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**THE FINANCIAL AND ADMINISTRATIVE SUSTAINABILITY OF  
THE AGRICULTURAL UNIVERSITY PESHAWAR**

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**Report Prepared for:**

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UNIVERSITY PESHAWAR**

**EXECUTIVE SUMMARY**

The Agriculture University Peshawar (AUP) has experienced major change in the previous decade. From a typical Pakistani University, AUP began to be restructured under the Transfer and Integration of Provincial Agricultural Network (TIPAN) project, initiated in 1984. The project has been funded jointly by the United States Agency for International Development (USAID) and the Government of Pakistan (GOP). The TIPAN project had a number of goals. A major upgrading of human skills involved the training of some 140 staff in the United States for Ph.D. and M.Sc. degrees. A large building program for the AUP new campus entailed the construction of around 600,000 square feet of academic buildings and staff and student accommodation.

A major goal of the project was the 'merger' of AUP with the provincial Agricultural Research Stations (ARS). This aim of integrating the agricultural higher education and research systems would optimize their impact on agriculture. Another significant component of TIPAN was to link AUP personnel with the provincial agricultural extension network, through an 'outreach' program. These innovations were aimed at enhancing agricultural productivity in North West Frontier Province (NWFP).

The TIPAN project is now faced with the prospect of premature termination, owing to the possibly imminent stoppage of USAID operations in Pakistan. A USAID-sponsored stage three of the TIPAN project (which involved the actual translation of developments in human and physical resources into tangible achievement of higher productivity in NWFP) seems now unlikely to be realized. There is also difficulty in obtaining an appreciable increase in GOP fund allocations, to keep up with the financial demands of a high quality University. Moreover, the maintenance costs of the newly

constructed buildings and recently acquired equipment will place major new demands on the University's resources.

The Lahore University of Management Sciences (LUMS) was commissioned to conduct a study on the financial and administrative sustainability of AUP till the year 2003-04.

An analysis of the financial position of the Agricultural University Peshawar indicates a very serious financial sustainability problem. AUP has been running a budgetary deficit since 1989-90, with a cumulative resource gap (total receipts - total expenditure) of over Rs -47 million in 1992-93. From 1993-94 it will have an additional annual expenditure of approximately Rs 20 million for the operation of the new building.

To determine AUP's financial sustainability several scenarios were considered. The basic idea behind these scenarios was to determine the cumulative deficit the University will face by the year 2003-04. The annual deficit that was accumulated over the next ten years was defined as: (UGC grant + own resources + endowment income) - (salary expense + other charges + maintenance of new facilities + library and marketing expenses). The key factors that affected this deficit figure were the growth rates of the above items which in turn were related to the expected inflation rate over the next ten years. The several scenarios considered are summarized below.

## SUMMARY OF FINANCIAL SCENARIOS

SCENARIO	CUMULATIVE RESOURCE GAP (2003-2004)	PRESENT VALUE (PV) OF ANNUAL DEFICITS AT 15%	FOR FULL ANALYSIS, SEE APPENDIX NO.
1: ANNUAL INCREASE IN UGC GRANT, SALARIES, OTHER COSTS, AND OWN RESOURCES AT HISTORICAL RATES	Rs -1467 m	Rs -519 m	2-A
2: SAME AS SCENARIO 1 EXCEPT ANNUAL INCREASE IN UGC GRANT ASSUMED AT 5%	Rs -2217 m	Rs -765 m	2-B
3: 10% ANNUAL INCREASE IN OWN RESOURCES; INCREASE IN SALARIES AND OTHER COSTS AT THE INFLATION RATE	Rs -1059 m	Rs -398 m	2-C
4: 10% ANNUAL INCREASE IN OWN RESOURCES; INCREASE IN SALARIES AT 1/2 TIMES THE INFLATION RATE; AND INCREASE IN OTHER COSTS AT THE INFLATION RATE	Rs -815 m	Rs -314 m	2-D
5: INCREASE IN OWN RESOURCES AT 20% PER ANNUM; AN ENDOWMENT FUND OF Rs 50 m IN 10 YEARS; SALARIES AND OTHER COSTS INCREASING AT TWICE THE INFLATION RATE	Rs -2344 m	Rs -803 m	2-E

The financial sustainability of the University was also assessed through break even analysis. Break even analyses were performed keeping all revenue sources and costs at some reasonable rate except one revenue source which was varied to make the cumulative annual deficit in the year 2003-04 as well as the present value of annual deficits to become zero. For example, in Scenario 1 we assume that own resources are growing at 10 percent while salaries and other costs are growing at the inflation rate. Under these conditions we varied the UGC grant until the cumulative deficit as well as the present value of annual deficits became zero. This occurred at an annual growth rate in UGC grant of 23 percent. The different scenarios for break even analysis are summarized below.

## BREAK EVEN ANALYSIS

SCENARIO	ANNUAL GROWTH	FOR FULL ANALYSIS, SEE APPENDIX NO.
1: ANNUAL GROWTH IN UGC GRANT REQUIRED TO BREAK EVEN: ASSUMING ANNUAL GROWTH IN OWN RESOURCES OF 10%, AND SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE.	23.00%	3-A
2: ANNUAL GROWTH IN OWN RESOURCES REQUIRED TO BREAK EVEN: ASSUMING UGC GRANT INCREASING AT 1/2 TIMES THE INFLATION RATE, AND SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE.	58.50%	3-B
3: ANNUAL GROWTH IN ENDOWMENT FUND REQUIRED TO BREAK EVEN: ASSUMING UGC GRANT INCREASING AT 1/2 TIMES THE INFLATION RATE, ANNUAL INCREASE IN OWN RESOURCES OF 10%, SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE, AND A SEED MONEY OF Rs 270 m.	Rs 100 m	3-C
4: MONTHLY TUITION FEE REQUIRED PER STUDENT TO BREAK EVEN: ASSUMING UGC GRANT INCREASING AT 1/2 TIMES THE INFLATION RATE, ANNUAL INCREASE IN OWN RESOURCES OF 10%, AND SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE.	Rs 3450 per month	3-D

Resource gap and break even analysis above depict a very serious financial sustainability problem for AUP. The size of the cumulative resource gap facing AUP in the next ten years is somewhere between Rs -815 million and Rs -2,344 million, depending on the assumptions made about the annual growth in UGC grant, rate of inflation, growth in own resources, and income from endowment fund.

