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Evaluating Jordan's Higher Education Development Fund

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1. Any program of competitive support should be clearly defined for one or other of the three main activities of universities: education, research and enterprise.
2. Program objectives and criteria to be used in evaluating competitive proposals should be well defined and clearly understood both by potential proposers and by reviewers.
3. There must be sufficient incentives for individuals or universities to invest in developing proposals.
4. The selection process must be designed to enable informed and objective judgements to be made about competitive proposals
5. Implementation arrangements, such as grant conditions and procurement, should be designed to assist decentralized university level implementation as well as learning

Executive summary

1. The Higher Education Development Fund (HEDF) was introduced with its competitive funding windows in 1998 as part of the World Bank funded project, the Higher Education Development Project (HEDP). The overall objective of the HEDP was **to improve the quality, relevance and efficiency of education programs by encouraging innovations at the program level**; the HEDF was intended to contribute to those same objectives, along with other components of the HEDP. Public universities were requested to develop proposals to improve their educational programs, which were reviewed by external peers for selection.

2. This evaluation was proposed as a program review of HEDF with a view to drawing lessons for the future. It was not intended as an evaluation of individual sub-projects and the approach adopted for the review does not allow conclusions to be drawn for specific projects.

3. The **first main conclusion** of the evaluation is that the project objective was met, although not as fully as it might have been. There were undoubtedly benefits brought about by the project. The purchase of much needed equipment – particularly for teaching – filled a gap in facilities in most cases and enabled programs to move away from theory-based teaching towards practical-oriented teaching. Most of the sub-projects were proposed by 'movers and shakers' in the universities – exactly the kind of individuals who deserved support.

4. The main reason for the shortfall was because insufficient resources were devoted in the early stage to clarifying and communicating the kind of changes envisaged under the project, both to potential project proposers in universities as well as to proposal reviewers. The arrangements for sub-project selection, as well as those for monitoring, were not sufficiently designed to ensure learning about the competitive process nor to enable its effective operation. As a result, many sub-project proposers simply made requests for funding that they were familiar with, for example, for the purchase of equipment for teaching and research laboratories; few sub-project proposals had much real innovative content. Further, few proposals gave sufficient justification, by reference to the project objective, for the program improvement or the level of investments being proposed.

5. The **second main conclusion** is that the project experience can provide valuable lessons both for the government and for universities for the future. It is not clear whether the designers of HEDF saw it as a one shot intervention or as a new policy instrument to be sustained – perhaps because they did not feel comfortable to propose it one way or the other. However, with the benefit of the hindsight, it is clear that it is ambitious to design a competitive program such as HEDF as a one shot intervention. After all, this was the first time a competitive funding approach had been adopted in Jordan higher education, and to make a success of such an approach requires experience of the concept of bidding against pre-set objectives. Such experience can only be built over time, both at the centre to know how to steer the approach to meet pre-set objectives, and at university level about how to respond effectively in the light of the objectives.

6. Our conclusion is that the HEDF subprojects on the whole did not sufficiently attempt to address the deeper issues of how to improve the quality of pedagogy

nor the difficult issues of how to increase relevance or efficiency. Of course, such issues can only be fully addressed through concerted and sustained effort in the medium to long term and, as the project designers correctly saw, HEDF can only be the first step in the long term reform effort.

7. The question is what should Jordan do now? This evaluation concludes that some form of competitive funding would be valuable for the government to use as a key policy instrument to continue with the reform agenda. But to do this would require improvements to the design and to the institutional arrangements. This evaluation report provides recommendations for such improvements, both for the ongoing project, but particularly for the future.

I. Introduction

1. The Higher Education Development Fund (HEDF) was introduced with its competitive funding windows in 1998 as part of the World Bank funded project, the Higher Education Development Project (HEDP). The overall objective of the HEDP was **to improve the quality, relevance and efficiency of education programs by encouraging innovations at the program level**; the HEDF was intended to contribute to those same objectives, along with other components of the HEDP. Public universities were requested to develop proposals to improve their educational programs, which were reviewed by external peers for selection.

2. The first round of proposal solicitation and selection took place between 1998-2000 prior to the final approval of the World Bank loan. Since the start of the project in 2000, two more rounds of proposal solicitation have taken place, with increasing levels of competition at each stage. This was a brand new experience for Jordan, and there has been considerable interest in the approach in order to learn lessons and so improve its effectiveness in the future.

3. This evaluation was proposed as a program review of HEDF as a program sub-project with a view to drawing lessons for the future. It was not intended as an evaluation of individual sub-projects and the approach adopted for the review does not allow conclusions to be drawn for specific projects. More specifically, the objectives of this evaluation were threefold:

   (a) to make a preliminary assessment of the performance of HEDF to date;

   (b) to learn appropriate lessons to improve its performance for the remaining sub-project implementation; and

   (c) to learn lessons beyond the project about how future government policies and interventions of this type may be improved in their design.

4. This report was based on two visits: (a) a one week visit in August 2004 during which a preliminary review of related documents and interviews with key people associated with the operation of the HEDF; and (b) a two and a half week visit by two consultants in February - March 2005 during which all eight public universities were visited for detailed discussions.

5. The report is structured as follows. In the next section, the question of whether project objectives were achieved is addressed, covering successes as well as shortcomings. The third section examines the factors that limited success. In the fourth section, the advantages and disadvantages of competitive funding are discussed with a view to considering the potential benefits for Jordan in sustaining such funding in the future. In the fifth and sixth sections, describe the lessons learned for the future and those for the continuation of the current project.

II. Were the purposes of the project achieved?

Project objectives

6. This evaluation found that the three dimensions of the overall project objective, of improving quality, relevance and efficiency, were met only to a limited extent.

7. One major concern that spans all three dimensions of the objectives was the issue of **research drift** in many projects. About a third of sub-projects were research-oriented justified on the basis of links to post-graduate programs; many other sub-projects included support for facilities that were really focussed on research and not on teaching. This was a direct result of the project design in which support for research was endorsed to the extent that it contributed to education, including post-graduate programs.

8. In our view, justification to build research capacity (which is usually linked to postgraduate education) requires a different kind of prioritization at the national level from that of undergraduate education. This is because research capacity is expensive to build. Even the richest countries are selective in the number and location of support given for research capacity building. For a small country such as Jordan, decisions to build research centres of excellence must be guided much more strongly by national priorities in terms of the fields and number of such centres.

9. The project experience in each of the three dimensions is discussed below.

Quality

10. There was a widely shared view that the quality of educational programs has improved, particularly as a result of the injection of the much needed equipment and laboratory facilities, which, in turn, helped bring in the needed practical orientation in teaching. Most teaching programs visited were able to significantly update and revise their curricula as a result of such investments. The impact of such investments was widely felt, as many academics expressed the joy of being able to demonstrate rather than lecture. In the Jordanian context in which there has been significant concern about overly theoretical teaching, this was a significant achievement. Many sub-projects also highlighted the value of new ICT equipment in enabling better demonstration and student-oriented teaching.

11. On the other hand, improvements from the HEDF programs to date appear to go little further than equipment driven changes. Most university representatives admitted that deeper pedagogical issues of developing teaching style to foster problem solving or learning skills in students have not been addressed systematically, and that there is a lot more to be done. Of course, the Faculty Development Centres (FDC) also help develop new teaching styles, but the real change in style comes in the actual teaching itself, and that is where the HEDF projects should be complementing what the FDCs provide.

