Research and development (R&D) have long been a key component of what has generally been called “research universities”. There is also recognition that in order to stay on the cutting edge of R&D, higher education institutions (HEIs) must increasingly strive for innovative R&D, and this has important implications for the structure and governance of higher education (HE) as well as numerous other factors of HE change and transformation. Furthermore, in a manner that may be unprecedented in the period of the so-called modern university, innovation as almost a form of social responsibility has been thrust upon the university. Interestingly and overwhelmingly, due to the role that the university is performing within the emergent knowledge society, innovation in the “knowledge transfer” functions of the university—the teaching role foremost among them—has become of increasingly greater importance. In this seminar we would like to focus our attention on several of these factors, including but not limited to the following suggestions.

There is a fundamental issue of the location of R&D in the academy structure. It is widely acknowledged that in many settings, including most OECD members, R&D typically resides in recognized research HEIs. Yet, in many cases, as massification has occurred and as hierarchical relationships have resulted in differential funding and prestige levels, there has been what is sometimes referred to as “mission creep”. An example in the U.S. is the California Master Plan, which was designed to delineate a clearly delineated structure that focused research and development on the University of California segment, teaching and some research on the California State University segment, and teaching and open access on the Community College segment. For a variety of socio-economic reasons (not the least of which is the opportunity of over-head funding from external research grants), faculty in the California State University segment have been “creeping” toward replicating the R&D functions of the University of California segment, thus blurring the boundaries between the research functions of the system. Similar forces are present in newer systems in Japan, China and Korea to name just three Asia Pacific settings. These forces have a significant impact on the organization, planning and governance of higher education with respect to R&D and the emphasis on innovation.

A related issue of “location” relates to the so-called “triple helix” of university, industry and government relations. In recent years, a number of concepts have been proposed for modeling the transformation processes of this three-way interaction. Adding the notion of innovation requires the blurring of boundaries between them and suggests different modes for the production of new knowledge. Knowledge flows are recursive rather than linear, and suggest many new and novel ways to think about R&D and the knowledge revolution.
While typically discussed with respect to the sciences, this model has equal relevance for all areas of knowledge production including the social sciences and humanities (e.g. the nature and impacts of health policy) even though these have been much less self-consciously studied as such.

Another fundamental issue has to do with the historical distribution of R&D in higher education with Europe and the North America having a head-start and other emerging HEIs developing capacity later and forging links in a variety of ways with leading universities in those settings. There are various implications for this, especially in the increasingly globalized environment in such areas as cross border research and the migration of intellectual talent (the so called brain-train), massification of academic research, basic research, academic research and new public management, rise of private funding, internationalization of academic research, new social contracts for research, the role of new developments in technology, emerging “new giants” such as India and China (as members of the BRICs), the role of regionalization in R&D and innovation (e.g. the Bologna process in Europe and various new Asian and Pacific regional organizations), the link between R&D and innovation and the burgeoning quality assurance and accreditation movements especially on the international level, the financing of R&D, and the increasingly blurred role between the public and private sectors and their impact on R&D and innovation. As a set of institutional structures and functions this entire landscape has been enormously impacted by the role of emergent private sector HEIs, many of them acting cross-nationally, some of which are enrolling hundreds of thousands at a time, gaining significant returns on capital and impacting in major ways the status of traditional HEIs within their accustomed national settings.

These issues represent broad, regional and global concerns. Focusing on the HEIs and their responses to these broader forces leads into more specific concerns such as the purpose and functions of research and innovation in the academy and how dramatically changed funding patterns have impacted the organization of R&D and innovation. In many recognized research institutions, there has been a decreasing reliance on state/government funding for R&D and an increase in the role of private funding from the corporate sector in order to mount the kind of research necessary to remain competitive. This has implications for the basic research and applied research shares of the R&D effort, as well as academic autonomy and innovation. There are additional implications for the social returns to higher education from this changed research landscape such as the relationship between employment and R&D investment that underpins the “high skills” strategy of many governments and HEIs in the Asian Pacific region. It is here that the “innovative” aspects of private sector (often proprietary) HE are being most experienced. At the institutional level this impacts the relationship between the post-graduate education experience and training and the labor market—the classic “alignment” issue.

The broad area of internationalization, and the role of globalization in HE within the context of competition and rankings has contributed to an environment in which R&D and innovation are inextricably linked between institutions within the Asia Pacific region and between it and other global settings. These linkages are increasingly being recognized by HE leaders in the U.S. and Asia as well as Europe. It is now clear that breakthrough
discoveries will occur in many parts of the Asia Pacific region and many HEIs in the U.S. and elsewhere are seeking active partnerships and collaborative arrangements in order to participate in these new ventures. One aspect of this development may be a re-thinking of how intellectual property regimes exist within countries between HEIs and other sources of knowledge innovation. Overall, how these linkages develop and enhance R&D and innovation in cross-regional settings is a critical question that we hope some of the papers in this seminar will address.