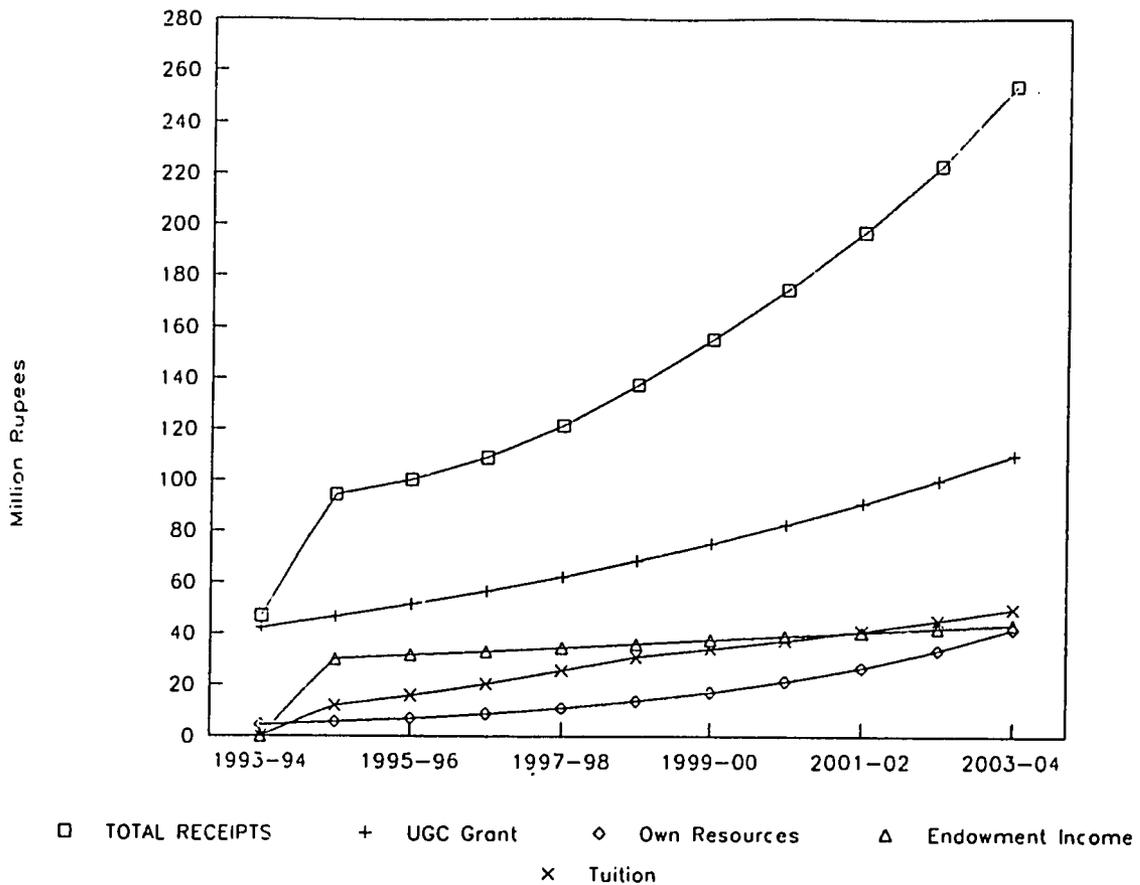
From the resource gap and break even analysis it is evident that meeting the resource gap through any one source is not likely. AUP has to make efforts in several avenues. We recommend the following targets:

- (a) Convince UGC to increase its grant annually by the inflation rate.
- (b) Keep salary increases equal to the inflation rate. Given the severe budgetary restrictions increasing the staff salaries at the inflation rate may seem generous, but we feel that this is the minimum increase necessary to keep the highly qualified staff from leaving AUP.

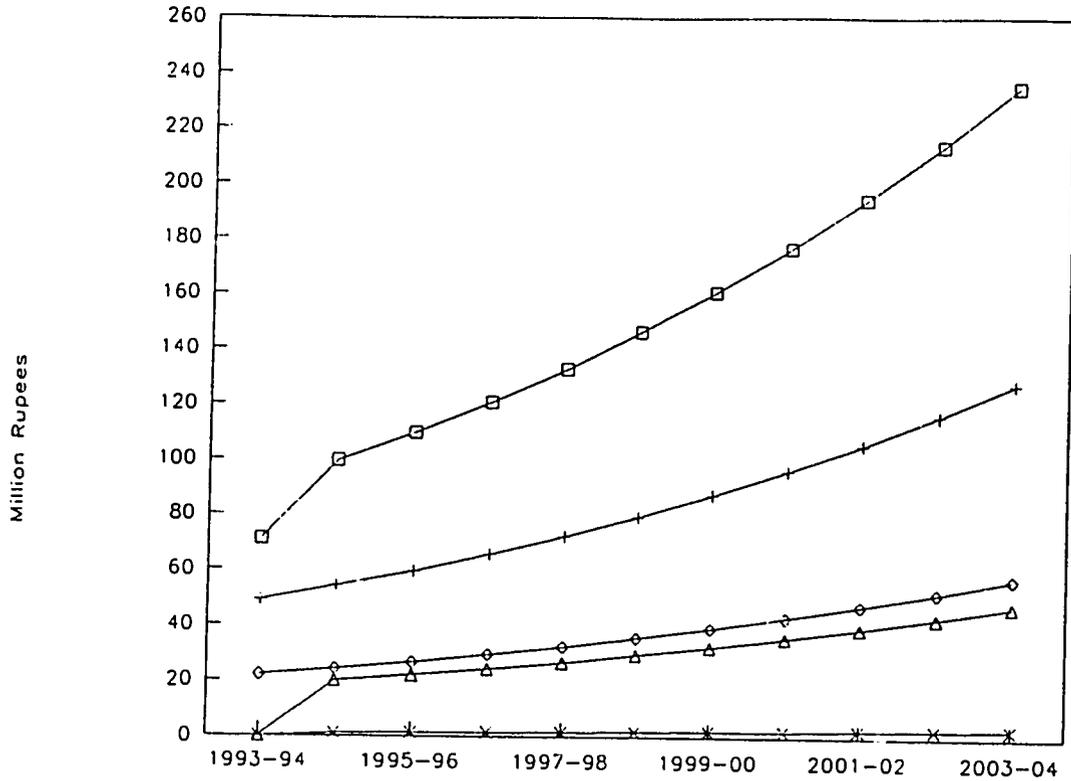
- (c) Increase the number of students to 1,750 in the next five years.
- (d) Increase the student tuition to Rs 1,000 per month.
- (e) Create a permanent endowment fund through seed money of Rs 200 million and add Rs 10 million per year to it starting in 1994-95.
- (f) Increase the income generated from own resources (excluding tuition fee) by an average 25% each year, starting 1994-95.

The financial impact of these recommendations is graphically shown below.

