

# Consequences of Financial Crisis on Human Resources in Pakistani Universities

Syed Hafeez Ahmad<sup>a\*</sup> and Syed Zulkifal<sup>b</sup>

Institute of Management Sciences, Peshawar, NWFP, Pakistan. +92-91-5850304

<sup>a</sup>[hafeezjee99@yahoo.com](mailto:hafeezjee99@yahoo.com), <sup>b</sup>[\\_skifal@hotmail.com](mailto:_skifal@hotmail.com)

## Abstract

Institutions of higher education, throughout the world, are treading through a very critical juncture in the backdrop of recent global financial downturn. Universities in the developing countries have also received inadvertent shocks in the aftermath of worldwide recession. Academia in Pakistan has been facing, more or less, similar predicament. The Government has tightened up over flowing funds to public sector universities. Consequently, educational institutions have been confronting stiff financial crunch. In the institutions of higher learning the worst hit is the human resource development component. The matter remained the hottest academic debate during the year 2008. It is still a burning issue. However, very little research has been conducted, to address the problem. The purpose of the paper is to take the lead, to fill the gap. This exploratory study takes stock of the enormity of financial crisis in public sector universities in Pakistan, with special reference to its North West Frontier Province. The study examines the recuperative measures, being taken by individual university to deal with the situation.

The study reveals that institutions of advanced learning in Pakistan can't become self-sustainable, till the time, the people at the helm of universities' affairs explore the possibilities of establishing meaningful linkages outside the traditional government university relationship. One of the most convincing and viable mechanisms for realizing the same objective is academia industry collaboration. To meet this end university has to transform itself to cope with the changing needs of industry by producing demand oriented and marketable output in terms of highly skilled human resources. Ironically, the possibility of such a mechanism has never been explored until very recently. The paper analyses the possibilities of how an effective alliance could be established between the academia and industry, in order to reduce universities' reliance on government funding. The paper offers various recommendations for policy makers besides offering new insights for future research.

## Introduction

Times are bleak for the higher education system in Pakistan if the national as well as international media is to be believed (Ali, 2009; Askari, 2008; Hoodbhoy, 2009). The government has stifled runoff funds to public sector universities. All schemes concerning overseas scholars and scholarships have been adversely affected. According to Akbar (2009) some universities in the country are on the 'brink of closure because of a chronic financial crunch'. Some of these are unable to pay salaries to the employees and some did not have

enough money to pay utility bills. The only option left with the administration is to close the universities, till the situation improves.

A vice chancellor of a public sector university termed the situation as worst than Talibanisation in the country (Khattak, 2008). During preliminary data collection, a vice chancellor of another university disclosed that public sector universities always needed government financial injection. In the absence of such support, it wouldn't be possible for these institutions to sustain their operations. He went on to say that if government stopped subvention to these universities, they would have to virtually wind up their business.

In fact, universities all over the world have been facing, more or less, similar state of uncertainty or perplexity. This phenomenon is associated with worldwide recession experienced by global economy (Koh, Kaur and Sirat, 2009). Institutions of higher education in the developed countries are having taxing times. The affluent universities in the richest of the nations US, Japan, Britain and Australia are not safe from the contagion, by any means. Raising tuition fee, slashing students' intake and recruitment freeze are few of the offshoots of this phenomenon (Maslen, 2009). In this backdrop, higher education is in trouble in developing countries (Salmi, 1992). According to the World Bank (2000) the higher education systems in the developing countries are under enormous strain. The campuses, in general, are chronically under funded. 'Financial dependence on the state means that funding levels fluctuate with the ups and downs of government resources'. Whereas Zideman and Albrecht, (1995) argue that the crisis has arisen because rapid enrollment growth in higher education has not been accompanied by commensurate increases in public expenditures.

In Pakistan, the campuses started feeling the pressure with the advent of new democratically elected government. Within months of its rule, releases to public sector universities were substantially constrained or stopped altogether. According to Askari (2008) almost all public-sector universities in the country have been facing stiff 'financial crunch' subsequent to the federal finance ministry's refusal to release the Higher Education Commission of Pakistan's (HEC) fourth quarterly installment of development and recurring grant of over 8 billion rupees for the year 2007-08 which was due by the April, 2008. The commission was primarily set up by the Government of Pakistan to facilitate allocation of funds to the public sector universities out of the bulk of financial provision, received from the Government (HEC, 2009). This has rendered all the public sector universities 'virtually cash strapped' Askari (2008). The crisis compelled the universities to launch self-finance scheme, paving the way for the richest of the students, to buy admission seats (Khattak, 2008). Nevertheless, at this stage most of the universities have no idea what to do about it. Besides, the financial wizards have no rescue plan at the back of their mind. In the face of all this, the study investigates the consequences of current financial crisis on human capital in the higher education institutions in Pakistan.

## **Literature Review**

University is a place of advanced learning, where students carry on their higher education after school or college. It is an institution of the highest level offering various schemes of studies for graduate and postgraduate students (Ahmad & Junaid, 2008). By and large institutions of higher education, world over, face a whole host of problems. Brown & Brien (1981) in their study outlined a number of compelling reasons, for poor show of the institutions of advanced learning. The overriding amongst those is the deteriorating financial position of universities. According to Cross (2004), for the state run colleges and campuses, state funding is the prime source of financial support without which it would not be viable to run their business.

