INNOVATION & KNOWLEDGE MANAGEMENT: 
LEVERAGING STRENGTHS OF INDIAN HIGHER EDUCATION SECTOR

Dr. Sujata J. Dhopte¹, Rajan Nandola²
¹Department of Economics, Malini Kishor Sanghvi College of Commerce & Economics, JVPD, Vile Parle, W., INDIA
²Department of Economics, Thakur College of Commerce, Thakur Village, Kandivali, E., INDIA
¹sujatadhopte@gmail.com, ²rajan20202000@yahoo.com

Abstract
The paper analyses innovation in higher education sector from the point of view of product content i.e.- programmes and markets i.e. -institutions. Emergence of the knowledge driven economy exposed to the free trade face a number of challenges. These macroeconomic problems are closely linked to and dependent upon the effectiveness of higher professional education. Innovation is bringing forward movement in the higher education sector. In the light of globalization, many external environment changes are taking place in the higher education service sector. With the enormous reduction in the cost of transport and communication, the barriers to the flow of goods, services, people and knowledge are breaking down. Globalization leads to the creation of new institutions that have joined with existing ones to work across borders. The major features of transformation are in the form of the arrival of foreign private higher education service providers, growing competition; changes in the educational needs of consumers as well as new technological advances require a different scale of innovations in higher education. With the competitive environment, there will be more ‘niche’ marketing, with greater specialization of courses and programmes designed to render services to the target markets. It is not simply about pushing back the frontiers of knowledge but about developing innovations in the content and delivery of educational services to satisfy the student consumers.

Keywords: Macroeconomic, Innovation, Principal Advocacy, Marginal Social Benefits

I. INTRODUCTION

Survival and development of the mankind is associated with the magic of ‘Innovation’. Innovation is a creative rearrangement that always comes bearing gifts. It is a natural tendency of the human being to try out improved and new means in every aspect of life. Several economic and social changes are associated with the process of innovation. Innovation is a multidisciplinary terminology. It brings forward movement in every sector of the economy. Innovation system leads to the development of a knowledge-based economy. Innovative changes in the products and markets of higher education industry drive sustainable development.

In the global capitalism, there is closer integration among the countries and the peoples of the world. Knowledge products are freely traded in the global
marketplace. Emergence of the knowledge driven economy exposed to the free trade face a number of challenges. These macroeconomic problems are closely linked to and dependent upon the effectiveness of higher professional education. With advent of the new technologies, there is a remarkable rate of change that marks higher education service sector.

The paper analyses the explicit innovation system from the point of view of product content-programmes and markets. It reviews the external forces and factors that are driving institutions to introduce and use innovation in this area and investigates in particular the role of globalization and increasing competition. The responses of institutions to the changing environment are discussed with respect to international strategies.

This study is segmented into four sections as follows- Section I explores the Innovation methods in product content of higher education services Section II elaborates changing paradigm in the current institutional set up of the higher education sector after introducing innovation system. Section III reviews the benefits of innovation to higher education sector and it also provides recommendations about institutional reforms to improve the performance of the existing capabilities and build on potential of the innovation system in India. In this section finally, a number of future scenarios will be discussed along with the strategic pathways an institution may choose in planning for the future. Section IV gives brief account of the study in the form of conclusion.

**SECTION I: Innovation methods in product content of higher education services**

Higher education products are the education programmes, which are offered to both students as customers and labor market. Higher education product can be defined as educational and support services aimed at improving or changing the level and/or area of customer’s education. Higher education products include combinations of different types of program having the features of both- professional and mass programmes. There are standard educations services which are mass in character, but some professional or corporate courses can be highly customized – tailor made taking into account the need of the industry as well as the demand from students. Such higher education services aim at enhancing the competence based upon attitudes that guarantee the maintenance and renewal of skills. An impressive response from higher education services is observed in the form of designing new professional programmes that consists of autonomy and adaptability to innovation.

Higher education will be determined by consumer decisions rather than state compulsions. Higher education sector will be pushed by demand factor rather than supply factor. Henceforth, government’s policies will not be the decisive force in the pattern of higher education system but will be based on consumer choice model along with the corporate rule. The business-education partnership will train our young generation to make choice about the product they consume, rather than which democratic decisions we will make for our community.

Many educators would point out that the demand for higher education has been steadily increasing for years and that academic mobility of students, scholars, teachers and knowledge has been an integral aspect of high education for centuries. But this picture is changing. Now not only more people moving; academic program and providers are also moving across the borders. These changing modes cover four ways of supplying services, which are pretty comprehensive.