**TOTAL RECEIPTS  
UNDER RECOMMENDED FINANCIAL STRATEGY**

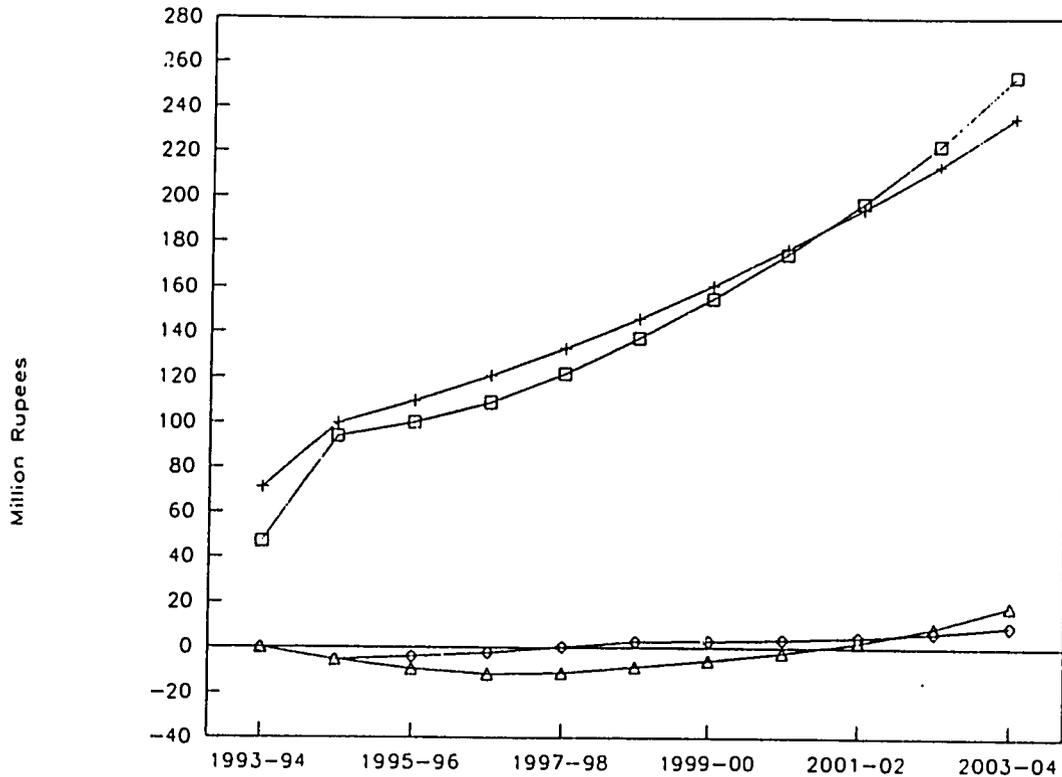


**TOTAL EXPENDITURE  
UNDER RECOMMENDED FINANCIAL STRATEGY**



□ TOTAL EXPENDITURE      + Salaries      ◇ Other Charges      Δ Maint. of New Plant  
 × Library & Mktg.

**ANNUAL AND CUMULATIVE DEFICIT  
UNDER RECOMMENDED FINANCIAL STRATEGY**



□ TOTAL RECEIPTS      + TOTAL EXPENDITURE      ◇ ANNUAL DEFICIT  
 Δ CUMULATIVE DEFICIT

Each one of the above targets represents a major challenge. However, AUP has no other choice. An enormous amount of financial and other resources have gone into the TIPAN project to bring it at a stage where benefits from investment appear within reach. Pakistan has already under invested in agricultural research compared to other Asian countries. The investment in agricultural research per scientist is even lower than Bangla Desh and Nepal. This neglect of agricultural research in Pakistan has been particularly detrimental because studies have consistently shown a rate of return of 60-80% from investment in agricultural research. This return is far in excess of 15-20% return typically obtained from investments in other public projects such as roads and bridges. Specifically, returns from agricultural research during the period 1956 to 1985 on wheat, rice, maize, bajra, and all cereals have been:

Wheat	76%
Rice	87%
Maize	46%
Bajra	44%
All Cereals	84%

Furthermore, PC-1 (1991) for the TIPAN project shows that if there is only a 5 percent increase in agricultural production as a result of the AUP strategy after 1998-99 even then the present value of these additional revenues will be 60 percent greater than the total cost of the project. Judging from the marginal internal rates of return estimated for Pakistan, the benefit calculated in the PC-1 may be grossly understated.

The potential benefits accruing from the TIPAN project justify continuing financial and political support. Failure to provide this support will indicate a poor original investment strategy, with the consequent loss of a tremendous opportunity for improving the productivity of the agricultural sector.

While a detailed marketing plan is given to achieve above targets, it is emphasized in the report that the key to the University's long term viability lies in having a strategic planning process in place. This process involves: mission statement; internal and external environmental analysis to determine strengths, weaknesses, opportunities, and threats; choosing objectives and strategies; statement of the 'grand' strategy; functional plans for strategy implementation; and monitoring and evaluation of implementation plans. In this report we outline the generic strategic planning process, as well as specific marketing and administrative plans to achieve targets recommended above.

The grand strategy recommended for AUP is one of achieving financial and administrative sustainability through enhancing revenues from internal and external sources.

AUP can enhance its revenues through the following three sources:

- (a) University Grants Commission (UGC),
- (b) The University's own resources, and
- (c) Donations and return on endowment fund.

All the above three sources of revenue for AUP have to increase significantly in order to cover the cumulative resource gap by year 2003-04. An aggressive marketing strategy is required to generate revenue from these sources. The University's marketing strategy will be instrumental in AUP's transition from a wholly government-funded institution to a semi-private institution which generates a significant share of its total revenue through its own programs and services. Only by doing this can the University have funds to maintain quality education which can attract and retain 'customers'.

Our discussions with the UGC indicate that AUP can expect a maximum increase of 5 percent per annum in its grant from the UGC. However, we believe that it is absolutely vital for AUP to secure

enhanced funding from the UGC, pegging it at least to the official annual rate of inflation of 10 percent. With significantly larger human and physical resources of AUP under TIPAN, UGC funding has to increase much higher than 5 percent. In addition, AUP should highlight that it is making maximum efforts to generate funds through sources other than UGC, such as University programs and services, and donations.

Several options are available to AUP to increase revenues from own resources. These are:

- Raising tuition fee
- Increasing annual intake of students on self-reliance basis
- Attracting full-paying foreign students
- Increasing room and board charges
- Renting University conference facilities
- Offering workshops and other programs to private and government institutions that will return a surplus
- Encouraging sponsored (contract) research.

Pricing various educational and other programs and services of AUP will depend on a number of factors including the cost, quality, demand, prices charged by comparable competing institutions, the desired level of revenue to be generated, and the ability of the prospective customers to pay. For example, in this report we have proposed a monthly tuition fee of Rs 1,000, growing annually at the rate of inflation. However, in setting these prices, the University management should also consider other factors such as the political and social impact of a price increase. The management should also decide about the criteria for waiving tuition fees, basis for any differential in tuition fees charged, etc. While all the relevant factors bearing on the pricing decision need to be considered, this should not mask the impending need for a significant upward revision of the fee structure.

Apart from the agricultural education (B.Sc. and M.Sc. programs) and research at the campus, AUP system includes

agricultural research stations (ARS) located in several places in NWFP. The research done at the University and the research stations is disseminated to the farmers through provincial agricultural extension network. The objective of AUP's distribution strategy should be how best to deliver various products including educational programs, extension services, publications, research findings in agricultural fields, and farm produce.

AUP also needs effective communication with its various markets and publics. Developing good programs and services, pricing them attractively, and making them readily available to target customers is not enough. The institution must also inform consumers and others about its goals, activities, and offerings and motivate them to take an interest in the institution.