According to Maslen (2009), 'few higher education institutions around the world appear to have escaped the collapse of financial markets. In Asia, Africa, North America, Europe, Britain and down under in Australia and New Zealand, universities have been hit hard as the value of their investments in property and shares and, in many cases, their income from diverse sources crumples'. The outcome of the worldwide collapse in financial markets is catastrophic for the higher education sector. Christopher Newfield, a renowned author in an interview with Crucio (2008) resembled it with "financial neutron bomb" or 'hurricane'. According to (Koh, Kaur and Sirat, 2009):

The downturn in the economy has affected universities everywhere, indefinitely. Financially then it has lessened activity in the market which invariably lessened the income for government all around. As a consequence this has forced governments to restrict their spending, particularly on higher education, creating a significant impact on the future growth of global higher education, at least until the crises subsides.

Maslen (2008) found that some universities in Japan have to put up its property i.e. land and buildings on the campus, to obtain loan from the Banks. While, others have recorded losses on their investment. Some successful institutions i.e. Komazawa and Keio have been facing losses to the tune of 15.5 billion yen (US\$ 170 million) and 22.5 Billion (US\$ 233 million) and were compelled to take loan from the Mizuho Bank in the hope of clearing the losses.

Overall, the higher education is in crisis (Salmi, 1992) and the universities are in deep trouble these days. The worst hit are the US universities. 'The wealthiest universities, among them Harvard and Yale, have begun cutting spending, canceling new building plans and upgrades, and putting a halt to hiring new staff.' In UK, the universities felt the strain in October, 2008. Cambridge, Glyndwr, Manchester and a number of others have fallen pray to the ongoing crisis. The Australian oldest and wealthiest universities are not even safe from the contagion. Overall campuses in Australia are cynical to the core and have decided to cut down expenditure and reduce staff strength. Some of these institutions are struggling to survive, although these have slashed the number of courses offered. Same is the case with universities in New Zealand and Germany (Maslen, 2008).

According to Pohlman, Gardiner and Heffes (2000) in every threat there is an opportunity, and in every opportunity a threat. Selig, (2009) is of the view that the current world financial crisis, in spite of all its ominous repercussions for higher education system, offers "once-in-a-lifetime opportunity" for some people. This has provided Israeli universities a chance to initiate 'reversing the brain drain, the exodus of skilled academics to higher-paying positions in Europe and the United States'. Selig (2009) maintains that such kind of prospects comes around every 60 years or so. He found that 104 Israeli scientists had returned from overseas positions during the year 2008-2009, and had already been reabsorbed into new positions created at the country's seven universities.

Generally speaking, institutions of higher education in developing countries find themselves in an entirely different position as compared to their peer institutions in industrialised countries (Salmi, 1992). They tend to be mostly under-funded and understaffed and unable to purchase anything at liberty. Their faculty and staff tend to be less qualified on average. Thus, universities in developing countries are usually far below the academic standards set by universities in industrialised countries (Schiller & Liefner, 2007; World Bank, 2000; Altbach, 1998). However, the situation is not much different, as far as financial crunch is concerned (Salmi, 1992). The situation is even worst in case of universities in the developing countries.

Universities in Pakistan, these days, have been subjected to extreme fiscal crisis, due to ‘unprecedented and un-bearable’ budgetary cuts on the recurring grants. The major portion of the recurring expenses almost 70% goes towards payment of salaries. Additionally, the adverse effects of inflation, salary/pension increase by 20%, and utilities have struck the universities a grievous blow, which may cause some to collapse altogether. While old universities have been battered by the crisis, the very survival of the new universities is at stake. Under such circumstances the universities have other reasons of serious concern than academic excellence (Ahmad & Junaid, 2008).

The period from 2001 to 2008 is regarded as the golden era of the HEC. During this time, the Commission introduced a series of reforms. These were marked, mainly by generous funding to the universities with prime focus on the human resource development (Ahmad, 2008). Nevertheless, when these reforms were about to bear fruit in the desired fashion; it seemed that all of a sudden the curtain was fallen, and the universities startlingly found themselves in deep trouble. This all happened to the utter disappointment of academicians, scholars and researchers. Almost a year has passed by; nonetheless, the issue yet to grab the attention of those who matter. This lack of serious consideration on the part of researchers and social scientists provides sound justification for our endeavour, aimed at discovering the nuts and bolts of the recent happening.

### **Methodology**

Not much research is available in the field of higher education in Pakistan (Ahmad and Junaid, 2008). In the current scenario, where funding for research related activities is severely constrained, not much effort has been undertaken, to bring to light various dimensions of the crisis experienced by universities in the country. According to Koh, Kaur & Sirat (2009), ‘with the current economic meltdown, it is essential to look in depth on the effects it has on global higher education as a whole. Inevitably, the economic crisis has affected global higher education in more ways than one. The future of global higher education has been altered according to the events of the present. We need to understand the repercussions on global higher education to prepare ourselves for the challenges ahead as the crisis provides opportunities for a shift towards greater inclusion, equity and social justice’.