The quest for new approaches to R&D, entrepreneurship and innovation have also had a significant impact on HE governance. In the Asian Pacific region and in the U.S., HEIs have long incorporated offices and centers for R&D within their governing structures. More recently there have been more proactive efforts to establish new administrative units to focus on innovation as it relates to more traditional R&D. Chief Innovation Officers have been appointed in many HEIs in the region, usually attached to schools and colleges where R&D is typically performed (e.g. STEM areas, medical schools, engineering schools, etc.). This represents a new administrative input into the governance architecture of higher education and one that has been little studied as to its impact and effectiveness. As for the trans-national mass proprietary HEIs, the governance relationship has been fundamentally restructured as a result of “unbundling” traditional faculty relationships and roles while transforming the “faculty” role within the institution to one of that of a focused, specialized, contract employee. Decisions typically made within traditional HEI structures as part of the governance structure are increasingly made within a corporate management framework.

Thus we see the following topics, among others, as possible subjects to be be addressed by participants in the seminar, seeing them primarily as hypotheses to be sharpened and/or revised.

- **Massification of HE** has resulted in a problematic as to where R&D and its innovative mission should reside in higher education systems. Systems in the past have sought to lodge R&D in discrete kinds of institutions and restrict it from others (e.g. the California Master Plan) but this approach has eroded as non-research oriented HEIs have sought to move up resulting in a form of “mission creep”.

- **Government policies** that promote research and innovation are (a) on the increase, (b) extend to and invite new relationships especially among private sector actors (but not exclusively), (c) are occasioning new ways of linking HEIs to the research and innovation activities of society, with (d) increasingly novel ways of both financing and recovering the benefits of research and innovation (including intellectual property rights).

- **University responses** to university-industry-business cooperation are becoming more common among HEIs in all Asian Countries (if highly differentiated) with strong implications for university governance structures and relations. Overall, research is being re-positioned within university structures with a range of impacts
that include re-statusing of faculty, reconsideration of the kinds of skills and capabilities that both undergraduates and graduates should possess. As a general rule it is the case that HEIs are subject to a wide range of pressures to assure that graduates have skills deemed necessary by national, regional and global economies.

- University's third mission: Asian university perspectives. As HEIs continue to develop across the broad range of demographic, societal and economic transitions characteristic of Asian societies, universities are being looked to as focused sources of retention and articulation of those elements within such societies that “make them Asian”. This extends to the understanding of the university itself as an institution and its mission to embody and continue to develop Asian perspectives.

- University strategies in enhancing research capacity are becoming both more intense and more comprehensive as the range of university-related research grows. Such efforts extend from developing and sustaining research activities within HEIs previously known almost exclusively for their teaching role, to developing curricula that align the university with major issues within the world at large (e.g. population growth and entailments, societal aging, technology transformations, climate change, global financial issues, globalization).

- The quest for research excellence and entrepreneurship: impact on university governance. Within this environment of intense concentration on research, innovation and development, impacts on university governance are large as new activities come to be pursued within universities that require novel approaches and tend to “privilege” other parts of the institution than those that gave rise historically to governance structures.

The intent of this concept paper—and the laying out of these hypotheses—is to encourage seminar attendees to address one or more of these in a relative brief paper of about 3000-3500 words. It is expected that some papers will support the thrust of the hypothesis, whereas others will choose to contest it (them). The seminar will be organized such that each paper will be individually presented and discussed. At the conclusion of the session, time will be devoted to gaining a sense of the kinds of novel and/or unexpected insights or content that have come forward from the discussions. Notes will be taken throughout the seminar, collated and provided to presenters in a timely manner following the sessions. Following the seminar a prospectus will be prepared for an international publisher. Upon acceptance, each contributor will be provided with suggestions from the volume editor (s) for a revision of his/her paper, and a timeline provided for revision and subsequent publication.

It should be noted that given this framework, contributors are also encouraged to develop papers which in the author’s view go beyond in some meaningful way the frame created by the hypotheses outlined above. We do ask, however, that should you choose this course, please communicate with either John Hawkins or Deane Neubauer, co-directors of APHERP prior to initiating your paper.
We hope that you find the prospect of addressing these important higher education issues exciting and look forward to your participation in this event.