For effective communications strategy AUP should devise public relations and advertising plans in line with the characteristics of the 'target market'. For example, in preparing the student catalog, there first has to be an understanding of the factors influencing student choice of a university, which could include quality education, fees, availability of financial aid, competent faculty, job prospects, location of campus, library and laboratory facilities, computer facilities, general reputation, hostel accommodation, campus environment, transport facilities, extra-curricular activities, etc. These factors can then be emphasized in the student catalog.

Similarly, to generate external funding attractive documentation and audio-visual material will be needed to 'sell' the project. The University's top management should emphasize its mission, report on the success of its research and course development efforts, and state plans for the future. Potential role of the University in training manpower for agricultural development in other developing countries of the region especially Afghanistan and Central Asian Republics could be attractive to many donors interested in economic development of the region. This point should be included in the communication plan for the donor segment.

It is critical for AUP sustainability to convince UGC and other government agencies/ministries to actively support the TIPAN project, both financially and politically. For this, a serious personal selling effort is required on the part of the top officials of the University and some key officials of the TIPAN technical assistance team. It may be noted that in our recommended strategy, the ratio of UGC funding to revenue from own resources is 45:55, at an assumed 10 percent annual increase in UGC grant. This point needs to be emphasized in negotiations with UGC officials.

In addition to seeking higher grant from UGC and generating more revenue from own resources, AUP must attract donations to survive. Attracting donations will require a considerable amount of preparation and effort by AUP management. The University should set annual and long-range goals for fund raising. The goals should state the uses for the donated funds, rather than just desired total amount. In developing fund-raising goals, the University's management should consult with key people, including deans and faculty heads, to determine their most pressing needs. These needs and 'wishes' should reflect strategic planning at the University and faculty level. The projects need to be prioritized as a basis for determining the amount the institution would like to raise and the amount that is of greatest importance. Setting a goal each year for contributions will establish a budget for fund-raising activities, motivate the management and volunteers to increase efforts, and measure fund-raising effectiveness.

After setting its fund-raising goal, AUP should develop an overall strategy, identifying the most promising donors and determining how to present its case to the donors.

First, prepare a list of potential donors and potential partners in raising funds. Potential donor markets include federal and provincial government, private sector (individuals, agribusinesses, etc.), foreign donor agencies, and alumni. An example of potential partners could be landlords, who could also be potential targets for donations.

Second, select donors on the basis of 'giving potential' and 'interest potential'. Preferably, concentrate on large potential donors.

Third, prepare the case to be put to a donor or a group of donors. Different pitches will be required for different donor markets. These pitches should highlight the best features of the University that would merit donor support. Also, prepare for answers for the prospective donor who wants evidence that the University knows where it is going and will spend donated money wisely to further significant goals. Present donations as an investment in some aspect of the University that the donor cares about. One of the most powerful appeals in attracting donations is an offer to have donors' names (or the names of their loved ones) attached to campus buildings, distinguished chairs, and the like.

Different modes could be used to approach potential donors, including personal solicitation by University managers and direct mail. However, large contributions should always be sought through personal solicitation by top management of the University.

The vice-chancellor should be the chief fund-raiser for AUP and should be involved in meeting major prospects and asking for their support. To assist in his fund-raising efforts, he will establish committees and working groups or task forces.

AUP's faculty, research, and other staff should all take an active role in marketing the University more effectively. Formally, however, the Directorate of Outreach could take on the responsibility of implementing marketing programs. In the TIPAN concept, the outreach program was designed to link the teaching and research functions of AUP to various extension services that work directly to serve farmers and their families. Organizationally, the Directorate of Outreach appears to be a logical center for marketing implementation. It could help various faculties in curriculum development by assessing the demand in the market for different courses offered. It could help the admissions office by identifying and attracting prospective students. The Directorate of Outreach could also help in development and execution of various

technology, training, and service packages for farmers, research stations and extension staff, and other publics served by the University. Another important role of the Directorate will be the provision of communication services in the form of bulletins, brochures, and audio-visual aids for students, farmers, and donor agencies, etc.

A seed grant of Rs 200 million is proposed to provide the necessary base for an effective fund-raising campaign. Considering that the TIPAN project is being wound up before its final third phase, it is imperative that the USAID and GOP contribute towards the seed money. The total TIPAN allocation was about Rs 1.6 billion (with approximately 85% of this total amount provided by USAID). To provide Rs 200 million (about US \$ 6.7 million) in seed grant to sustain a project on which such a huge amount of money was spent seems reasonable. After the seed grant of Rs 200 million, starting 1994-95, donations of Rs 10 million annually to the endowment fund will be required to cover AUP cumulative resource gap by 2003-04.

With a maximum effort to raise revenues, AUP should also monitor its costs and find ways to reduce them. Some cost-saving measures that could be taken include energy-conservation and reducing waste. Reduction in staff can be another cost saving measure. However, given that government funding is tied to staffing levels, i.e., reduction in staff results in a reduction in government funding, this is not a realistic option. There might actually be a need to recruit more staff to provide for increase in University operations due to enhanced facilities. In fact, there are currently several requested posts that have still not been filled.

Linked to the financial sustainability is the issue of administrative sustainability. In our investigations we found certain human resource management (HRM) issues leading to the problem of administrative sustainability. They were: fears related to the AUP-ARS merger, leadership, control, compensation, evaluation, and intellectual isolation. In resolving these problems it is important that HRM policies and practices are linked to the

overall strategy of enhancing revenues recommended for AUP. Given the diversified organizational setup of the AUP system, comprising the University, agricultural research stations, and outreach-extension there cannot be a single set of HRM policies that satisfy all the stakeholders. In this report we concentrate on two major HRM policy areas which we believe are root cause of AUP's current HRM problems. They are the appraisal process and the compensation system. While we were asked to prepare detailed appraisal and compensation plans, we believe that no single appraisal form or a compensation package can be appropriate for all situations. The approach that we recommend is that the HRM policies should be linked to the overall strategy of AUP and should be tailored to meeting the needs of each stakeholder. We propose a five-step appraisal process which treats as a total process a person's ability to see an organizational problem, devise ways of attacking it, translate his ideas into action, incorporate new information as it arises, and carry his plans through to results.

The compensation plan should be such that it motivates the employees in direction set by the overall strategy. Again, given the diversified nature of AUP stakeholders, this calls for tailor-made compensation packages. One of the central ideas of the compensation plan recommended by us is that it should reward the person and not the job. This means that people are paid according to what they can do, rather than what they actually do. Most of these plans pay individuals according to the number of jobs in the organization they can perform, and do not take into account only the job the individuals are actually performing at a given time. This has the effect of focusing on the individual rather than the job, and it encourages individuals to learn new skills.

Given the highly qualified faculty at AUP, one of the major concerns is turnover. The main factor in turnover is a pay difference between comparable organizations for the same job. Establishing external equity requires good market data. The key is to gather market data on those jobs that the individuals whose jobs are being evaluated might move to. For AUP faculty and research

staff it might be a large number of jobs located all over the country or abroad.