We selected qualitative research paradigm for the study for variety of reasons. The most compelling is the conspicuous lack of previous research on the subject matter in view of the prevailing circumstances (Morse, 1991). Qualitative approach is valuable for the exploration of new dimensions and their interrelationships (Creswell, 1994). As not much background information is available on the theme for empirical analysis, choosing a qualitative approach provides a strong rationale for exploring and describing the phenomenon for developing a theory (Morse, 1991). Moreover, the phenomenological approach would help in having an in-depth understanding of the ground realities by means of shared human experiences (Nieswiadomy, 1993). Data has been collected through personal observations, informal telephonic discussions and face-to-face in depth interviews using semi-structured questionnaire.

For the study all 12 public sector universities in the North West Frontier Province of Pakistan have been selected. These universities have their own peculiar dynamics in terms of fee structure, disciplines offered and students’ enrolment to make a strong case to be included in the study. For the data collection, heads of the three administrative sections i.e. Finance (DF-1 to DF-12), Planning (DP-1 to DP-12) and Academics (DA-1 to DA-12) of each university have been chosen. A total of 39 unstructured open-ended interviewes were conducted with these

purposefully selected individuals. These units of analysis are highly pertinent for obtaining the type of data required about the financial health of the university. Head of the Finance Section generally designated as Director Finance /Treasure deals with financial affairs. Whereas, the head of Planning Section, designated as Director Planning & Development looks after the planning affairs for ensuring adequate and smooth funding to the universities. Similarly, head of the Academics Section deals with the affairs of overseas scholars and scholarships with some variation in nature of the tasks assigned to these officials. Characteristics of the respondents are given at Appendix-I. After informal telephonic discussion and face-to-face in depth interviews data has been analyzed.

## **Findings**

The data collection process resulted in a series of variables which enabled the researchers to narrow these down to the most relevant factors for further investigation. It was noticed that as a result of current economic crisis universities across the length and breadth of NWFP received grievous blows. The Government has throttled substantial funding to public sector universities in the province. Hence, these institutions have been confronting stiff financial crisis. This situation finds no parallel in the history of higher education in the country. There is not even a single university which left unaffected. It was found that the country in general affected by global recession, but not to the extent of US and other European countries. Similarly, universities in the advanced countries have been adversely affected but not to the extent, that of universities in Pakistan. In NWFP most of the universities are newly established and consequently these institutions are confronting odd times. The worst hit is the human capital in the public sector universities. Hiring of new faculty, capacity building of existing staff and organizing of workshops and seminars, which are the core features of the university's academic life, have been seriously affected as funding for such activities has been substantially constrained.

It was found that reliance of public sector universities on government financial support is deep rooted to the extent that under the prevailing situation the universities wouldn't be able to survive without unwavering government assistance. The study further revealed that if universities want to overcome the existing crisis and stay away from similar eventualities in the future they would have to develop links outside the traditional university-government domain. One of the most convincing and viable mechanisms for realizing the same objective is academia industry collaboration. The study concludes that the institutions of advanced learning in Pakistan can't become truly self reliant and self sustainable, till the time the people at the helm of universities' affairs explore the possibilities of establishing meaningful university-industry collaboration. To meet this end, university has to transform itself to cope with the changing needs of industry by producing exceedingly skilled human resources. Nevertheless, this is an uphill task which requires all out support of the current government as well as concerted efforts and commitment of the university administrators.

## **Reasons for financial crisis in universities**

Notwithstanding, there is a lot of fuss about financial crunch in public sector universities these days; however, very few essentially understand the antecedents of the problem. (DF-6) argues that contrary to the past practices, the government spending on higher education has multiplied several hundred times during the last 7 to 8 years. However, all of a sudden releases to the universities were constrained when the new government took up the reign.

The reasons for current crises in higher education are manifold. Firstly, it is due to the changing priorities of the ruling regime. The government has ambitious developmental plans with no genuine revenue generating alternatives. It is purely due to poor planning and financial mismanagement on the part of the current set up (DF-8). The dismal financial health of the government is the root cause of the financial crises. The government is already on the verge of default, due to excessive debts and payment of debt servicing on regular basis. (DP-5) argues that the pouring of superfluous funds for other than higher education projects also reduced the availability of finance to all important higher education.

At the same time, we cannot disassociate these happenings from the worldwide recession experienced by the global economy in the recent days (DF-3). The theory also made rounds that the government has become cash strapped. However, this belief evaporated sooner than later when the government started pumping huge funds in other projects of political orientation. One of the example is that the government has profuse allocation in pipeline for Benazir Income Support Programme (DF-3). According to Quillian, (2005) the governments are spending an ever-increasing amount on priorities other than higher education.

The universities, over the years, did not lend much attention to resource diversification for attaining self-sustainability (DF-1). As a matter of fact universities are government entities aims at serving and facilitating the society (DA-6). One of the compelling reasons for poor economic conditions in universities these days is the dearth of dynamic leadership in these institutions. Academia in the entire country lacks vibrant leadership in the form of top management i.e. vice chancellors, administrative heads of finance, planning and academic units/sections (DP-4). Judicious utilization of accumulated funds is also an aptitude. The university, generally, lacks the capacity, to utilize the available funds which give a negative impression about the overall performance of a university (DF-7). The cumbersome procedure of releasing funds is also one of the reasons for poor economic show of the universities (DF-9).

