that research promotion is very extensive and functioning excellently.
The study also revealed that very extensive promotion for research in providing assistance to the researcher in the improvement of the research paper (4.88) and encouraging advisee's independence in the process of writing the research paper (4.67). Great extent of promotion was also recorded in monitoring and supervising of data gathering procedure (4.42), guidance in the editing, coding and collating of data gathered (4.11), judicious examinations of the research paper submitted by the advisee (4.22), correction of errors in grammar, spelling, and mechanics (3.64), correction of organization of ideas (3.56), and assistance on statistical aspect of the research design and statistical treatment of the paper (4.14).

Moreover, moderate extent of mentors' support was perceived in terms of clarification of the proper statistical treatment (3.11), guidance in the methodology of analysis (3.14), guidance and direction in the mechanics of interpretation (3.36), direction in the use of proper style and format of the research report (3.28), regularity in checking the researcher's progress (3.11), professionalism, system, and manner in giving critique (3.49), assistance on statistical aspect of the research design, definition of the statistical treatment to be used (3.0) and judiciousness in the certification for oral defense(3.06). This finding indicates that research promotion is adequate and functioning well.

Although mentoring alone may be insufficient, it is essential to promote a positive attitude and understanding of the responsible conduct of research. Mentoring is a shared professional responsibility of all the researchers in the institution. The enterprise of science depends on effective communication, not just about science, but about the practice of science, standards of conduct, and ethical and social responsibility. Taking an active role in helping to train the next generation of scientists should not be optional. Scientific trainees have a complementary responsibility to take an active role in their own development and seek mentors.

Promotion of the Research Environment

With regard to the institutions' extent of promotion of the research environment, research promotion was perceived to be very extensive and functioning excellently in developing and maintaining a distinctive culture, positive group climate, decentralized, organization, participative governance, and frequent communication that would enhance research productivity among faculty members (4.56), utilizing research capability as one of the criteria for recruitment and promotion of faculty member (4.70), and allocating adequate budget for research (4.89).

Also, research promotion of HEIs was moderately extensive and functioning very well as shown by the following indicators: DHVTSU develops research agenda based on the institution's philosophy, goals, mission and vision, as well as its research emphasis and strategies for supporting and promoting research (4.14), the institution provides training and exposure to research in order to build research capacity among the faculty members (3.94), the institution provides research unit, research staff, adequate research services, and facilities in different disciplines for the conduct of research (4.31), and the institution provides means for linkages with other institutions, local or international, in order to create intellectual synergy (3.95)

The study also revealed that research promotion was adequate and functioning well in terms of the following extent of promotion

of the research environment of DHVTSU: the departmental research programs and strategies are designed to encourage and sustain research productivity among the full-time and part-time faculty members(2.47), the institution looks for external sources and obtains research grants(3.16), the institution has clear rules and procedures on the granting of financial and non-financial rewards for research(3.41), the institution institutes a research monitoring body that screens the types of research conducted and looks into the ethical dilemmas involved, especially in sensitive fields (3.08), and the institution's produces quality researches as evidenced by the number of published researches in local and international journals, awards attained by faculty, and patents, among others(2.48)

The kind of research environment may lead to research productivity among faculty members in HEIs. Hence, developing an attainable research agenda, good culture of research, appropriate budget for research, functional research units and services, linkages and networks, provision of research benefits and incentives, research committee, and venue for publications are the essential elements of supportive research environment which may be considered by the university in order to motivate faculty members to become research productive.

Research Productivity of Faculty Members

The research productivity of DHVTSU faculty members was found to be low especially in the areas of scientific researches, publications, and citations. Majority of research outputs are technological inventions. Results of the survey revealed that faculty members' time availability is one of the possible reasons for not being research productive. Majority of their time is allotted for teaching, hence focus in writing a research becomes an obstacle. The university is also focused on developing technology development not much on scientific writing and publication in internationally refereed journals. Also, administrators are so much engaged with the voluminous admin work that they can no longer participate in research writing.

It is very interesting to note that the majority of the faculty members have recognized the value of scholarship as shown by their interest in doing research. It would be more interesting if they would take cognizance of what Boyer [8] is saying that it is not a matter of doing research for its own sake, but engaging in original research. For the real work of research scholar is stepping back from one's investigation, looking for connection, building bridges between theory and practice, and disseminating research findings to students.

According to the National Higher Education Research Agenda [1], research is one of the main functions of the higher education faculty. They are expected to lead in the conduct of discipline- based, policy-oriented, technology-directed and innovative researches that are locally responsive and globally competitive. The findings of the study indicate that there is so much that can be desired in terms of improving the research productivity of the faculty member of schools. In order to improve the research productivity of faculty members of HEIs, the institutions may encourage the faculty members to conceptualize and develop relevant research proposals in identified priorities for CHED's funding supports in the form of Grants-in-Aid (GIA) or commissioned research grants.

The Medium-Term Development of Philippine Higher Education Institutions espouses that in order to promote and enhance the research culture in higher education; there is a need to develop graduate education in the medium term. That is providing training to the faculty members and grants to qualified researchers to respond to national development needs.