Finally, it is strongly recommended that AUP management monitor and evaluate the impact of AUP programs and activities on the overall agricultural performance in NWFP. This will not only indicate how far the TIPAN project has succeeded in achieving its mission, but it will also be the strongest marketing tool to achieve financial sustainability.

## LIST OF ABBREVIATIONS

ARS	AGRICULTURAL RESEARCH STATIONS
AUP	AGRICULTURAL UNIVERSITY PESHAWAR
GOP	GOVERNMENT OF PAKISTAN
HRM	HUMAN RESOURCE MANAGEMENT
LUMS	LAHORE UNIVERSITY OF MANAGEMENT SCIENCES
NWFP	NORTH WEST FRONTIER PROVINCE
TIPAN	TRANSFORMATION AND INTEGRATION OF PROVINCIAL AGRICULTURAL NETWORK
UGC	UNIVERSITY GRANTS COMMISSION
USAID	UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

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**INTRODUCTION**

## 1. INTRODUCTION

The Agriculture University Peshawar (AUP) has experienced a major change in the previous decade. From a typical Pakistani university, AUP began to be restructured under the Transfer and Integration of Provincial Agricultural Network (TIPAN) project, initiated in 1984. TIPAN has been funded jointly by USAID and the Government of Pakistan (GOP). The TIPAN project had a number of goals. A major upgrading of human skills involved the training of some 140 staff in the United States for Ph.D. and M.Sc. degrees. A large building program, concentrated on the AUP campus, entailed the construction of around 600,000 square feet of academic buildings and staff and student accommodation (See Appendix 1 for a profile on AUP). Under the project, a Technical Assistance Team has been in place, under contract from two universities from the state of Illinois, USA.

A major goal of the project was the 'merger' of AUP with the provincial agricultural research stations (ARS). This aim of integrating the agricultural higher education and research systems would optimize their impact on agriculture. Another significant component of TIPAN was to link AUP personnel with the provincial agricultural extension network, through an 'outreach' program. These innovations, it is hoped, will cumulatively result in enhancing agricultural productivity in NWFP.

While the TIPAN project promises to provide the AUP system (comprising AUP, ARS, and extension-outreach) with major human, institutional, and physical assets, changes of this sort can also result in the system being faced with new demands and challenges. For one, the TIPAN project is now faced with premature termination, owing to the possibly imminent stoppage of USAID operations in Pakistan. A USAID-sponsored stage three of the TIPAN project seems now unlikely to be realized, at least within the USAID-GOP context of the first two stages. There is also difficulty in obtaining an appreciable increase in GOP fund allocations, to keep up with the financial demands of a high quality university. Indeed, annual grants might well decline in real terms in the coming years. If such shortfalls begin to occur,

even in the recurring budget, then the viability of the University will come under serious strain. The University's capacity to attract high quality faculty can be greatly reduced. Even the retention of the staff recently returned with foreign qualifications can become problematic. Moreover, the maintenance costs of the newly constructed buildings and recently acquired equipment will place major new demands on the University's resources.

These problems of growing expenditure assume even greater seriousness in the existing situation where the University's sources of income are relatively weak and undiversified. The financial mainstay remains state grants; from the federal government for the University itself, and from the provincial government for the Agricultural Research Stations. Traditionally, in Pakistan public sector higher education institutions and research institutes have neither been encouraged nor required to diversify their income base. Seeking and developing new and different sources of income has therefore definitely not been part of the 'culture' of these institutions. Reliance on state funding has bred an ignorance, if not a distaste, among university administrators for treating and regarding such bodies as 'business-type' organizations, which need at least to break even. This outlook is, of course, not confined to Pakistan alone. But in Pakistan it has also been accompanied by a distinct drop in university standards, both in the quality of faculty and students, as well as in the institutional processes that are vital for a university's reputation, such as integrity in student admissions and examinations, and in faculty appointments and promotion. This 'decline' implies that universities and research centers have over time become less capable of becoming financially sustainable institutions.

The strategic business plan that has been formulated here represents an effort to avert, for the AUP system, the scenario outlined above. Change and transition is never painless. To meet the stipulations of the plan the organization will need to reorder its approach towards administrative and financial matters. To achieve sustainability various sources of income will need to be generated,

and this must be done in a relatively short space of time. This will require major effort from a large number of functionaries in the organization. Moreover, to retain sustainability these sources of income will not only need to be maintained over the coming decade, but must show annual growth to keep up with inflation and to contribute to the reduction of the projected deficit. These goals must be accompanied by the maintenance of a fruitful, productive, and challenging professional environment for the organization's staff. Human resource development will play a critical role in the success of the strategic plan, since many items of projected revenue will depend on the human skills available to the organization. Thus, one major aspect of the strategic plan presented here is to examine specific aspects and actions for achieving viability for the AUP system.

The other major element of this study is to help introduce and institutionalize strategic planning within the organization. Strategic planning involves clarifying the institution's mission, assessing its resources, and examining the environment to determine what the institution's priorities and strategies should be. Therefore, strategic planning should be seen as the process of developing and maintaining a strategic fit between the institution's goals and capabilities and its changing market opportunities. To achieve this outcome it relies on developing a clear institutional mission, supporting goals and objectives, a sound strategy, and appropriate implementation.

A business plan will remain more effective and relevant if it is accompanied by an organization's capacity to formulate and implement long term or strategic planning as an integral part of its activities. Business plans might need future modification as conditions change beyond, and at times contrary to, the forecasted trends. Carrying out long term plans successfully is more likely if the capacity for strategic analysis and decision-making exists in an organization. But even outside the context of business plan implementation, strategic management is an extremely important part of an organization's activities. Therefore, an integral part of the present study is to suggest ways of building AUP's capacity for strategic management.

This dual approach thereby represents a suggested action plan as well as the creation of an infrastructure. It is within the latter that long-term decision-making will develop and be institutionalized. The business action plan will indeed be discussed within the context of the infrastructure of planning. In this way, different levels and stages at which the strategic planning process operates can be properly identified. The various activities proposed under the business action plan can be more effectively undertaken if they fall into place within a disciplined, wider planning environment. On the other hand, their impact will be reduced if they are carried out in isolation to each other, without proper coordination within the various elements, or without an understanding of the wider context of planning and strategy formulation. It is the building of this strategic management capability that we feel will give the AUP system its real capacity for viability, and which we intend here to help develop, along with specific administrative, financial, and marketing strategies in the coming decade and beyond.