Table-1- Reasons for Financial crises in universities

Reasons	Respondents
Global financial crises	(DF-2) (DA-8) (DP-4) (DA-6)
Government curtailed funding to universities	(DP-1) (DP-8) (DA-4)
Higher Education is low priority area for successive governments	(DA-2) (DP-1)
Poor planning of the government	(DP-9) (DF-8) (DA-5)
Financial mismanagement of the government	(DA-2) (DP-1)
Lack of continuity in policies	(DA-2)(DP-5)(DP-8)
Inability of university to generate funds from own/other sources	(DP-1) (DF-8) (DA-1)
Inability of universities to do long term planning	(DP-6) (DF-8) (DA-3)
Inability of university to deal with the crisis	(DP-1) (DP-8) (DA-5)

(DP-6) is of the view that the universities have utterly failed to muster resources from donor agencies such as USAID, JICA, WB and ADB. Whatever may be the reasons for financial crunch in the universities, the current crises proved to be harbinger of dire consequences for academic life of universities in the country.

### **Effects of financial crisis on the overall health of universities**

The entire fabric of the higher education system in Pakistan was jolted as a result of the budgetary cuts imposed by the Government (DF-3). The enormity of prevailing situation seems to be forerunner of depressing consequences for institutions of higher education in the country

(DA-4). Not even a single university got unscathed and not even a single aspect left of academic life unhurt. The well-established institutions received serious blows; let alone the newly established ones (DP-9). Ali (2009) argues that the idea of setting up nine world-class engineering universities in the country could not be realized due to economic crisis and weaknesses in project planning. However, efforts would be made to strengthen the existing universities and bring them at par with international standards.

University of Peshawar being one of the oldest and the most established institution in the public sector in the country having 25,000 on campus enrollment with 13,000 students in the evening programme was compelled to take loan from other funds for meeting its recurring expenditure, during the financial year 2008-09. If University of Peshawar has been affected to the extent then what to say of other recently established universities i.e. Islamia College University Peshawar, Khyber Medical University Peshawar and Abdul Wali Khan University, Mardan. (DF-11).

Ali (2009) found inadvertent delay in release of funds for the projects, excessive fluctuation in foreign exchange rates, particularly in connection with human resources development component and purchase of laboratory equipment, and cost escalation of civil works as issues of serious concern. (DP-3) is of the view that universities in NWFP are moving in a backward direction due to limited financial resources. The province has an entirely different dynamics in terms of institutions of higher education. A great deal of universities are newly established. Out of the total 12 public sector universities 7 were set up during the last seven to eight years and 3 in the last one and half year. These institutions are having taxing time under the prevailing circumstances. R & D activities have been adversely affected (DP-8).

Table-2- Effects of financial crises on overall health of universities

Effects	Respondents
University may collapse	(DA-2) (DF-1)(DP-5) (DA-8)
Unable to pay salaries	(DF-8) (DP-6)(DP-1) (DA-7)
Unable to pay utility bills	(DF-9) (DP-5)(DP-8) (DA-4)
Research activities in universities suffered	(DA-8) (DF-6)(DP-2) (DA-5)
Developmental work got affected	(DF-1) (DP-5)(DF-7) (DA-8)
Purchase of equipment has been stopped	(DA-1) (DF-9)(DF-1) (DP-4)
Establishment of new labs got affected	(DP-1) (DP-6)(DF-9) (DA-7)

### Effects of financial crisis on human resources

The economic crunch, by and large, resulted in depressing consequences for the public sector universities in the country (DA-4). Almost all of these are struggling to deal with serious funding problems, that there is not enough money to pay for what is direly needed for smooth functioning (DF-8). According to (DA-3) the worst hit is the HRD component of the developmental projects. Funding for overseas scholarships schemes has been slashed (DF-4). Faculty development programs are abandoned. HEC and even some universities have caped fellowships schemes in spite of the fact that selection of suitable candidates has already been finalized for the award of such scholarship programmes (DP-9). (DA-6) maintained that funding for HRD programmes, in a great deal of cases has been provided to the universities under various mega schemes by the HEC. Similarly, a number of universities have launched such programmes from own resources. Nevertheless owing to financial constraints they have either stopped it altogether or slashed it substantially.

The scholars sent abroad for higher studies under various schemes by the HEC and individual universities have been facing numerous problems (DA-4). They have varied experiences. According to an HEC scholar pursuing doctoral research in University of Sussex, UK, it never happened that they have received their stipends and tuition fee in time. They focus much on finances and less on studies. Some of them are even skeptical about the long-term viability of the project under which they have been awarded scholarship. Some of them are even contemplating not to return home after completion of their studies, as they feel that after their return they wouldn't be able to find a decent job.

Universities in Pakistan have sent hundreds of their scholars for undertaking PhDs in the top ranking universities of the world. These universities are facing acute shortage of funds and it has become extremely difficult for them to sustain financial support of these scholars (Ali, 2009). Apart from the substantial cuts in funding, the HEC has also withheld funding to those scholars who were all set to proceed abroad, to pursue academic endeavours in international universities of repute. For shortage of funds the number of scholarships under Indigenous Fellowship Scheme has also been reduced substantially.

Ali (2009) found that a total of 128 scholars from UET were undertaking their PhDs in top ranking universities abroad. But they were facing acute shortage of funds and it has become extremely difficult for them to continue their studies. The academic career of the numerous Pakistani scholars pursuing PhD courses in Turkey is at stake. They reportedly have complained about nonpayment of their due stipend by the ministry of education and HEC for the last couple of months 'putting their future in jeopardy' (The News, 2009).