12. These are clearly higher order issues in teaching quality – and the intention of the HEDF project in providing support for program-level innovations was precisely to address such higher order issues. The focus on equipment driven change, while useful in its own right, has missed the opportunity to support these more

fundamental changes in teaching style. If the project had been aimed at providing equipment support, the design could have had much simpler.

Relevance

13. Many programs were opened in fields that make intuitive sense as being relevant for Jordan – for example, water and environment, biotechnology or cultural heritage. Sub-projects 'look right' in terms of addressing Jordan's national needs. It is promising to know that universities themselves believe that they need to address these national needs. However, few of the sub-project proposals were based on any analysis of national demand or of existing national capacity; nor were meaningful contacts made with employers to establish whether such intuitive ideas were real in the market. As a result, whole sub-projects were based on 'felt' needs, rather than on any 'demonstration' of needs; no evidence was provided to show that their proposal would have any real world impact on the problems. The concept of 'relevance' was based more on intuition than on evidence.

14. There was also a tendency to develop programs targeting **narrow professional fields**. This was at least partly due to the fact that most proposals are written by one or two individuals who tended to emphasize their own areas of interest rather than those that made sense programmatically. Unfortunately the universities played little role in developing, scrutinizing and endorsing proposals with any sense of institutional priority.

15. This tendency for sub-programs to be in narrowly defined specializations was a particular concern, because the international trend suggests that relevance is to be found in the opposite direction. Most developed countries find that many of their graduates take jobs unrelated to their undergraduate education, and indeed move jobs more than once in their careers. In economies that are undergoing structural transformation or development, such a mismatch should be even more prominent.

16. The modern assumption is that undergraduate training should not, usually, be used for narrow professional preparation, it should be to impart basic learning skills to students for lifelong learning and to instil generic or soft skills such as problem solving. There was little such thinking reflected in sub-projects.

17. There were surprisingly few sub-proposals that were truly **interdisciplinary** -- in the sense of different departments or faculties coming together to improve or develop programs. Sub-projects in interdisciplinary fields tended to be to establish new units or to hire new academics, rather than to bring current academics together from existing faculties. Again, international experience is that in order to be relevant to societal needs, interdisciplinary collaboration is needed to broaden subject areas. In the few sub-projects which were attempting interdisciplinary collaboration, difficulties were being found in bringing together different groups of academics, and in sustaining such effort beyond a few specific individuals. The university as a body needs to take a much more active role in expecting interdisciplinary collaboration if such fledgling attempts are to survive and flourish.

18. There was also a tendency to assume that **'social (or student) demand'** was sufficient to satisfy the relevance criterion and so justify proposed sub-programs. In Jordan, as in some other countries, there is a high, and possibly 'excess', demand for degree credentials, not least at Masters and PhD levels – and there is

evidence of credentialism (e.g. students choosing to go overseas for 'cheap' and inferior quality programs). This means that being able to attract sufficient students to a program should be a minimum requirement for it, but it is not a sufficient justification for relevance on its own.

19. Many of the under-graduate students we met wanted to progress to higher degrees rather than to enter the job market (which was also worrying as most programs justified their relevance based on the assumption that their students moved into labour market upon graduation). Decisions about a university program cannot be solely based on social demand, as there will always be a push to open more masters and PhD programs, even if there is no obvious economic need for them. It is critical for universities, as the supply side, to take notice of the market signals coming from the economy and employers about the future human resource needs of the country.

Efficiency

20. The third dimension of the overall objective of the HEDF was a concern to improve efficiency; there seemed to be only a limited level of thinking about the concept and little sense of value for money. Only one sub-project explicitly discussed an efficiency improvement from the project – in terms of increasing student numbers and so making better use of facilities and under-utilised academic staff. None mentioned closing or merging programs to avoid duplication of course offerings. We also found very few examples in which any effort was made to share teaching resources such as computer rooms or laboratories across faculties in order to increase their utilization. Some sub-projects were aware that their programs were costly; and indeed their sub-project made the program even more costly, given the additional investment. It is unfortunate that there was no systematic requirement for sub-projects to think about how to restructure their work, or to develop new programs, so that their 'outputs' would be increased and/or their longer term costs minimized.

21. The lack of awareness about cost implications was reinforced by complaints from many sub-projects that their universities were not providing the needed resources to sustain investments. It was clear that in most cases, universities had not made serious or realistic commitments during the proposal solicitation process. One cause of this was the absence of detailed guidance or scrutiny about the level and nature of universities' own parallel investments.

22. Another efficiency issue concerns the level of **duplication**. Many proposers rushed into 'obviously right' areas around the same time, without coordination and without an updated picture of what others were doing. As a result, there were duplications of programs and research centres in similar areas, such as water and environment. This arises partly from inadequate analysis by the sub-project proposers, but it also reflects a shortcoming in national decisions in selecting overlapping sub-projects. It should have been possible to avoid unnecessary duplication - and also to build on existing capabilities.

23. Duplication is particularly serious for research centres or 'research components' of sub-projects with substantial investments in expensive and specialized equipment. Such centres and programs must compete against each other (and some external stakeholders) for scarce skilled human resources if they are to make the best use of such facilities. Most centres acknowledged that in a small

country such as Jordan, where universities are largely teaching-oriented, the country cannot afford to develop more than one or two research centres of excellence in any given area.

24. This duplication of effort, both between and sometimes even within, universities resulted in evidence of under-utilization of resources. Many sub-projects purchased specialized equipment which was under-utilized simply because there were not enough users of it from within their own universities. In the worst cases, centres were barely managing to train technicians to maintain the equipment – and very few academics were actually making use of the facilities. Even in the better cases, many facilities were not operating at a level of utilization that make economic or physical sense - sophisticated equipment often needs to be operated continuously or regularly for its best performance.

Entrepreneurial projects

25. Our coverage of entrepreneurial sub-projects was limited to a desk-top review and one sub-project visit (though we also saw two others in the course of our visits), and so only general comments can be made on this program.

26. From the desk top review, it was clear that entrepreneurial sub-projects covered a wide range of activities from joint research activities to the institutional development of an academic centre in order to forge new types of relationships with industry. To deal with these diverse proposals, the secretariat decided to form a panel of reviewers who in turn invited subproject proposers for face to face discussions. This was a sensible approach which allowed reviewers to understand the nature of proposals better, and for the subprojects to get direct feedback from the reviewers.

27. The subprojects we visited were making sensible efforts in pursuit of their respective objectives. One centre had managed to attract significant industry funding and collaboration, for which the WB project funding worked as a 'seed grant.' Students were benefiting from increased exposure to employers in their study. Under a joint research project, academics were working in close collaboration with industry representatives.

28. What are the expected benefits from such sub-projects? These sub-projects are likely to lead to diverse outcomes. In some sub-projects such as the above-mentioned centre, the best scenario would be that their activities are sustained in the future through additional industrial funding and collaboration. These new and visible relationships with industry on campus can lead to hostility and/or suspicion from other academics, concerned that commercial interests are encroaching into the university. And they might be right in the sense that universities worldwide sometimes go 'too far' in reaching out to industry, especially at an early stage of working with them. The problem is that universities may not be in a position to negotiate at the beginning since they may not have a credible strength in what they offer. It usually requires a better university-industry dialogue and experience of a relationship before the industry side can begin to concede as well. It is critically important for university leadership to give these fledgling initiatives full support, first through legitimating them on campus, and then through supporting them through experimentation and reflection.