1. Supply across the border: for example, distance education services, e-learning, virtual universities.
2. Consumption abroad: for example, students physically moving offshore to study.
3. Establishing a commercial presence: e.g. allowing a Foreign Service provider to set up a local branch, franchise, or satellite campuses; twinning partnerships; arrangement with local institutions.
4. Movement of personnel: supply of a service by specialist personnel travelling to the country, such as professors, specialist teachers or researchers.

a) The biggest component of higher education service is study overseas. While virtual learning, e-education are becoming popular and cost-effective delivery methods. Face to face contact with the teachers and classroom conditions are fading out. Evidence: Log on to www.cardean.edu and sitting at your desk you can enroll to any of the university from Stanford to London school of Economics.

b) There will be global standardization of higher education. The uniqueness of educational institutions; specialization of professors may not count much. The cultural aspect, language specialty will vanish. The glory of the tradition of Universities will disappear in the corporate merger deals. Evidence: An organization of Universities from 7 countries ‘UNIVERSITAS 21’ has applied to become an incorporated business in Britain. The member universities are-
Australia: University of Melbourne, University of New South Wales. University of Queensland, Britain: University of Birmingham, University of Edinburgh, University of Glasgow, and University of Nottingham, Canada: McGill University, University of British Columbia, University of Toronto, China: Fudan University, Peking University and University of Hong Kong, New Zealand: University of Auckland, Singapore: National University of Singapore, US: University of Michigan.

c) Higher education is no longer provided solely within national borders. Transnational education can be found in multiple forms, including both electronically and through traditional on-site instruction and training programmes. Issues of quality, purpose and responsibility abound in this new borderless education arena and the time is ripe for a new international alliance of business sector and government dedicated to principled advocacy for transnational educational programmes. This new alliance is GATE- the Global Alliance of Transnational Education. GATE was envisioned by the corporate sector and founded in 1995 by Jones International Ltd., a multinational telecommunication corporation. Jones has since been joined by a number of multinational corporations including Coca-Cola, Ericsson Telecom. The first invitational forum of GATE was held in October 1995, co-hosted by the Center of Quality Assurance in International Education and Jones International Ltd.

SECTION II – Changing Paradigm due to innovation in institutional set up of Higher education sector.

With the enormous reduction in the cost of transport and communication, the barriers to the flow of goods, services, people and knowledge are breaking down. Globalization leads to the creation of new institutions that have joined with existing ones to work across borders. The commercialization and privatization of higher education will lead to minimize the importance of public services. The basic structure of the Universities would be changing with the changing relationship between the Government and Universities, which annuls its democratic function. Privatization, decentralization and institutional autonomy would be magic words defining the innovation process in higher education markets.

Fiske (1996) describes the privatization in higher education sector as” nations as large as India and as small as Burkina Faso are doing it. Decentralization has been fostered by the democratic Governments in Australia and Spain & autocratic military regime in Argentina. It takes forms ranging from elected school boards in Chicago to school clusters in Cambodia to vouchers at Chile.” Resource constraint of the Government initiates innovative partnerships of the public sector with private resources. Similarly there are innovative types of the private sector higher education institutions existed which are aided by
the Government. Also public investment in higher education sector will not necessarily crowd out private investment but instead crowds in the investment of the private sector.

In many developed as well as in developing countries Government and private sector both together are functioning in the innovative manner to cater the services of higher education. Some experiences of such innovation methods are as follows:

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<th>COUNTRIES</th>
<th>PUBLIC-PRIVATE MIX</th>
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<tr>
<td>CHILE</td>
<td>Voucher system by Government to the students enrolled in the private school.</td>
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<tr>
<td>PAKISTAN</td>
<td>A pilot project of private girls’ school is initiated by the Government.</td>
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<tr>
<td>MIDDLE EAST,</td>
<td>‘SABSIS’ school network- private management with public funding</td>
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<tr>
<td>UK,</td>
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<tr>
<td>US, GERMANY</td>
<td>‘EDISON SCHOOLS’- private management with public funding</td>
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<tr>
<td>US</td>
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<td>DENMARK</td>
<td>50% subsidies to the private higher education programmes</td>
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It is observable from above experiences that instead of dichotomy between public and private provision of higher education services, synchronized innovative efforts are put up by both sectors in the tertiary education.

**Innovative method of using Vouchers for higher education programmes:**

Using vouchers for higher education provision is the innovative reform, which is currently popular. The curve labeled MCg is the marginal cost of the provision of the higher education services E by the Government. MSb is the marginal social benefit of education, yielding OQg as optimum level of production. Advocates of vouchers suggest that competition between the institutions would lower the marginal cost of production and raise the quantity.

Diagrammatically:

For simplicity it is assumed here that these alleged beneficial effects of vouchers can be captured in lowered marginal cost curve MCp. The optimal level of provision now is OQp. Now suppose there are three constant marginal variable costs of administering the scheme which raise MCp to MCp+a generating level of provision OQp+a. It shows that the vouchers lower the optimal provision of education, increasing the real resource cost of provision over public (non-voucher) provision by rectangle 1245. In addition, it reduces consumer surplus by area 234. It is attractive to settle for public education, even if it is inefficient to some extent.

a) Shifting the role of agencies to serve society. The priorities of public and private higher education service provider are bound to be distinct. The private providers of higher education services have clear goal of profit maximization and no intentions to be the service providers as horizontal
equity principle is followed. Hence higher education could be well out of reach of the people who are marginally participating in the play of the market economy. With commoditization of higher education those who are fit to pay the unwarranted set prices for degrees will be the beneficiaries.