**Table-3- Effects of financial crises on the human resources in universities**

Effects	Respondents
Stoppage of faculty development programme	(DF-2) (DA-5)(DP-8)
Hiring freeze of new faculty/staff	(DA-8) (DF-5)(DA-4)
Stoppage of funding for seminars, workshops and conferences	(DA-2) (DP-5)
Firing of contingent employees	(DA-4)
Delay in releases of funds to overseas scholars	(DA-2)(DF-8) (DP-5)

### **What the individual public sector university is doing to overcome the problem?**

As a first step universities in general resorted to abnormal hike in fee under various heads of accounts compelling the students to take to the streets (DA-1). Our students blocked the main Indus Highway as a sign of protest against fee hike creating law and order situation. Consequently, the university administration has to eat humble pie. (DP-9) is of the view that some universities have introduced additional seats in various programs to accommodate more students. Self-Finance scheme which has been abandoned some time back by the public sector universities is on the cards (DF-8). Assistance to deserving students in the form of merit or poverty-cum-merit scholarship has been substantially reduced (DP-9). Some universities have taken loans from Banks and grants from other sources (DA-2).

Individual universities are making a diligent effort to seek donors for financial assistance to launch various collaborative schemes. Kohat University of Science and Technology has started a number of projects through financial assistance of donor agencies i.e., USAID, US Embassy, JICA, and ADB. Similarly a number of such projects are in the pipeline (DP-4).



Table-4- What the individual university is doing?

What the University is doing?	Respondents
Raise in the tuition fee	(DF-2) (DP-1)
Hiring freeze	(DP-1) (DP-8) (DA-4)
Stopped financial assistance to students	(DA-9) (DF-1)
Increase in the numbers of students	(DF-6) (DP-7)
Taken loan from Banks	(DP-5) (DA-8)
Taken grants from other funds	(DA-4) (DF-9)
Developed relations with donors for assistance	(DF-3) (DA-3)
Canceling new development projects	(DA-5) (DP-8)
Stopped research projects	(DP-9)(DF-7) (DP-5)

Some universities are in the process of firing contractual employees to deal with the problem in their own fashion (DA-1). Universities have to great extent frozen new recruitment and have been thinking in terms of firing contingent employees (DF-5). Some universities are in the process of devising a mechanism how to develop linkage with industries (DA-4).

### What the individual university should do to deal with the problem?

According to Brumfield & Miller (2003):

The foundation of sustaining the operation of a public college or university is rooted in each institution's ability to adequately fund and support its expenses. These expenditures often include faculty and staff salaries, construction projects, learning resources, and utility costs among other items. In response to these fiscal demands, public institutions rely on income derived from student tuition and fees, private giving, government and business contracts, and non-profit grants. Most institutions are also significantly dependent on state governments to provide a source of revenue

In the prevailing situation the universities' top brass have a critical role to play in alleviating agonies of their respective institutions (DF-2). (DA-4) is of the view that universities should develop links with donor agencies as well establish contacts with foreign universities. (DA-1) is of the view that our universities must work out modalities for attracting students from Middle East, East Asia and African countries. One of the most convincing and viable mechanisms to minimize university's reliance on sloe government funding is university-industry linkage. Ironically, the possibility of such a mechanism has never been explored until very recently, when it was figured out that the universities have a greater role to play in the socio-economic uplift of the society (Ahmad & Junaid, 2008).

According to (DP-6) some universities are in the process of chalking out mechanism for setting up own endowment fund and thus approaching philanthropists to contribute to it. He, therefore, suggested that other universities should follow the suit.

Table-5- What the individual university should do ?

What the university should do ?	Respondents
Should raise tuition fee astutely	(DA-2) (DP-1)
Should build links with industries	(DF-6) (DA-2)
Should developed rapport with donors	(DA-9) (DF-2)
Should establish endowment funds	(DF-1) (DP-2)
Should approach philanthropists for donations	(DF-4) (DF-9)

The World Bank (2000) found that the higher education systems in developing countries where public spending on education is highly constrained are in need of additional resources to catch up academically with developed countries. The purpose of any reform initiative in the higher education should be aimed at slashing public spending and stimulating university–industry cooperation as a mean to obtain additional university income.

Rehman (1998) is of the view that in the first instance the state should invest heavily in the universities in a way which does not compromise their autonomy. As such, at least for the present, it is difficult to see any but a reformed version of the state-supported yet independent university, being established in Pakistan. Such a university would not only create and disseminate knowledge but also preserve liberal, democratic values, which are necessary to preserve democracy, tolerance and freedom of thought in Pakistan.

An often-neglected policy, as noted by World Bank (2000), is to push individual institutions to explore new ways of revenue generation such as offering executive training programs, marketing the expertise of faculty, and providing various other services such as carrying out laboratory tests and renting facilities. It is necessary to make it legally permissible to receive such funds and to use them in a discretionary manner, and also to impose limits on the extent to which proprietary research can be conducted. According to Schiller and Liefner (2007):

In many countries' higher education systems (HES), governments play a key role as the main funding source for universities. Reforms that are meant to tap new sources of university funding and to establish a market-coordinated HES, e.g. the commercialisation of research results or university–industry links, have the potential to weaken this strong relationship.