29. The best outcomes for collaborative research projects are commercializable discoveries. It is important that honest efforts are made to achieve such successes in individual sub-projects. However, it is equally important for outsiders not to form pre-conceived expectations about specific successes of these subprojects. It is unlikely that every commercialisation project would succeed - even in industry – it would be unreasonable to penalize individual sub-projects for lack of commercial success.

30. For Jordan, these sub-projects are pioneering and piloting forerunners from which the university community could learn about how best to work with the business community.

Evidence of learning in the course of the project.

31. In addition to the above explicit objectives, the HEDF project also had the purpose of providing a learning experience, both for the centre (government) and for universities. As mentioned in Section I, this was the first time that a competitive fund had been used in this way in higher education in Jordan, so naturally there were lessons to be learned about how to run and steer the overall project – at the centre and in universities. These are developed in later sections; this sub-section examines the evidence of learning during the course of the project.

32. All universities expressed their appreciation about participating in the competitive process endorsed by an international body such as the World Bank. In a couple of universities, one major benefit perceived was their improved capacity to write internationally competitive proposals, which was leading to new opportunities and access to external funding. Most other universities expressed their appreciation of the experience of writing competitive proposals , even though it was not clear if this had yet led to tangible benefits. In another couple of universities, there were discussions about improving their internal quality assurance mechanisms – though these developments are probably only tangentially related to their experience of the competitive funding programs.

33. The quality of proposals improved over the three rounds – but mainly in presentation rather than the content. The evidence is clear that the guidance to universities during proposal writing, including that supplied by the World Bank intervention during the last round, was heavily focussed on format, with far too little attention given to what was required in terms of the substance of proposals – for example about the types of evidence that would be expected to justify a bid. Many sub-projects went through a protracted process of re-writing and re-re-writing proposals, but most of that was concerned with detailed formatting and not with any substantial improvement in content.

34. While re-writing to meet format requirements was administratively convenient, it was less clear that the quality of proposals improved on re-writing, in terms of their conceptual maturity or their depth of analytical justification. Many of the sub-projects accepted in the third round would have benefited from a proper feasibility study and/or more preparatory work before making significant investments in equipment and facilities. Indeed, most of the proposal authors openly admitted that they had only a limited idea as to what the program was looking for in proposals.

35. None of the authors of unsuccessful proposals whom we met during our visits had received feedback on their proposals, although there would probably have been others who did have feedback. Clearly, there were communication problems inside many of the universities, for example, there was evidence of academics within a university who received information at very different times even from the same Vice President. All universities were sent the same set of information from the centre through their National Steering Committee representatives; what is clear is that it did not always reach its intended destination – the proposal author(s).

36. Such a simple communication problem should not of course arise in universities (and they should make efforts to improve their internal communications). But those involved at the centre could have checked whether communication within universities was appropriate and could have taken direct action to overcome them. This could have been done simply by sending the feedback direct to proposers at the same time as to the NSC members and to the Vice Presidents; the extra administrative task would have been well worth the benefit of reducing the frustrations of many proposers. We understand that this was not the agreed approach for the HEDF as a whole, but it would have been in the interest of the HEDF to take such an extra step.

37. This was symptomatic of a larger issue, which was that the centre's role was defined as an administrative one to support the NSC, rather than a more proactive one of ensuring an effective competitive process. This may sound like a small distinction, but as will be addressed later, there is a key difference between defining the role of the secretariat as an administrative unit discharging very specific support functions, and defining it a the body responsible for helping the whole project to meet its policy objectives.

38. During implementation, the main guidance that the sub-projects received was on procurement, through procurement reviews. Again, the guidance was more concerned with the administrative conduct of the process rather than with the substance of what was to be procured. The guidance focussed on whether procurement guidelines were procedurally followed, rather than on whether value for money was achieved in equipment purchase: surely value for money is more important than whether guidelines are procedurally followed?

39. The prior review requirements involving the World Bank were also unhelpful on this point, as the communication became protracted and similarly focussed on procedural compliance. From the university perspective, the issue was that the procedure agreed with the World Bank was sufficiently different from their normal procurement process that they had to learn new ways of doing things – yet with no tangible benefit. In fact, on the contrary, many sub-projects found that equipment purchased through Bank procurement rules ended up being more costly than it would have been had they followed their own procurement rules. There is a lesson here for the procurement section of the Bank.

40. Because of the way that the PIU was defined mainly as an administrative support body, there was little substantive contact between it and the sub-projects – apart from regular reporting requirements, which most sub-projects saw as bureaucratic and repetitive. Undertaking 'substantive' monitoring or providing comments or feedback on the performance of sub-projects would have required PIU to have hired outsiders (as in the case of reviewers). These would have needed the

requisite expertise if they were to provide constructive criticism on the substance of activities or feedback to universities and the centre about any support that sub-projects needed. No such follow up activities had been undertaken until the current review, which means that this report is the first opportunity to 'learn' from experience within the project.

Sustainability.

41. In most sub-projects visited, the main improvement had come from equipment purchased, from professional exposure to visiting foreign professors, and from training abroad. In most cases, universities were providing requisite space and operational budget to sustain the operation of teaching laboratories. In addition, there is a sustained benefit from the ability to write competitive proposals.

42. However, the sustainability of research equipment in terms of its simple utilization is an issue which should be addressed by universities urgently. In most cases, sub-projects felt that they could do little to improve usage of the equipment either because they had to charge the high and real costs to potential users, or because they feared damage to it. It should be up to universities to ensure that the responsibilities and access conditions are clear. For instance, every piece of specialized equipment should have appropriately skilled academics as well as technicians trained to be responsible for its operation. The analytical service should then be available without red tape or unrealistic financial requirements for other academics in the university. It would be helpful to learn from best practice in Jordan as some subprojects appear to have established good practices from which others could learn in this respect.

43. In one university, updated curricula and facilities had prompted academic staff to be more aware of their teaching methods, an awareness reinforced by the training activities conducted in their Faculty Development Centre. This appeared to be an isolated example rather than the norm. As noted above, the sub-projects should actively encourage all the associated academics to go beyond equipment driven quality improvements in education and reconsider their teaching aims and style; in this way, improvements would be more sustained.

44. Turning to the sustainability of the competitive funding approach itself, universities appear to have treated the three rounds of competition under HEDF as windows of opportunity that may only have a short life. We found little belief that 'we can try in the next round rather than this one'. Even though there were supposed to be three rounds, few appear to have believed in the stability between rounds, with the basic assumption that the rules of the game could change the next time. They were right, in that the rules of the game did change each time with tightened levels of competition.

45. Nevertheless, most university representatives thought that it would be important to have a permanent stream of competitive funding from government, even if it had to be taken out of the same total government funds of universities. All Vice Presidents we met thought that such funding was complementary to universities' own internal allocation mechanisms, as it enabled them to plan specific projects which could be funded as a whole.

46. There is thus an issue about the sustainability of competitive funding itself; the government needs to consider whether it makes sense for Jordan to continue with funding schemes such as this for universities in the future; the experience of this project suggests that it would be – as long as the lessons of this project are adequately learned. If the government does decide to sustain competitive funding as a policy instrument, it will need a continuing institutional capacity to implement it. The current 'institutional capacity' in administrating the HEDF competitive funding resides in one individual in the PIU – the fund coordinator. For various, now historical, reasons, the PIU was set up as a temporary body in the NCHRD; the Ministry will need to learn from the experience of the PIU if it is to continue with such a fund.