Evidence: World Bank insisted on charging compulsory fees on the member countries receiving loans for education. The implication of implementing the World Bank directives leads to reduction in the enrollment rate and increase in the dropout percentage in developing countries.

b) Threat to academic freedom the driving forces are becoming financial rather than educational. The academic freedom can be clouded by the unrestricted intervention of commercial service providers in higher education services. There is a fear that this type of innovation does not only bring economic integration but also a step towards cultural assimilation by treating knowledge as a product for sale.

c) Diversion from the mission of education: Generally the education institutions are desperate for funds. Introducing and implementing technological innovations in higher education services are a costly affair. With the funds flowing for innovative programmes from corporate sector, the education institutes may compromise in their mission.

Evidence: Research under ‘Unplug’ project shows that there was a contract made by the Channel One Television in US which make the school students watch a 12 minute television programme along with the commercials of junk foods and other lurking products each day. In return the institutes get TV dishes and equipment free.

d) New and innovative framework of higher education industry: Innovation methods in higher education sector are leading to structural and functional changes. It leads to setting up the existing higher education institutions with new legal frame. E.g. in Germany, Universities are now called as “Korpergeschats” or “Stiftuguniversitateten”; in Japan “Independent administrative institutions”; in “India “Autonomous institutions”. Such innovation methods will lead to a vital change in the traditional form of the governmental controlled Universities.

e) New innovative model of higher education institutions In the US new companies are formed only in order to intrude in the higher education market to make profits. Even University of Mumbai has discussed to adopt an innovative model of institution listed on the Stock Exchange. Exposed to the competitive environment, higher education services are adopting such innovation features which are propelling ‘commoditization’ of education program.

III: Benefits of innovation system to Indian higher education sector

This section covers recommendations about institutional reforms to improve the performance of the existing capabilities and build on potential of the innovation system in India. In this section finally, External benefits due to innovation methods applied by the private higher education sector in its programs are discussed. Innovation methods in higher education services can supplement and support national education commitments in India. Stronger partnerships also need to be developed between Indian universities and universities in other countries. In Thailand, IIE has worked with Ministry of University Affairs to develop an internet based ‘match-making service’ for Thai and US universities interested in developing linkage projects. Project JUNO (Joint Universities Network Online) enables Thai universities to
explore potential opportunities for students or faculty exchanges develop joint courses and undertake collaborative research with interested US counterparts. A similar innovative service could easily be developed for Indian universities, and could open up new avenues for Indo-US educational linkages and collaboration.

Another innovative pattern could be in the area of bi-lateral scholarly exchange programmes, such as those sponsored by Fulbright, DAAD and the British Council. Innovative practices such as International academic exchange, increased cross-cultural linkages will enrich the domestic knowledge sphere. Innovation methods will also improve the infrastructure level of the educational institutions.

Innovation methods will lead to maximization of efficiency, reduction in cost and also quality improvement of higher education services. Increasingly attractive market due to borderless education exchanges will drive corporate funding, which in turn will boost research and development activities as well as innovative processes. Innovation methods will reflect through greater autonomy, new courseware, and new courses. Innovation leads to higher level accountability and responsiveness as well as speed in higher education services.

With the foresight of innovation Indian universities can craft the higher education programs which encourage greater mobility and access to a wide range of options – with choice and flexibility. Innovation methods will help to upgrade knowledge and skills with better infrastructure facilities. With availability of several modes of learning, at a time student can enroll for more than one degree, even from different streams.

An interesting Innovation method is adopted in the form of grass root level in India. E-Choupals are Cyber Kiosks which are put up in thousands of Indian villages. It provides information access to farmers which increase productivity of agriculture and farmers now can obtain better prices for their produce. Thus innovation in Indian higher education sector can achieve both principles - access as well as equity.

**External benefits due to innovation methods applied by the private higher education sector in its programs**

In case of consumption of higher education programmes supplied by the private sector there are widespread external benefits due to the innovation methods. Innovation can extend the private benefits of the consumption of programmes provided by the private providers over the features of the mass education programmes.

In the above diagram, DD curve is showing the demand or the private return for higher education services, at different price levels. The external benefits due to innovation methods received by the community are shown by line B. When values of external benefits (line B) are added vertically to the private returns, it gives the line of Marginal Social Benefits (MSB) these are the wider social rate returns of higher education after implementing innovation over and above private returns.

Innovation will enhance the size and scope of the transnational education markets; will bring revolution in the education programmes and finally will increase access and bring benefits to all the students.
IV: CONCLUSION

With introducing innovation system in the higher education sector there is enhancement in choice, diversity, quality and efficiency. Introducing innovation in higher education services helps to detect and correct the areas of inefficiencies and take up the challenge of competition in higher education sector which brings new set of responsibilities.

The impact of using innovation method in higher education sector is positive. Innovative education programmes brings greater access and increase in the educational level of the developing countries. Innovation methods lead to diffusion of technology in higher education sector which in turn has enhanced the efficiency and quality.

BIBLIOGRAPHY