Such collaborative ventures may prove its utility as an ideal interactive mechanism to reduce universities' dependency on the state's funding and may go a long way in attaining self-sufficiency. A greater deal of literature on the subject area agrees that a certain level of commercialisation of research and linkages with private profit earning concerns is essential so as ensure matching response to depleted public funding and markets demands (Schiller and Liefner, 2007).

### **University industry collaboration**

Collaboration between academia and industry is regarded as one of the best interactive mechanism for technological innovations and enhancing global competitiveness which ultimately serve the interests of both the firm and academia across the world (Ahmad & Junaid, 2008). As observed by Davis (1996), 'university and industry now exist in a harsh and competitive economic climate. Indeed, their very survival depends increasingly on their ability and willingness to adapt to an unprecedented pace of change. There are a number of compelling reasons for university and industry to undertake collaborative research'

Academia interacts with industrial firms largely to obtain basic research funding, industrial expertise, and exposure and employment opportunities for university graduates (NSF, 1982a; Ervin *et al.*, 2002). According to Peters & Fuschfeld (1982 cited Wu 1999) the driving force that presses on university to collaborate with industry is that industry provides an ingenious source of financial support to the university which involves less bureaucratic red tape than the government financial support. Whereas, Hurmelinna (2004) found that 'the enhancement of teaching followed by funding/financial resources and reputation enhancement' are few of the frequently quoted motivation factors for both academia and industry to collaborate.

Under research support mechanism members of the corporate community make contribution in the form of both money and equipment to universities. Such contribution are extremely valuable for academia, since, the university has much more leverage in using these funds for up-gradation of laboratories, or provision of fellowships to graduate students, or granting seed money for initiating new projects (Reams, 1986). According to Schiller and Liefner (2007), 'the strategy of substituting government funding by funding through students, companies, and donors, must have additional drawbacks as these new principals neither have the financial strengths nor a sufficient level of information about the effects of higher education and research'.

In order to resolve this intricacy, Robinson (1987) suggests that universities must be allowed to 'make, implement, and defend strategic choices—because this is the only way to protect the integrity of the university and to sustain the public respect which is the ultimate base of the university's freedom'. To be competitive 'universities must combine continuity with change, expanding their role and functions to respond to these new demands, while maintaining their most important and traditional objectives' (Virgilio & Amaral, 1999).

### **Proposed mechanism for university-industry collaboration in Pakistan**

When we talk about university industry partnership in Pakistan, there has been found some informal kind of collaboration already existing since long (Competitiveness Support Fund, 2009). For instance students internship programs, joint capacity building activities, and consultancy services offered by faculty members in individual capacity. However, the same phenomenon has not been institutionalized in the country for lethargic attitude of the policy makers, which failed to patronize such schemes, and partly due to lack of interest on part of both the entities. Moreover, industries in this part of the world lack the right kind of exposure to such collaborative undertakings (Ahmad & Junaid, 2008). In view of, 'such differences in outlook emanating from entirely different environments, one could hardly be blamed for thinking that the two rarely find common ground on which to cooperate' (Davis, 1996). It is suggested that the government should come forward to create some favorable environment for developing closer nexus between university and industry (Brown & Brien, 1981).

For involving both the entities effectively and efficiently, Henry Etzkowitz, a renowned professor and expert in the field has proposed a workable mechanism, which is regarded as Triple Helix (TH) model. TH is inherently an innovation model under which university, industry, and government work jointly and interact closely as equal and independent partners with each partner assuming some of the capabilities of the other in such a way that each institution maintains its distinct identity. This model suggests that the interaction among university+industry+government offers a fertile ground for innovation in the knowledge-based society. Under this model industry operates as a locus of production. The university acts as a source of knowledge and technology. Whereas the government performs as the source of contractual relation and funding which guarantee smooth interaction between all the three partners (Etzkowitz, 2003). However, this mechanism has its own limitations in the context of developing countries which needs further investigation.

Schiller & Liefner (2007) have expressed similar concern, whether the reforms in the funding sources, introduced in the developed countries can be effortlessly replicated in the case of developing countries. They acknowledged that the reform endeavours aimed at changing funding pattern and government-university relations face serious problems in the developed countries, which may multiply in the face of other insurmountable challenges and inherent

bottlenecks present in the systems in developing countries. They are of the view that the mechanisms such as TH have expedited the processes of technological innovation in developed economies. However, they expressed their shared scepticism that such concepts can hardly be applied to developing economies. According to Mathews (2001) the 'innovation systems' in developing countries can appropriately be described as "Learning Systems", which means that these rely heavily on absorbing knowledge that has been developed over the years in industrialised countries. Schiller and Liefner, (2007) concluded that:

University–industry cooperation in developing economies cannot be expected to work in the same way as in developed economies. Neither can universities be expected to supply knowledge that is new to their partners, nor can companies be expected to be willing to pay universities for this service. Instead, university–industry cooperation can be a means to stimulate and foster the development of technological capabilities and learning on both sides. This process, however, may require government intervention, e.g. through pecuniary incentives or by setting up regulations that allow university–industry cooperation to flourish.