III. What were the factors that limited success?

47. There were five factors in the design and implementation of HEDF that explained the limitations on its success. First, the original program design made **insufficient distinction between undergraduate programs and graduate programs/research**. Original project documents emphasized teaching without differentiating between undergraduate and postgraduate programs, and this allowed support for many research-oriented activities. Paragraph 7-8 above has explained the 'research drift' that resulted and the need for different types of prioritization by the government if it wishes to encourage the building of research capacity. Of course, both education and research need support, but they need very different approaches in project selection. This is especially the case in a small developing country such as Jordan where building research capacity has to be done on a very selective and strategic basis.

48. In contrast, and for future reference, a project to provide support to research centres would require far more rigorous evaluations in terms of existing academic staff capacity to develop into centres of excellence – to ensure that specialized equipment was bought in places where heavy use would be made of it. It also would need much more prior analysis at national level to define research areas of national importance, to determine the plausible number of research centres that Jordan should have, and to find ways to avoid unnecessary duplication. Proposals to establish new research centres from scratch would be scrutinized very carefully as to their feasibility and their fit with national needs.

49. The second factor is that the **objectives of the competitive program were not clearly enough defined or understood** - not by the National Steering Committee, nor by potential proposers, nor by reviewers. The meaning to be ascribed to the concepts of quality, relevance and efficiency should have been discussed explicitly, and defined clearly at a very early stage; they were not. It should have been explained how these terms would apply to project proposals and especially the ways in which evidence would be required for a proposal to justify its claims about how the project would meet one or more of the objectives. These definitions and requirements should then have been unambiguously conveyed to universities and reviewers, so that proposals could have been solicited, written, and evaluated systematically by reference to the objectives.

50. No collective understanding was developed about the kind of improvement expected from the project, and judgement was left entirely to individuals. This meant that it was not possible to guide universities as to how to write a good proposal that met the project objectives - other than in terms of how to follow the administrative format). Similarly, it was also not possible to explain to reviewers how they should assess proposals against the objectives.

51. As a result, universities interpreted quality improvement in the standard ways that they had previous done, and so were not pushed to think more deeply about teaching improvements, nor encouraged to think in new and innovative ways. There was no requirement on them to produce evidence or analysis behind any of the claims they made; few did and so most proposals were based more on unsupported assertions than on analysis. Similarly, reviewers approached their tasks in very different ways, using differing interpretations of terms. Almost no reviewers challenged unsupported assertions and few commented about the almost

total lack of evidence or analysis – even the international ones, who should have known better from their own past experience.

52. A better definition of measures for the three objectives and more systematic interaction at all levels (among program designers, proposers and reviewers) would have helped encourage more innovation and deeper thinking than was evident.

53. The third factor is that **three competitive rounds were not sufficiently stable to provide incentives for university to compete**. Indeed, even among university representatives at the National Steering Committee, there appears to have been little clarity as to the nature of the competition in each of the rounds.

54. Unfortunately, the first round of proposal solicitation process took place under a high degree of uncertainty about funding availability – both from the government and the World Bank. This context was not conducive to provide a learning environment for proposing institutions or for the fund administration. The first round of proposal solicitation is typically the time when concerted efforts should be made in debating and developing collective understanding about what kinds of proposals would be desirable and why – going well beyond abstract program objectives (see paras 48-51). As the situation was still unfolding at the time, the fund organizers could not be too demanding to proposing institutions about multiple revisions of proposals, given that they could not be certain of the availability of the funding 'carrot'. The World Bank, as a financier, may have been reluctant to commit funds without having any appropriately prepared sub-proposals, and the government of Jordan itself may have been caught between scepticism about this new funding mechanism and uncertainty about Bank funding.

55. Even when 'full competition' was announced for the third round, the universities still did not really believe it – and they were right in the sense that the government made a policy-based commitment to support one sub-project in spite of its low score – with the result that all eight universities secured some support. The uncertainty about the nature of the competition had direct implications for the internal selection process within universities where the prevailing attitude was that they would let any proposal go ahead in case it won support. There was insufficient explicit selection or priority setting in universities and their resource commitments were highly variable, which in many cases enabled them to avoid the issue of prioritisation or efficiency in resource use at the university level.

56. The fourth factor is that **the selection process at the national level** was not well designed and underestimated what it takes to make a rigorous selection. There are two separate issues:

(a) Simplistic averaging of scores from reviewers was clearly inappropriate. Even with far better prepared proposals and far better informed reviewers, it is unlikely that reviewers would come up with consistent enough numerical scores such that simple averaging would give appropriate 'ranking' of proposals. Rather, the results of the review process should be used as 'inputs' for qualitative decisions where judgement cannot hide behind spurious numbers.

(b) A larger issue concerns the institutional arrangements in which the tasks of various parties were not clearly defined. Much of the problem here was the

inadequate definitions or application of the criteria against which proposals should have been judged (see paras 48-51). But in addition, the original institutional arrangements did not work well either; they comprised a three tier structure.

- The National Steering Committee, including Vice Presidents from all public universities, was to be the final decision making body.
- A specialized Fund Committee, comprising 5 non university NSC members as well as 4 selected university members (who were to rotate across rounds), was to take the specific role of reading proposals, assigning reviewers, and making final judgements based on reviewer recommendations.
- The secretariat had a fund coordinator with the administrative task of arranging reviews and grants agreement.

The design of this arrangement was unlikely to be workable – not least because the 'representatives' from universities made 'full competition' difficult because each of them had an obvious interest in making their own university do well in the competition. The non university members were perhaps too far removed from the details of university matters, as well as being too busy, to provide detailed feedback or to effectively 'manage' this complex competitive process.

The National Steering Committee was also responsible for the implementation of the entire project with multiple components. Even without the conflict of interest issues, there would have been a limit to how much managerial attention they could have given to the HEDF component.

The fund coordinator was in the best position to see what was happening at the sub-project levels and often had a good intuitive understanding of the issues. However, the secretariat was given neither the authority nor the requisite expertise to demand better proposals – in substance not format. The secretariat could have been more proactive had it been given the power to do so along with more active support from senior academic reviewers for making judgements.

Finding good quality reviewers was also not easy. This was in spite of concerted and systematic efforts made by the secretariat to try to identify and select reviewers. In the second round, higher education management experts such as high level academic administrators were used along with two subject specialists. This did not work as they were too busy to provide meaningful inputs. In the third round, specialist academics were used, which helped in that they could devote more time and attention to proposals, but it escalated the problem of conflicts of interest. The performance of the international reviewers was also disappointing in that they rarely supplied critical comments and tended to be far too accommodating. This is another area in which having some senior academics at the heart of the program implementation could have been helpful.

57. The fifth factor is that **little emphasis was given to the process of monitoring and guiding implementation**, even though this was in the design as an expected part of the activities – and stipulated in the operational guideline of the fund. Despite the design, sub-projects were not contacted or visited in order to discuss

substantive progress and issues. All the contacts with the centre appear to have been oriented to procedures or approvals. If there had been more substantive contacts during the implementation of Round I or Round II, lessons learned in the sub-project selection could have been reflected in the design of Round III. As a result, an important opportunity to improve the program implementation was missed.

IV. What are the advantages and disadvantages of sustaining competitive funding in Jordan?

Advantages

58. Proposal based competitive funding is a common international practice for governments or other bodies to finance aspects of higher education institutions in developed as well as developing countries. Most OECD countries as well as an increasing number of middle income developing countries have competitive funding for research, typically for smaller amounts. Competitive funding is regarded as a useful mechanism for encouraging excellence.