Acosta and Clemena [6] support the idea that there are 12 factors present in high performing research environments. These are: clear goals for coordination, research emphasis, distinctive culture, positive group climate, decentralized organization, participative governance, frequent communication, resources (particularly human resources), group age, size and diversity, appropriate rewards, recruitment emphasis, and leadership with both research skill and management practice. On the other hand, DeHaven, Wilson, and O'Connor- Kettlestrings as cited by Acosta and Clemena [6] identified unanimous and extremely important characteristics of successful research namely program director

support, time, faculty involvement, didactic curriculum/journal club, professional support and guidance, forum/opportunities for presenting. The extremely important characteristics include: early start, integrative curriculum, required projects, broad research definition, visibility, and research committee. Individual attributes, institutional and departmental attributes, as well as departmental culture and working conditions, affect research productivity. Additional indicators of research culture, derived from the broad criteria evident in CHED's NHERA, are: research agenda, policies and guidelines on research incentives, services and facilities for research, publications, and research capable faculty.

Determinants of Faculty

Results of the regression revealed that of the three provisions in promoting research productivity, providing mentors' assistance and promotion of a healthy research environment produced B coefficients of .814 and .836 respectively with associated probability less than the significance level set at .05. The findings indicate that for every unit increase in mentors' assistance and promotion of the research environment could generate a .527 and .598 increases in research productivity of faculty members at DHVTSU. The obtained Beta coefficients of .527 (Providing mentors' assistance) and .598 (Promotion of research environment) indicate that the two factors contribute almost the same significant effects in the faculty research productivity. The factor "improving researchers' capacity" also contribute to research productivity but not to a significant extent. The obtain F-ration of 6.219 which was found significant at .05 alpha indicates that the extent of research promotion of DHVTSU in terms of improving researchers' capacity, providing mentors' assistance, and promotion of research environment formed a very significant set of predictor for the research productivity of faculty members.

Azad and Seyyed [9] corroborated the findings of this study when they disclosed that the promotion of the research environment such as reward structure of higher education institutions produces more productive researches among faculty members. On the contrary, Williams et al. [7] found out that educational experience and background are significant determinant of research productivity in terms of quantity and quality. Faculty members' confidence in their research abilities was found related to faculty research productivity.

The perceived institutional supports for research work were the most important factors enhancing research productivity. Williams et al [7] had confirmed these significant effects on research productivity. Those research references employed several indicators measuring institutional and departmental supports for researchers. The most important indicators were institutional policy that encouraged instructors to do research, institutional library budget and computing facility [10-12].

Conclusions

Based on the findings of the study, the following conclusions were drawn:

- There is still a need for DHVTSU to further advance the faculty members' educational experiences and background in research particularly in giving exposures to current professional literature and in the dissemination of research findings.
- Majority of the faculty members have recognized the value of scholarship as shown by their interest in doing research and taking small steps in attaining real work of research scholar.
- Faculty research productivity is significantly influenced by the extent of promotion of research environment and providing mentors' assistance.

Reference

1. NHERA (2009) National Higher Education Research Agenda-2: Commission on Higher Education.
2. Hadjinicola G, Soteriou A (2005)Factors affecting research productivity of production and operations management groups: An Empirical Study. Journal of Applied Mathematics and Decision Sciences. Doi 10.1155/ JAMDS/2006/9654
3. Kurtz D, Kees J, Tokar T (2004) An Examination of Intrinsic and Extrinsic Motivational Factors that Affect Research Productivity of Marketing Academicians. Journal of Advancement of Marketing Education. 4:9-15
4. Betsey C (2007) Faculty Research Productivity: Institutional and Personal Determinants of Faculty

Publications. The Review of Black Political Economy.

5. Lacanilao F (2009) Adapting to Climate change through Research and Education. Plenary Lecture, CHED National Conference on Research in Higher Education, Davao City National Science Teachers Association, (2002)

6. Acosta S, Clemena RM (2009) Developing Research Culture in Philippine Higher EducationInstitutions: Perspective of University Faculty retrieved on January 2010 from

http://portal.unesco.org/education/en/files/54062/11870006385Rose_Marie_Clemena.pdf/Rose_Marie_Clemena.pdf

7. Williams H, Huggins C, Bartlett J, Kotrlik J (2007) Factors Associated with Research Productivity of Agricultural Education Faculty. journal of agricultural education. 43(3).

8. Glassick C (2000) Boyer's Expanded Definitions of Scholarship retrieved on January 2012 from http://www.academicpeds.com.org

9. Azad A, Seyyed F (2007) Factors influencing faculty research productivity:Evidence from AACSB (Association to Advance Collegiate Schools of Business) Accredited Schools in the GCC (Gulf Cooperation Council) countries. Retrieved on September 7, 2010 from http:// www.highbeam.com/doc/1G1-175065688.html

10. Hazelkorn E (2009) The Impact of Global Rankings on Higher Education Research and the Production of

Knowledge. Occasional Paper. UNESCO Forum on Higher Education, Research and Knowledge. Paris: UNESCO.

11. Mouton J(2007) UNESCO Forum Special Initiative: Study on National Research Systems. Regional Report on Asian Countries. Paris: UNESCO (mimeo).

12. UNESCO (2005) Towards Knowledge Societies. First UNESCO World Report, with preface by Koïchiro Matsuura, Director-General of UNESCO. Paris: UNESCO Publishing

ISSN: 2278-3369

International Journal of Advances in Management and Economics

Available online at www.managementjournal.info

RESEARCH ARTICLE