### **Conclusion**

Like the rest of the world, universities in Pakistan are confronting serious financial crisis. It is mainly due changing priorities of the government as well as universities' inability to diversify its sources of revenue. The overriding colonial legacy and robust bureaucracy have besieged the autonomous status of universities. This is why universities could not excel in teaching and research and did not contribute substantially to the socioeconomic development of the country. The recent reforms initiated by the HEC are aimed at attaining these objectives. In addition, the universities must explore the possibilities of developing links outside university-government equation. The viability and practicability of university industry collaboration needs to be explored in the context of developing countries like Pakistan. 'In this regards, government needs to take proactive initiative to acknowledge and understand the happening of this industry in order for us to find solution to make sure there is sustainable growth in the higher education enterprise' (Koh, Kaur and Sirat, 2009). It will go a long way in reducing universities reliance on state funding and will allow academia to set their own priorities in line with the changing needs of the society. As suggested by Koh, Kaur & Sirat (2009):

In the landscape of the current economic crises, we need to set our eyes on a hopeful future. Presently, things may seem bleak for many universities. Governments, ministries, academics and interested stakeholder must take the initiatives to not only understand the current situation that is causing many universities and institutions to shut down, but also find ways in which they can curtail this problem.

### **References:**

- Ahmad, S.H & Junaid, F.A. (2008). A conceptual framework for developing strategic partnership between university and industry in Pakistan with particular reference to NWFP. *Proceedings In: 2nd International Conference on Assessing Quality in Higher Education*. Lahore, Pakistan: December 1-2.
- Ahmad, S.H. (2008, April 19). HEC's misconceived educational reforms. *The News*.
- Akbar, M. S. (2009, January 16). Financial collapse threatens closure of Balochistan University. *The Daily Times*.
- Ali, Y. (2008, July 19). Cut in grants put NWFP varsities on verge of collapse. *The News*.

- Ali, Y. (2009, March 05). No cut in allocations for NWFP, Balochistan varsities. *The News*.
- Altbach, P. (2001). Academic freedom: International realities and challenges. *Higher Education*, 41, 205–219.
- Askari, S.J. (2008, June 20). Lack of funds jeopardizes higher education sector. *The Nation*.
- Brown, G.E. and Brien, T.C., (1981). University-industry links: government as blacksmith. *Technovation*, 1, 85-95.
- Brumfield, R. and Miller, M.T. (2008). A review of the literature related to government relations in higher education. Higher Education Leadership Program, University of Arkansas. Fayetteville, AR. Retrieved December 5, 2008 from [http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/42/d0/07.pdf](http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/42/d0/07.pdf)
- Competitiveness Support Fund. (2009). The state of Pakistan's competitiveness report. Retrieved August 1, 2009 from [www.competitiveness.org.pk](http://www.competitiveness.org.pk).
- Corsten, H. (1987). Technology transfer from universities to small and medium-sized enterprises- an empirical survey from the standpoint of such enterprises. *Technouation*, 57-68.
- Creswell, J. W. (1994). *Qualitative and Quantitative approaches*, United kingdom, London: Sage publications.
- Cross, J. F. (2004). The impact of college and university faculty collective bargaining on state appropriations to public higher education. (Doctoral dissertation, University of Illinois at Urbana-Champaign, 2004). Retrieved January 11, 2009 from: ProQuest Digital Dissertations database
- Curcio, A. (2008). The corporate university and the financial crisis, what is going on? edufactory Retrieved December 5, 2008 from <http://www.edu-factory.org>
- Davis, R. M., (1996). Industry-university collaborations: a necessity for the future. *Journal of Dentistry*, 24, 3-5.
- Ervin, D., Lomax, T., Buccola, S., Kim, K., Minor, E., Yang, H., Glenna, L., Jaeger, E., Biscotti, D., Armbruster, W., Clancy, K., Lacy, W., Welsh, R. & Xia, Y. (2002). University-industry relationships: framing the issues for academic research in agricultural biotechnology. Retrieved June 20, 2008 from [www.pewagbiotech.org/research](http://www.pewagbiotech.org/research).
- Etzkowitz, H. 2003. Innovation in innovation: the triple helix of university-industry-government relations. *Social Science Information*, Vol. 42 No. 3, pp. 293-338.
- Fairweather, J. S. (1988). *Entrepreneurship and higher education: lessons for colleges, universities, and industry*. ASHE-ERIC Higher Education Report, No. 6. Washington D.C.: Association for the Study of Higher Education.
- Higher Education Commission of Pakistan (HEC). (2009). Our institutes. Retrieved April 16, 2009 from: [www.hec.gov.pk](http://www.hec.gov.pk)
- Hoodbhoy, H. (2005, January 4). Reforming Pakistan's Universities-I. *The Dawn*.
- Hurmelinna, P. 2004. Motivations and barriers related to university-industry collaboration-appropriability and the principle for publicity. In: *Seminar on Innovation*, UC Berkeley.
- Khalid, S. (2009, January 21). Financial crisis hitting education sector hard : Bijarani. *The News*.
- Khattak, I. (2008, December 6). Cut in HEC funding lands NWFP UET in hot waters. *The daily Times*.