59. Many countries also use competitive funding for awarding larger grants to institutions, to selectively finance high priority activities. The process respects the autonomy of proposing institutions as it allows them to determine whether to bid or not and, if so, to design their own activities and investments bottom-up. Governments often use the mechanism to ensure accountability and to instil an output based planning culture because sub-projects are funded for specific outcome objectives, and proposals are treated as plans for which grantees become accountable.

60. It is therefore not merely a mechanistic method for selecting investment proposals, but is often a way to instil a certain mindset and encourage a culture that is sensitive to quality. This mindset change takes place not only through the implementation experience of the sub-projects, but also through the process of proposal solicitation itself. There is much learning that can take place across the higher education institutions during the process. When the program objectives are explained to institutions through the request for proposals, new ideas about what is to be emphasized are communicated in the form of program objectives as well as the proposed selection criteria. Proposal writers learn through the process of proposal writing how to think about output objectives, and analytical ways to provide justifications for their investment proposals. Reviewers also learn from the proposal review and their experience can then feed into their own plans that help improve higher education. This learning is usually reinforced both through specific feedback given to the proposers from the reviewers, and also through the demonstration of successful as well as unsuccessful cases in the selection process.

61. Programs can be designed at variable levels of competition – and governments do so by targeting different categories of institutions or units. For example, one program may be based on open competition to award grants for the best proposals to build centres of research excellence. In contrast, another program may be designed to target new institutions which are trying to define their areas of expertise, and might award grants to any proposal that meet a defined acceptable standard. Different policy objectives can be reflected in the ways in which the level and nature of competition is structured and through the eligibility criteria and conditions of funding.

62. There are specific advantages to competitive funding in Jordan. The structure of university finance is such that the government's proportional contribution is rapidly declining. Indeed, given the strong tradition of managerial autonomy, the government's contribution (at 30-50% of total budgets), may be too small to influence university behaviour. It is important for the government to develop a

policy instrument which can provide leverage to address key national issues such as the quality, relevance and efficiency of education – but without undermining institutional autonomy. Competitive funding provides such an instrument.

63. From the university perspective, the competitive funding approach can be valuable too. In the current project, all eight public universities appreciated the opportunity to compete as it provided them with a useful experience in proposal writing. They also all thought that it enabled them to plan specific projects which could be funded as a whole. In addition, the resulting funds supported some major investments, particularly for laboratory equipment in sciences.

64. Most universities appeared to have resources for investments in equipment as well as fellowships. What seemed to be missing was an internal allocation process which could permit sizable investment in a given field; a competitive fund opportunity can help to provide for investments. The current strategic planning exercise that all universities are going through is also likely to clarify their strategic goals and help their internal selection process. Such developments could be further enhanced if external funds were available to each university – as long as it made a good proposal.

65. It is also clear from HEDF experience that for competitive funding to be valuable – for universities or for government – programs need to be much better focussed. It also must be sustained long enough so that competition to become a stable incentive, rather than be a fleeting window of opportunity for universities. The three competitive rounds were insufficient to reach such a stable point. NOT HERE

Disadvantages

66. There are reasons why Jordan should also be cautious in any further thinking about competitive funding. By far the most significant problems are the **difficulty of setting up an appropriate selection process that is perceived to be fair by the potential beneficiaries**. It is not enough that the selection process is, in fact, fairly conducted – it is critical that potential beneficiaries believe in that fairness. Unless they trust the process, they are unlikely to invest enough energy and effort in developing a good proposal – which is fundamental to having a good competition.

67. In Jordan, this difficulty is compounded by at least four factors. First, the country is too small to have an anonymous system of reviewers, or one that is free of conflicts of interest. Everyone knows everyone else – and even if they don't, they know enough to suspect who is reviewing which proposal. It is not easy in such an environment to select appropriate reviewers – and to make sure that everyone perceives it as a fair process.

68. Second, there is little tradition of constructive criticism among academics in Jordan – unlike in more developed countries, where they hardly do anything else! Criticisms are often taken as personal attacks, and people are reluctant to be too open about what they really think. This makes the perception issue even more difficult to deal with.

69. Third, there is little institutional capacity within the central government to manage such a process. The competitive programs under HEDF were introduced with the

National Centre of Human Resource Development (NCHRD) as the implementing body. At the time of project preparation, there were reasons for selecting NCHRD to serve as a secretariat. It was independent of any university, and there was no Ministry responsible for higher education. However, it is not clear that NCHRD is the right place to build the future national capacity for administering competitive funding. The (now) Ministry of Education, or even some separate body, would be better placed to house such a long term capacity than in an independent research organization such as NCHRD. Any debate about continuing competitive funding has to therefore also address the issue of institutional capacity. We understand that the Ministry is intending to learn from the experience of the HEDF project and the operations of the PIU; this report should contribute to that learning.

70. Fourth, it is also not easy to motivate individual academics to come up with initiatives in Jordan. They see it as a hassle to develop a proposal, let alone to implement it – why should an established academic who has a satisfying job and a good life be interested in getting engaged in such a hassle? If it is not easy to motivate individuals in these current circumstances. It is even harder to motivate teams to come up with initiatives, because writing proposals with others requires even more time and effort on the part of the individuals: writing research proposals for yourself is one thing, it is quite another to write a proposal on behalf of a department or a university.

V. Recommendations for an improved competitive funding process in the future

71. If there are so many cultural and institutional factors that would cause difficulties for any competitive funding, is it worthwhile for Jordan to consider competitive funding in the future? This is a debate that Jordanians should have explicitly.

72. From this review, we conclude that some form of competitive funding can be a valuable policy instrument for the government in the future, because we believe that the benefits can outweigh the costs. An effective culture of peer review and constructive criticism is so critical to future academic development in Jordan that it is worth making the effort just to address these issues. The lack of institutional capacity is a potential problem, but not a good enough reason to delay action, given the potential benefits.

73. The most significant problem is the attitudinal one that stems from the lack of incentives for individuals and teams to develop proposals; for this, we believe that it is important to address the issue directly by building in more rewards, rather than to try to ignore the issue. We conclude that the concept of competitive funding should continue in Jordan, but subject to the lessons learned from the HEDF and from international experience. We believe that there are five main lessons that arise from this review. These are discussed below, drawing also on some international experiences of competitive funds in other countries.

1. Any program of competitive support should be clearly defined for one or other of the three main activities of universities: education, research and enterprise.

74. These three sets of activities have very different drivers and motivations, which means that a single competitive fund can only be aimed effectively at any one of them. If more than one is to be targeted, then there would need to be more than one competitive program, each with its own selection criteria.

75. Since all universities should seek to improve their **teaching**, it seems reasonable that all should have some claim to obtaining program level support. It is also clear that head-on competition between universities which have different levels of maturity is unlikely to provide fair opportunities for all. One option to consider is to make all universities eligible to obtain a certain level of funding, subject to an acceptable quality proposal being submitted. This way, the level of competition becomes limited – giving room for universities to focus on their own internal selection and priority setting.

76. For **research** and for **enterprise**, there is no reason why every university should have some protected claim. Rather, capacity should be developed based on the strengths that they already have – so that human and physical resources are concentrated in some places rather than spread thinly over the country. Full competition, based squarely on merit, would make sense fro either such a program – perhaps with provision for seed grants for newer universities to establish at least one centre of excellence that also meet national needs, but only after they have sufficient human resources to build upon.

2. Program objectives and criteria to be used in evaluating competitive proposals should be well defined and clearly understood both by potential proposers and by reviewers.

77. If terms such as quality; relevance and efficiency are to be used, it is essential to explain what they mean and that analytical evidence is expected to support claims about them being met – expressions of 'belief' are not enough. A clear definition of the measures and interaction to explore what they mean would help encourage more innovation and deeper thinking from proposers than was evident in the HEDF program.