**CHAPTER 2**

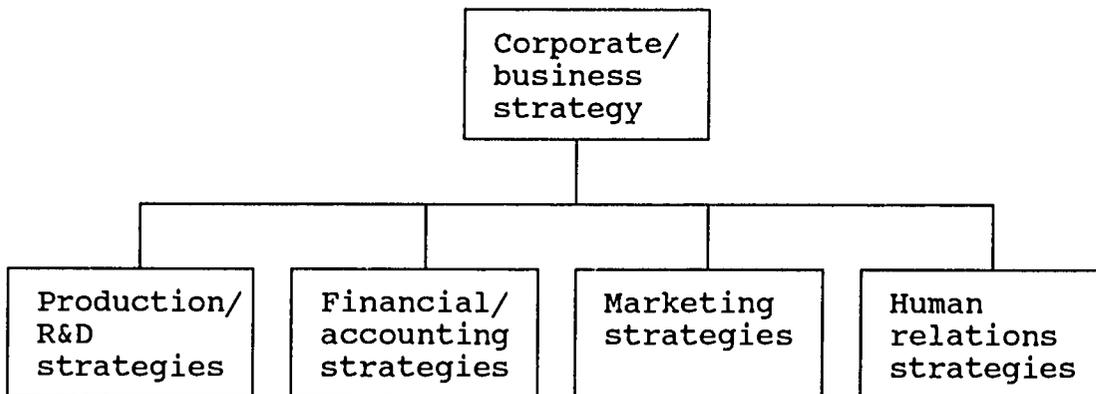
**THE STRATEGIC PLANNING PROCESS FOR THE AUP SYSTEM**

## **2. THE STRATEGIC PLANNING PROCESS FOR THE AUP SYSTEM**

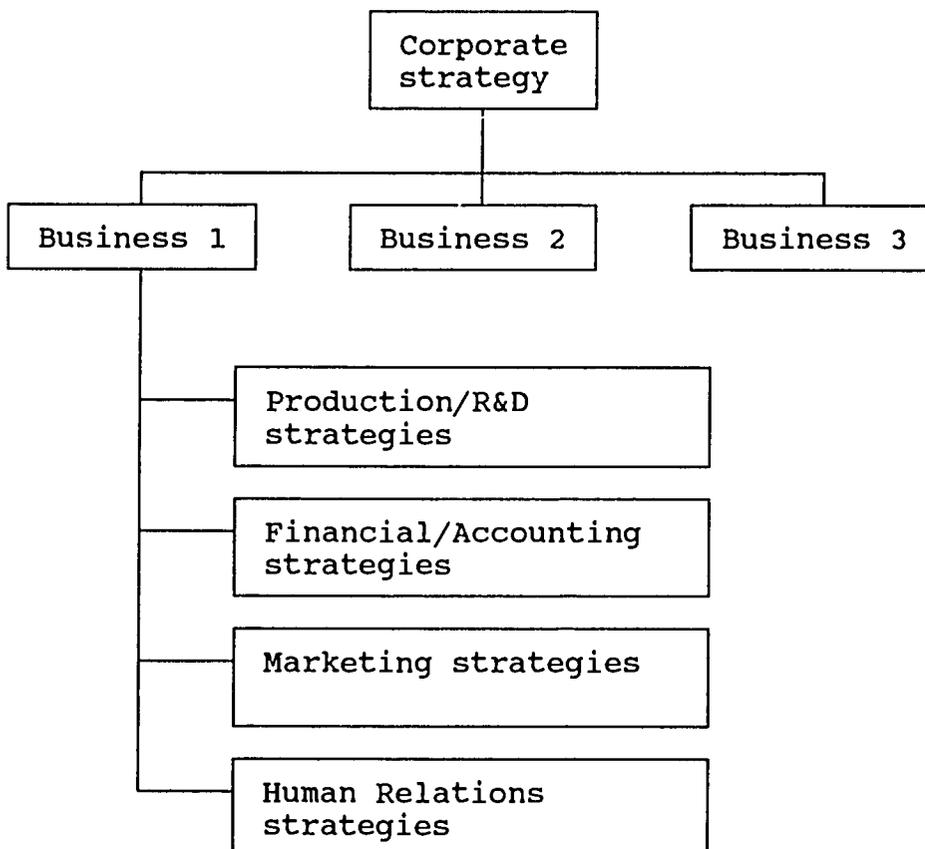
The strategic planning process closely involves but is not confined to the top administrative layer of an organization. Ideally, this process should be governed and developed by a team that consists of members from the major identifiable levels of an organization. In a large business corporation, with multi-business operations, the team could consist of members from the corporate level, business level, and functional level. In single business firms the corporate and business levels would be merged, forming a two-level strategic management structure. These single-business and multiple business structures are depicted in Figure 1.

**FIGURE 1: ALTERNATIVE STRATEGIC MANAGEMENT STRUCTURES**

**Alternative 1: Single-business firms**



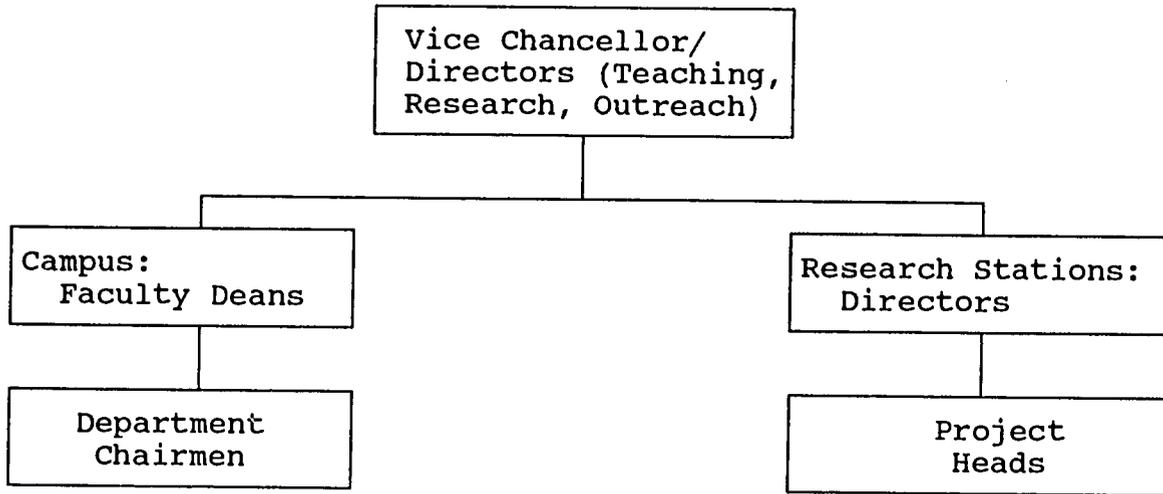
**Alternative 2: Multiple-business firms**



For the AUP system, a decision will need to be made regarding the different structural levels that exist. We recommend that the system be treated as having two distinct levels, thereby resembling the multiple business structure more closely than the single business one. This is because there are at least two distinct spheres or 'businesses' in which the University operates. These are the teaching departments and the research stations. These two components of the AUP system, at present at least, are not closely integrated into a single 'business' activity. Even if merger, in the sense that it has been undertaken under TIPAN, fully takes place, there is every likelihood that the teaching faculties and the agricultural research stations (ARS) will retain their own identity. Currently, they are even being funded from separate sources, with distinct rules of service. Complete merger is being resisted, especially from the ARS cadres. This will mean that the AUP system cannot really be treated as a homogenous whole, but will have distinct segments, which might require some separate consideration in the strategic planning process.