- Koh, C., Kaur, S & Sirat, M. (2009). Global economic meltdown and global higher education. Institute Penyelidikan Pendidikan, Universiti Sains Malaysia. Retrieved May 12, 2009 from [www.usm.my/ipptn](http://www.usm.my/ipptn).
- Maslen, G. (2008). Australia: Crisis has already arrived. University World News. Retrieved December 21, 2008 from [www.universityworldnews.com/article.australia](http://www.universityworldnews.com/article.australia).
- Maslen, G. (2008). Global: Universities lose billions as recession deepens. University World News. Retrieved December 16, 2008 from [www.universityworldnews.com](http://www.universityworldnews.com)
- Mathews, J. A. 2001. National systems of economic learning: The case of technology diffusion management in East Asia. *International Journal of Technology Management*, 22(5–6), 455–479
- Morse, J.M. (1991). Approaches to qualitative and quantitative research triangulations. *Nursing Research*, 40 (1), 120-123.
- National Science Foundation (NSF). (1982a). *University-industry research relationships: myths, realities, and potentials, Fourteenth Annual Report*. Washington, DC: US Government Printing Office.
- Nieswiadomy, R.M.(1993). *Foundations of Nursing research* (2nd ed.) Norwalk, CT. Appleton & Lange.
- Pohlman, R., Gardiner, G. S., & Heffes, E. M. (2000). *Value driven management: how to create and maximize value over*. New York, AMACOM Press.
- Quillian, B. (2005). Regaining the trust in higher education. Paper presented at the meeting of the TIAA-CREF Institute Conference, New York. Retrieved June 10, 2009 from the [www.tiaa-crefinstitute.org/research/articles/030106.html](http://www.tiaa-crefinstitute.org/research/articles/030106.html)
- Reams, B. 1986. *University-industry research partnerships*. Westport, CT: Quorum Books.
- Rehman, T., (1998). Transforming the colonial legacy: The future of the Pakistani University. *Futures*, Vol. 30(7), 669–680.
- Robinson, M. (1987). Strategic management in universities, In: *European Rectors Symposium- Innovation Policies in Universities*, Knokke, Belgium
- Salmi, J. (1992). The higher education crisis in developing countries: issues, problems, constraints and reforms. *International Review of Education*. 38 (1): 19-33.
- Schiller, D. & Liefner, I. (2007). Higher education funding reform and university–industry links in developing countries: The case of Thailand. *Higher Education*, 54, 543–556.
- Selig, A. (2009, February 24,). Financial crisis gives universities a chance to reverse brain drain. Jerusalem Post online edition. Retrieved from <http://www.jpost.com/servlet/Satellite?cid=1235410704504&pagename=JPArticle%2FShowFull>
- Virgílio A. M., & Amaral, A. M. S. C. (1999). The entrepreneurial university: a fine answer to a difficult problem?. *Higher Education in Europe*, 24(1), 11-21
- World Bank. (2000). Higher education in developing countries: perils and promises. Report of the Independent World Bank/UNESCO Task Force. Washington DC US. Retrieved March 16, 2008 from: <http://www.tfhe.net/report/downloads/report/whole.pdf>.
- Wu, F.S. (1999). An Empirical Study of University Industry Research cooperation-The Case of Taiwan. In: *A New Technological Landscape in Asia Pacific Workshop, Taipei, and Taiwan. March, 1999*.
- Ziderman, A., & Albrecht, D. (1995). *Financing Universities in Developing Countries*,

**Characteristics of the respondents:**

**Heads of the Finance Section (DF-1 to DF-12)**

Respondents	Designation	University/Institute
DF-1	Director Finance	Khyber Medical University
DF-2	Director Finance	University of Science & Technology Bannu
DF-3	Director Finance	University of Malakand, Chakdara
DF-4	Director Finance	NWFP University of Eng & Tech Peshawar
DF-5	Director Finance	NWFP Agriculture University
DF-6	Director Finance	Kohat University of Science & Technology
DF-7	Director Finance	Hazara University, Dodhial
DF-8	Director Finance	Gomal University, DI Khan
DF-9	Director Finance	Frontier Women University Peshawar
DF-10	Treasure	Islamia College University, Peshawar
DF-11	Treasurer	University of Peshawar
DF-12	Controller Finance	Institute of Management Sciences (IM Sciences)

**Heads of the Planning Section (DP-1 to DP-2)**

Respondents	Designation	University/Institute
DP-1	Director Planning	Islamia College University, Peshawar
DP-2	Director Planning	Khyber Medical University
DP-3	Director Planning	University of Science & Technology Bannu
DP-4	Director Planning	University of Peshawar
DP-5	Director Planning	University of Malakand, Chakdara
DP-6	Director Planning	NWFP University of Eng & Tech Peshawar
DP-7	Director Planning	NWFP Agriculture University
DP-8	Director Planning	Kohat University of Science & Technology
DP-9	Director Planning	Institute of Management Sciences (IM Sciences)
DP-10	Director Planning	<u>Hazara University, Dodhial</u>
DP-11	Director Planning	Gomal University, DI Khan
DP-12	Director Planning	Frontier Women University Peshawar

**Heads of the Academics Section (DA-1 to DA-2)**

Respondents	Designation	University/Institute
DA-1	Director Administration	Islamia College University, Peshawar
DA-2	Director Academics	Khyber Medical University
DA-3	Director Academics	University of Science & Technology Bannu
DA-4	Director Admissions	University of Peshawar
DA-5	Director Academics	University of Malakand, Chakdara
DA-6	Director Academics	NWFP University of Eng & Tech Peshawar
DA-7	Director Academics	NWFP Agriculture University
DA-8	Director Academics	Kohat University of Science & Technology
DA-9	Director Academics	Hazara University, Dodhial
DA-10	Director Academics	Gomal University, DI Khan
DA-11	Director Academics	Frontier Women University
DA-12	Coordinator HRD	Institute of Management Sciences (IM Sciences)