78. It is important that program objectives and evaluation criteria are communicated widely so that all potential proposers have direct access to information about program intent. Program guidelines for proposers and guidelines for peer reviewers should be separate and freestanding documents – and distinct from operational guidelines for the fund. The program and operational guidelines should be specifically developed for the project, consistent with each other, and disseminated to meet their respective needs.

79. One way of ensuring effective communication would be to advertise the program nationally through media that would be widely accessible to all academics, such as newspapers or journals. This could be augmented by an open forum in which potential proposers were invited to hear about the program, about the proposal guidelines and about the expected selection process. Key documents may be put on the web so that anyone could download them.

3. There must be sufficient incentives for individuals or universities to invest in developing proposals.

80. It is significant commitment on the part of individual authors or universities to develop full proposals when the chances of winning support are slim. One way to raise the level of interest is to structure the competition so that every university has some reasonable chance of winning support – but only if that fits the program objectives, as it would do in the case of education program described above.

81. Another method would be for the proposal solicitation to be a two step process. In the first round, a much shorter proposal would be sought – to be subject to a simple review process. A short-list of proposers would then be selected to submit full proposals, which would in turn be subject to a full review process.

82. Yet another way of making the level of effort match the reward would be to provide small seed grants for a group of high potential applicants. Seed grants could be used to release the time of the key individuals who would be engaged in developing the proposal. They could also provide a good incentive for proposers who had 'good but undeveloped ideas' to encourage them to undertake more analysis, piloting, or preparatory work – so that they could develop a better proposal in the future.

4. The selection process must be designed to enable informed and objective judgements to be made about competitive proposals

83. To run any future competitive funding scheme in higher education would require the development of an appropriate and objective selection process for competing proposals. Drawing on international practice, there are two main approaches, but each would normally have a more senior level of decision making in which recommendations were endorsed. This is to enable questions to be raised about the selection process by people other than those who were directly involved.

84. One option would be to establish a Committee that was responsible for making judgements through their own reviews of proposals. The Committee would comprise individuals who were selected on the basis of their merit and expertise, their integrity, their understanding of higher education, and their ability to think creatively. They are likely to include academics, but could also include non academics. They should be chosen as individuals – none of them should be included as ex officio. The members of the Committee would be asked to commit a significant amount of their time to reviewing proposals and making final judgements, informed by reviews from external reviewers as and when needed. A Committee such as this would require an active secretariat to provide administrative assistance in contacting reviewers and managing the review process.

85. The second option would be to have a strong secretariat with a group of professional program officers who were empowered to make substantive judgements – but again with the help of external reviewer comments. Such program officers would typically have a good understanding about how universities operate and would be able to make judgement about proposals as generalists. This is an approach taken by the National Science Foundation (NSF) in the US, where many program officers have PhDs and senior officers include well respected academics.

86. It would also be possible to combine the two approaches – which may be the most feasible approach in Jordan as the concept of peer review is still new and needs to be actively developed. One or more professional program coordinators could be assigned to work with a small Committee which would make informed judgements.

87. It is worth considering site visits or face to face discussions by the reviewer(s) particularly for evaluating proposals for large grants – as was done for entrepreneurial subprojects. For instance, the NSF in the US often recruit reviewers to undertake site visits for selection as well as monitoring of large institutional grants. Site visits provide an opportunity for reviewers to understand the realities on the ground – and for proposers to learn from their immediate feedback. Indonesia, a late starter in competitive programs, relied heavily upon site visits for their larger institutional grants, which was also helpful in obtaining better inputs from international reviewers. In a small country such as Jordan, site visits should be easy to organize.

88. For most programs, there would be a continual need for external reviewers to conduct desk reviews of proposals; they would certainly be needed to assist program officers in the second option and would be used as needed to assist the Committee(s) in the first option. External reviewers would need to be given well

structured guidance as to what they should be looking for (for instance, by checking if proposals provided sufficient evidence for claims made – and not simply asking if the proposals were good). It is important that external reviewers know that they would be professionally accountable for their reviews and that they may be asked to elaborate and justify their views if there were a significant divergence between reviewers. Reviewers should be asked to declare any conflicts of interest and be told that unsubstantiated praise or unsubstantiated criticism were both unacceptable.

89. It will be very difficult to deal with the issues of a limited culture of peer review and constructive criticisms. It will take a long time for such a culture to develop, and it is only likely to do so as the result of exposure to the approach of international reviewers. A small scientific population is an issue faced by all small countries, many of which deal with it through a strategic use of international reviewers (e.g. Scandinavian countries). This is, of course, easier said than done. As HEDF found, international reviewers know relatively little about Jordan and its needs, and are more likely to be 'kind' or 'gentle' in their criticisms because they want to give the benefit of the doubt to fellow academics.

90. Government should develop a list of good international reviewers, over time through experimentation, to ensure better inputs from them than were observed in the HEDF project. One way of helping to develop this list would be to invite key international reviewers for site visits to Jordanian universities. Another would be to include international reviewers with known track records as members of the Committee, and also ask them in turn to help identify other international reviewers. If such international experts were to undertake reviews alongside domestic reviewers, each would learn from the other and make better calibrated judgements.

91. Even with good structured guidance, numerical scoring is unlikely to be suitable for making final decisions in a mechanical way. Indeed, many international competitive processes use qualitative rankings for reviewer inputs rather than simple numerical scores (e.g. the NSF and many UK programs). No method of averaging or of a single cut-off point can ever be satisfactory to judge competitive proposals. Indeed, in the NSF, reviewer inputs are used mainly as qualitative inputs for decisions to be made by program officers.

92. There should always be a group of proposals that fall into 'borderline' -- which are neither clear winners nor clear losers. These need separate treatment, for example by the program officer(s) having follow up discussions with individual reviewers to capture finer nuances of their judgements. The Committee(s) may also have explicit discussions about each of the borderline proposals to produce their own ranking and cut off decisions.

93. An explicit process is needed for cases in which there were large deviations in reviewer views. One option would be to contact the reviewers to ask them to clarify the reasons for their original views in the light of the divergence of opinion. Some reviewers may change their mind at this point, others will not – and it would then be a judgement call for program officers or the Committee(s). Another (more expensive) option would be to bring the reviewers together to have discussions about the borderline proposals. A third possibility would be to discard any extreme reviews and ask for additional ones. But it is important to give either the committee or the program officer the authority to make their own judgement in making the final recommendation.

94. However selection is approached, it is important to remember that it is not an exact science and should not be followed mechanistically. It is more of an art and a process that should be continually improved with experience and over time. One of the first tasks for whatever institution is responsible for competitive funding should be to establish the guidelines for the operational and selection processes.

5. Implementation arrangements, such as grant conditions and procurement, should be designed to assist decentralized university level implementation as well as learning

95. Grant agreements should clearly stipulate what the recipient universities are accountable for. There should be specific provisions for substantive monitoring and evaluation, preferably including site visits for large scale sub-projects, so that the 'threat' of early termination in the event of non-performance is a real possibility.

96. It is also important to make sure that sub-project implementation is as administratively simple as possible for universities. Public university procurement rules should be accepted - unless there are serious issues and specific reasons why an alternative route should be taken. Most decisions should be internal university-level ones with no prior review requirements; it is reasonable to arrange some form of ex post review.