We can thus identify the top administrative roles. These are the vice-chancellor's office and the directors of teaching and research. The next level is that of the two major components of the AUP system. The first of these components is the teaching faculties, with the director teaching and deans. The second is the research system, with the director research and the directors of the research stations. The third administrative level is that of the departmental chairman for on-campus and the research project heads for the ARS. This three-level structure for each of the two major components of the AUP system is shown graphically in Figure 2. This does not imply that faculty deans and ARS directors, or faculty chairpersons and ARS project heads, have to be in the same service 'grade'. This is simply a representation of the strategic management structure, for purposes of clearly delineating strategic planning roles.

**FIGURE 2: THE AUP STRATEGIC MANAGEMENT STRUCTURE**



One important implication, however, is that strategic planning is not simply the formulation of a single plan at the top level. Each of the three levels in each of the two components will need to undertake strategic planning. The lower levels, having made their strategic plans, will need to send these to the next level for incorporation into its strategic planning. This in turn will be sent on to the top level for the entire system's strategic planning as a whole. In this way not only will the interests of each of the components be preserved and represented, but different levels of staff will also become involved in the strategic planning process.

Thus we see the present analysis as not being by any means an end product that suggests a rigid course of action or set of activities to be followed by the institution. Rather, this should be seen as the initiation of a process of formal long term planning that is organically and purposively adaptive to changing conditions; and which involves large and different segments of the organization in both long term and tactical strategy formulation and implementation.

The strategic planning process for the AUP system will consist of a series of stages. These phases should be developed in sequence. The process starts with the need for a mission for the University system. A very helpful, if not necessary, outcome of this stage would be the

formulation of a mission statement. Additionally, the institution should also have the capacity and willingness to modify its mission, if changing circumstances justify such a basic change in direction.

The next two stages would be an analysis of the institution's internal and external environments. The former would comprise a profile or a resource analysis of the organization itself. The latter would consist of an analysis of the 'operating' and 'macro' environments. The operating environment comprises the University's competitors, customers, suppliers, and creditors. The macro environment would be the general economy and society of the North West Frontier Province (NWFP), and the educational and agricultural sectors in NWFP and Pakistan, and possibly in the region (thereby perhaps including Afghanistan and Central Asia).

Having conducted the above analysis, it would then be possible to identify the University system's goals and longer term objectives. In the light of the preceding resource analysis, the need to achieve financial and administrative sustainability could be one major goal. Identifying the longer term objectives would help provide operational and measurable form to the institution's goals. Again, these goals and objectives can be modified if warranted by changing conditions; and the institution should develop the capability to identify such changes and make decisions accordingly.

This stage will lead to that of the formulation of strategy. An analysis of strategic choice will reflect the environmental analysis, resource analysis, and goal-formulation steps. With this background, current programs and markets can be reviewed and changes considered. It will then be possible for the institution to decide upon a strategy that will be in harmony with its mission, will reflect its goals and objectives, and will meet the requirements and constraints coming out of the external environment and internal resource analysis. This strategy will represent the most promising approach for obtaining the desired results for the institution. Such a 'grand' strategy will set the course and direction, or the fundamental approach, along which the institution will then gear its activities, resources, and capabilities.

Once such strategy has been formulated it will be possible to move into the implementation stage of the strategic planning process. Here the major 'functional' strategies will need to be implemented, designed to achieve the aims of the overall strategy. Attention should be paid to administrative structure, personnel policies, marketing strategies, and financial strategies. In addition, the institution's 'operations', its 'production process', or in other words the teaching, research, and outreach functions, will also need to be geared to reflect the strategic aims of the organization.

The operating policies will need to be underpinned by annual, or short term objectives. These will identify the results the AUP system will need to achieve within a one-year period. Thus greater specificity will be required in establishing the targets that are achievable in the short-term. Yet these will need to be within the parameters established in the longer-term targets of the strategic business plan, which may span a 10-year period. The ability to regulate and monitor the relationship between the shorter and longer term objectives underlines again the necessity, which we have already stressed earlier, of developing a strategic planning capability in the AUP system. Without such a capability it would be very difficult to manage a long term plan to best advantage. Any variances between projected targets and actual results, whether through exigency or design, can best be resolved if the strategic management process itself is well established.

The final phase of strategic planning process is that of control and evaluation. An implemented strategy must be monitored to determine the extent to which objectives are achieved. It is only in the implementation stage that the true test of a strategy becomes evident. AUP planners will have to be prepared for major effort in monitoring and evaluating implementation. That is where much of the strenuous part of strategic management lies. But the practice of methodical monitoring and evaluation brings discipline to an organization, and of course a much better understanding of the exact state of organization.

**CHAPTER 3**

**THE AUP MISSION**

### 3. THE AUP MISSION

The 'mission' of an organization represents its basic goals, characteristics, and philosophies. These must be determined to guide development into new areas of activity or reformulating direction. The mission also helps to guide future action. An institution's mission can be defined as the fundamental, unique purpose that sets it apart from other institutions of its type and identifies its operations in product and market terms. Thus the mission is an enduring statement of the institution's intent, reflecting as well the image it wishes to project, its self concept, and its governing values and priorities. For AUP, knowing and understanding its mission will be a vital element in its sustainability.

It is appropriate to pose the question whether there is need for an explicitly stated mission. For one, developing a mission is time-consuming and tedious, and could be seen to have questionable practical application. It contains few specific directives, while objectives and strategies are only broadly outlined or implied. It is really a statement of attitude, outlook, and orientation rather than of details and measurable targets. However, despite these qualifications, a mission accomplishes several purposes. It can ensure unanimity of purpose, provide a basis for allocating resources and motivating action, and establish an organizational climate.

The mission is not a rigid statement of purpose, but can be redefined to incorporate changes. The mission statement itself can be drawn up, formulated and reformulated, in the course of the strategic planning exercise. Thus, analysis and understanding of an institution's internal and external environments and strategic options can help to clarify that institution's basic character. The mission statement should also be developed after extended discussion, which can take place at both formal and informal levels, among the organization's personnel. We would recommend that such a discussion be broad-based, rather than be confined to strategic decision-makers and to select committees. The mission formulation process can itself create a sense of belonging and commitment to the institution. It can

also provide an awareness of the individual's place in and relevance to the wider process and context of the employing organization.

The AUP system clearly needs to delineate its mission. It has undergone rapid change over the previous decade. The existing uncertainties, such as about the merger, need to be overcome. Once outstanding issues have been resolved, the formulation of a clearly defined mission statement would become a very constructive way of providing an expression to the fundamental character and direction of the entire system. With the incorporation of the agricultural research system, its activities and the aspirations and goals of its staff will need to be represented in the mission. Similarly, the outreach function, and its perceived importance in delivering staff expertise to farmer needs, should be overtly recognized in the mission. For the on-campus AUP personnel, such a mission would then be quite different from the 'normal' or 'traditional' concept of university work. For a typical agricultural university it would consist of the training of undergraduate and graduate students in the agricultural sciences, and the maintenance of a research track for faculty. AUP's mission would go further than this, to include the work of the agricultural research system and outreach activities.