97. In the case of programs funded from outside Jordan, any initial requirements of donors should be a critical item of discussion in project preparation, with the aim of minimising unnecessary administration. It was clear that the World Bank's involvement was important for the universities. HEDF was regarded as an international program endorsed by an international body – and this was a critical factor in winning credibility from proposers. Without the World Bank's name, it would have been harder to experiment with competitive funding. External donors can bring important benefits.

98. However, it is also important for Jordan to choose where and how to get assistance from such an international body. The last thing that competitive funding programs need is externally imposed implementation arrangements which jeopardize the accountability of sub-projects. External agencies are unlikely to be suitable for detailed prior reviews for small decisions at the sub-project level, and such requirement would make the donor agency, and/or the fund secretariat accountable for any delays in implementation – or for any additional costs.

VI. What should be done during the remainder of the HEDF project?

99. Since all the sub-projects have now been selected and grant agreements are now in place, there is little scope for any major changes to the activities or items to be supported in individual sub-projects. However, there is still scope in improving sub-project implementation – encouraged by improved monitoring and streamlined procurement. In particular, sub-project organizers could be encouraged to think beyond equipment purchase to the better utilization of facilities, to think more about measures to improve their efficiency, to make other qualitative improvements, and to think how they could increase the relevance of what they are doing. Such encouragement might best be provided by requiring them to report on such matters – but with very clear definitions as to what each one meant.

'Reflective' monitoring

100. Universities could also be asked what actions they are taking to put in place the resources that will be needed to ensure that the program improvements are sustained – and carried across to other parts of the university from the direct beneficiary of the grant. These questions can be asked both to individual sub-projects, but also to the university representatives responsible for university level actions – so that universities are actively required to think about efficiency and sustainability.

101. Such 'reflective' monitoring could pave the road for a better understanding of policy objectives by universities. Equally, interactions with universities during the implementation of sub-projects will enable the central agency to develop a better understanding of issues on the ground; in turn, this should help identify other desirable features and structures for future programs and funding. The central agency at present is NCHRD, but, if feasible, it would be sensible to include in those interactions, any individuals who are likely to be responsible for future competitive funding.

102. The objectives of the short term actions would be:

- to instil a better understanding in the universities about what it means to improve the quality, the relevance and the efficiency of their sub-projects, so that they can start taking actions to these ends;
- to help the centre learn what 'good practices' look like, what types of expenditures are necessary and hence how best to structure future programs;
- to help resolve outstanding issues around procurement.

103. This would mean that NCHRD should increase its level of effort on the project to undertake such 'reflective' monitoring. The extra resources should include some informed academics or higher education experts who could help NCHRD make judgements as to what is appropriate and what is not.

104. Follow up actions by the PIU may, for instance, include:

(a) ensuring that appropriate feedback from this current review is given to universities

(b) improving annual and final report guidelines so that they are less repetitive, and more performance-oriented (see Annex II for a sample which may be used as a starting point)
(c) organizing follow-up visits by experts, particularly to review improvements in the pedagogical approaches undertaken by universities, but also to monitor the utilization of research facilities and/or to foster communication and collaboration between similar centres.

Procurement

105. There has been considerable confusion and delays around procurement, mainly because universities were unfamiliar with the procurement process requirements of the Bank – which do seem unduly difficult for such multi-faceted projects. Recommendations have already been made to the World Bank/PIU to resolve specific cases, and for future competitive funding programs, a much more careful approach must be taken in procurement to facilitate decentralized implementation. If there is a significant amount of equipment purchase in the reminder of the project, it may be worthwhile simplifying the rules even for the current project.

VII. Concluding remarks

106. The **first main conclusion** of the evaluation is that the project objective was met, although not as fully as it might have been. There were undoubtedly benefits brought about by the project. The purchase of much needed equipment – particularly for teaching – filled a gap in facilities in most cases and enabled programs to move away from theory-based teaching towards practical-oriented teaching. Most of the sub-projects were proposed by 'movers and shakers' in the universities – exactly the kind of individuals who deserved support.

107. The main reason for the shortfall was because there were insufficient resources devoted in the early stage to clarifying and communicating the kind of changes envisaged under the project, both to potential project proposers in universities as well as to proposal reviewers. The arrangements for sub-project selection, as well as those for monitoring, were not sufficiently designed to ensure learning and effective operation of the competitive process. As a result, many sub-projects proposers simply made requests for funding that they were familiar with, for example, for the purchase of equipment for teaching and research laboratories; few sub-project proposals had much real innovative content. Further, few proposals had sufficient justification, by reference to the project objective, for the program improvement or the level of investments being proposed.

108. The **second main conclusion** is that the project experience can provide valuable lessons both for the government and for universities for the future. It is not clear whether the designers of HEDF saw it as a one shot intervention or as a new policy instrument to be sustained – perhaps because they did not feel comfortable to propose it one way or the other. However, with the benefit of the hindsight, it is clear that it is ambitious to design a competitive program such as HEDF as a one shot intervention. After all, this was the first time an competitive funding approach had been adopted in Jordan higher education, and to make a success of such an approach requires experience of the concept of bidding against pre-set objectives. Such experience can only be built over time, both at the centre for how to steer the approach to meet the pre-set objectives, and at university level about how to respond effectively in the light of the objectives.

109. Our conclusion is that HEDF subprojects on the whole did not address the deeper issues of how to improve the quality of pedagogy or the difficult issues of how to increase relevance or efficiency. But this probably means that such issues can only be fully addressed through concerted and sustained effort in the medium to long term. As the project designers correctly saw, HEDF can only be the first step in the long term reform effort.

110. The question is what should Jordan do now? This evaluation concludes that some form of competitive funding would be valuable for the government to use as a key policy instrument to continue with the reform agenda. But to do this would require there to be improvements in the design and the institutional arrangements for any such program; this evaluation report provides recommendations for such improvements, both for the ongoing project, but particularly for the future.

Sachi Hatakenaka
Quentin Thompson
June 2005

ANNEX I

Evaluation Method

1. The evaluation was based on qualitative and comparative approaches using inputs from stakeholders at multiple levels: the national level including policy makers and the fund administration, universities, and sub-projects.

2. One important step was to clarify the objectives of HEDF programs against which the performance needed to be measured. This entailed developing clearer images of desired directions for change and types of improvements that were deemed important for Jordanian universities. The main inputs for this came from the original HEDF organizers, but also from sub-project representatives and other informed experts in and around universities.

3. In reviewing the selection of sub-projects, attention was given equally to (a) centrally orchestrated proposal-solicitation and selection; (b) university-level proposal solicitation and selection; and (c) sub-project level proposal generation and revision.

4. Similarly, in reviewing the sub-project implementation experience, attention was given not only to the actual implementation records at the sub-project level, but also the roles played by universities and the fund administration in providing support and incentives for effective implementation.

5. Finally, the issue of sustainability was explored at three levels. Was the improvement made in individual sub-projects likely to be sustained? Was there any change in the mindset of sub-project implementers that could generate spill-over and further improvements outside the sub-projects? Were there changes at the university level in the mindset and processes that could lead to continued improvement?

6. The evaluation comprised four types of activities:

   (a) interviews with organizers/participants of the selection process;
   (b) a desk-top review of project and sample sub-project documents;
   (c) site visits to meet university stakeholders and sample sub-project representatives; and
   (d) interviews with key stakeholders who are likely to have informed views about the kind of desirable changes.

7. The people interviewed at the national level included members of the original National Counterpart Team, the President of the National Centre of Human Resource Development, the Minister of Higher Education, the Secretary General of Higher Education, and the former VP of the National Centre of Human Resource Development, the chairman of the Accreditation Council.

8. All eight universities were visited to meet with the Vice Presidents in charge of academic affairs, most of the relevant Deans and the sub-project coordinators. A small sample of unsuccessful proposal authors were also interviewed.

9. The original intention was to meet with key stakeholders such as employers and community representatives nominated from each university, but this was considered infeasible. Instead, one meeting was organized with an industry representative related to one of the entrepreneurial projects and another meeting was held with an expert in Jordanian labour market conditions – to probe the issues of national economic needs. (It turns out that most universities do have industry representatives with whom they work– in their Boards of Trustees and some specialized advisory committees. In the future, it should be possible and worthwhile to arrange meetings with such stakeholders in site visits.)

10. A sample of eight sub-projects were selected from rounds I and III, including one entrepreneurial sub-project, to hold in depth discussions with sub-project coordinators, related junior academic staff, and students; and to visit their laboratories.

11. In the event, there was considerable confusion in most universities as to what meetings were to be arranged with whom – and not all the meetings were arranged in the way originally requested. Nonetheless, with considerable last minute efforts and collaboration on the part of university organizers, we were able to meet the requisite numbers of related academic staff as well as students and laboratory units, and managed to gain much deeper insights into several other sub-projects.

12. A series of detailed discussions were also held with the fund coordinator who has been involved in the HEDF operation since the early days. Meetings were also held with the World Bank mission members. Towards the end of the second visit, preliminary findings from this evaluation were discussed with the NCHRD representatives as well as the Minister of Higher Education and the World Bank. An earlier draft of this report was sent to the Steering Committee and their comments have been taken into account in the final report.

ANNEX II

Guideline for annual progress and completion report

Name of sub-project:
University:
Sub-project coordinator/director:

Part I: Sub-project summary:
This part should remain the same for all annual reports, unless there are explicit changes made. If your original proposal did not cover items raised here, please elaborate to reflect the current thinking, clearly marking in parenthesis the date of revision/addition (e.g. [added/revised March 2005]).

1. **Description of the target educational program/s**
   (a) name of the educational program
   (b) level (undergraduate, masters etc.)
   (c) nature of the degree program (research-based educational programs or course-based educational programs)
   (d) target student size (the number of target students)
   (e) whether the proposal was to develop a new program or to revise existing ones e.g.

Name of program	Level	Course/ Research	duration	Total enrolment	New?/revised?
Environment	undergrad	Course	4 yrs	400	Revised
Environment	masters	Research	2 yrs	30	New

2. **Sub-project contributions in meeting HEDF objectives:**
   - How will the sub-project contribute to:
     - the quality of the educational program/s?
     - the relevance of the educational program/s?
     - the efficiency of the educational program/s?

3. **Organizational arrangements for implementation**
   (a) who has the overall responsibility for the implementation of the sub-project?
   (b) who are the individuals involved in the implementation?
   (c) one paragraph bio of key individuals to demonstrate why they are qualified to undertake the tasks as proposed
   (d) how much time do these staff devote to proposed activities?

4. **Nature of improvement proposed**
   (a) Specific output targets/goals

   (b) Proposed activities and inputs

Part II: Progress to date

1. **Activities undertaken**
   (a) a brief summary of all activities undertaken to make the sub-project a success before the last year

(b) all activities undertaken during the last year

2. **Sub-project contribution to HEDF objectives**
   (a) How is the sub-project contributing to the quality, relevance and efficiency of the educational programs?
   (b) How do you know that improvement is taking place?
   (c) What is the university doing to increase impact?

3. **Problems/issues**

5. **University contribution**
   - Is the university providing sufficient resources to ensure effective implementation of the sub-project?
   - What is the level of their contribution?

6. **Changes**
   - Are there any major changes in plans as a result of learning during implementation
   - What are the proposed approaches for dealing with problems

Part III. Monitoring indicators

[NOTE: Indicators are popular instruments in program monitoring and evaluation. However, unless their meaning is understood well by all concerned, they could also bring in unnecessary biases and confusion. In the case of HEDF sub-projects, it is likely to be too late to introduce their proper use – but it may be still worth while introducing the concept for the future.]

- This section should include both a list of HEDF designated indicators and your own supplementary ones. (Listed below are the HEDF designated ones – to which you should add your own sub-project specific ones.)
- If the originally proposed indicators do not make sense for one reason or another, then please include the revised version that makes best sense – again clearly indicating that they are different from the original
- The expectation would be that sub-projects would complete more and more of these indicators as they progress in their implementation
- In the final report, the expectation would be that all items would be covered

(a) input indicators

(i) equipment purchase
   - total amount of equipment purchased for teaching laboratories
   - total amount of equipment purchased for research laboratories

(ii) curricular revision
   - number of programs for which curricular revision has been undertaken
   - extent/degree of curricular revision (e.g. completely new, vast improvement, modest change)

(iii)number of staff trained
   - number of academics trained abroad
   - number of technicians trained abroad

(b) process indicators

(i) Level of engagement by trained staff in education;

- increase in the number of staff engaged in the educational/research programs as a result of sub-project
- student-staff contact time

(ii) Utilization of materials/laboratories/facilities

- List major pieces of equipment (e.g. above the unit value of USD 10,000) and for each piece, list the following
  (a) Is the equipment for teaching or research?
  (b) How many technicians are trained to operate equipment?
  (c) How many academics from your university are using the equipment on a regular basis and bear some responsibility for its use?
  (d) How many hours a week is the equipment used?

(iii)Programs/students affected by sub-project improvement

- number and nature new programs/courses initiated
- number and nature of programs/courses improved
- number and nature of programs rationalized/closed as a result of sub-project
- annual enrolment of students affected by sub-project

(c) output indicators

(i) number of graduates

(ii) employment of graduates – this is meant to provide the evidence of relevance

(1) % of graduates pursuing non-academic employment

- % of graduates employed in sectors/professions relevant to academic programs
- % of graduates employed in other sectors/professions
- % of graduates unemployed

(2) % of graduates pursuing further academic study

(iii)Evidence of better quality research

(iv)Opinion surveys (both formal and informal):

- What is the overall level of satisfaction with the improvement made under the project?
- While comprehensive surveys may be conducted only at key junctures (e.g. at the end of the sub-projects), it is expected that routine feedback such as student course evaluation or informal and qualitative feedback from staff and employers should be obtained on a continuous basis. This section should describe such informal feedback as well as structured survey results.
  - students
  - graduates
  - employers
  - staff

Part IV: Final self-evaluation upon sub-project completion

7. How has the sub-project contributed to improving the quality, relevance and efficiency of educational programs? What is the evidence to demonstrate that such improvements have actually been made?

8. Qualitative evaluation of inputs. What have been accomplished as a result of these inputs? What are the main benefits? What has the university done to maximize the benefit? What is the evidence you have to show that the benefits have been achieved?

   (a) Equipment
   (b) Visiting professors
   (c) Training of academics
   (d) Technician training
   (e) Staff time

9. Main problems and obstacles encountered and remedial actions if any

10. Sustainability of sub-project efforts
    (a) Will there be sufficient resources to operate and maintain activities initiated and physical facilities acquired under the sub-project?

    (b) Is sub-project helping to introduce good practices that will be maintained beyond the project? If yes, what are they?

    (c) Did sub-project help introduce additional funding that would help sustain activities? If so, how much and from what source?

11. What other activities should the university undertake in the sub-project area to continue improving the quality, relevance and efficiency of education?

12. As a result of the sub-project, are there things that the university would do differently? What lessons have been learned?