An important aspect of defining or redefining an organization's mission is to recognize and acknowledge the legitimate claims of other stakeholders of the institution. Such a claimant approach to the institution's responsibilities can include internal claimants, such as employees and students, as well as external claimants, such as funding bodies and agri-businesses. The AUP administration should clearly identify such groups, and then see how their needs can be incorporated in the AUP mission. Such groups can have justifiable reasons to expect, and even in some cases to demand, that the institution should act in a responsible manner in satisfying their claims. Therefore, after identification, an understanding should be reached about the specific demands of each group. This will help the organization to clearly appreciate the nature of the claims, and then to initiate clearly defined actions to meet them.

Since the concerns of different claimants can often conflict, there arises the need to reconcile these claims. One approach would be to assign them priorities. Such claims could, and will mostly, have desirable ends. Yet they cannot be pursued with equal emphasis. Therefore, claims should be assigned priorities that reflect the relative attention the institution will give to each. However, identifying and fixing priorities will still require defining a mission that resolves the competing, conflicting, and often contradictory claims of different stakeholders. Additionally, the coordination of these claims with the rest of the institution's mission is necessary. Demands by claimant groups for responsible action are one set of inputs to mission. Other principal components would be the element of social responsibility, the operating philosophies, the nature of product offerings and the major markets to be served. Once this process of prioritization, reconciliation, and coordination is achieved, a much sounder basis for administrative sustainability will be created. With a unified approach, objectives and strategies can be internally consistent and precisely focussed. It will then be possible to adopt a single-minded, though multi-dimensional, approach to the institution's mission.

To restate the requirements discussed above, AUP needs to take the following steps to properly incorporate claimant interests in its mission.

1. Identification of claimants.
2. Understanding of specific claims vis-à-vis the AUP system.
3. Reconciliation of claims and assigning them priorities.
4. Coordination of claims with other elements of the mission.

The various claimants or constituencies of AUP system can be divided into two broad categories. These are the internal claimants and external claimants. Proper identification of these groups is needed. Internal claimants could be the University executive administration, the student body, the teaching faculty, the research station staff, administrative staff, and subordinate employees. External claimants could be the federal and provincial governments (which are major sources of AUP finances), the agriculturalists of the

province and nation, and groups and companies trading and processing agricultural products. International agencies, which can act as both major donors and customers of AUP products, can also be identified as external claimants.

Thus, an essential component in the process of achieving sustainability should be to develop AUP's mission. AUP should ask the question, "What is our business?" It should try and arrive at the basic purpose of the institution, and what it is trying to accomplish. It should identify the underlying need it is trying to serve. Furthermore, it should establish the institution's scope along at least three dimensions. The first is 'customer groups', or who is to be served or satisfied. The second is 'customer needs', or what is to be satisfied. The third is 'technologies', or how customer needs are to be satisfied. AUP should strive for a mission that is feasible, motivating, and distinctive. In other words, it should not read as a 'mission impossible'. It should be perceived as significantly enriching the lives of people associated with it. Moreover, a mission statement should address why the institution deserves to command pride, identification, and loyalty.

We suggest that work on developing the mission should be taken up on a priority basis. The implementation of the other programs and activities recommended in this strategic plan will be facilitated once this stage has been completed. A high level committee should organize this activity. It should mobilize discussion, hold several meetings, and extensively survey people in order to prepare a meaningful mission statement. This will be hard work; but the time will not be wasted. In the process, the administration and faculty will discover a lot about the institution and its best opportunities. The mission statement should be designed to serve for several years. It should not be such that it needs to be changed abruptly every few years. Of course, AUP should review its mission periodically, to see if it is still relevant and still defines the appropriate course for the institution to take. We recommend that the committee commence its task by January 1994, and completes it by April 1994. Thus the mission will have emerged well before the end of the 1993-94 academic year.

In parallel, mission definition of AUP components should also take place. This is part of the parallel system of strategic planning for AUP system's major units, a proposal already made earlier. Each agricultural research station should participate in this activity, as well as each faculty. For all these units, mission development should be complete by February 1994. The task should be handled by representative committees in each unit.

## **CHAPTER 4**

### **ANALYSIS OF AUP'S EXTERNAL ENVIRONMENT**

#### **4. ANALYSIS OF AUP'S EXTERNAL ENVIRONMENT**

In order to be optimally positioned for formulating strategies to achieve administrative and financial sustainability, AUP's strategic decision makers must properly analyze and understand its external environment. The external environment comprises all the conditions and forces that affect the institution's strategic options, but are normally outside its control. The external environment is complex and constantly changing. It poses threats and opportunities that can radically affect an institution's sustainability. In analyzing the external environment, it is useful to view it as consisting of two interactive and interrelated parts: the macro environment and the operating environment.

AUP's operating environment will consist of the forces and conditions within the educational sector, in the pertinent parts of the agricultural and agro-industrial sectors that it serves, and in the policies of relevant government departments. The specific competitive operating situation in higher education will influence the selection and attainment of AUP's alternative objective-strategy combinations. Unlike the macro environment, changes in AUP's operating environment will result from strategic actions taken by AUP itself, by other higher educational institutions (which will both compete with and supply students to AUP), or by competing non-AUP research institutions. Other interacting forces in the operating environment will include the customers of AUP products (whether graduates, research, or extension), and AUP's donors and creditors (who might be both government and non-government agencies). Thus, multiple sources of decisions and actions around the AUP, in addition to AUP itself, will shape the operating environment. AUP's strategic management capability will need to be keenly aware of these forces, and of changes that their actions have brought or will bring.

The macro environment refers to conditions and forces that originate beyond and will usually occur irrespective of AUP's immediate operating environment. It will include much wider process which can nevertheless impact on AUP's sustainability; these occur

within the general economic, political, social, and technological framework within which AUP as a part of the educational sector operates. For example, the AUP administration may face high rates of inflation (economic), high tariffs on imports of equipment and hardware (political), changing demographic or migratory trends (social), or rapid or major innovations in agricultural production and agro-processing (technological). AUP's strategic managers will need to keep themselves abreast of all such changes and developments, in order to create the prospect of making the most optimal strategic decisions and of eventually securing the administrative and financial viability of the system.

AUP should understand and adapt to macro-environmental trends, since it might no longer be so protected that it can ignore changing circumstances. AUP's performance will depend on the degree of alignment between its environmental opportunities, objectives, major strategies, organizational structure, and management systems. Thus:

**Environment -> Objectives -> Strategy -> Structure -> Systems**

This denotes that AUP should first study the environment in which it is operating, and specifically opportunities and threats. It should then develop a set of objectives describing what it intends to achieve. Then it should formulate an institutional strategy that promises to achieve these objectives. After that, it should build an organizational structure capable of carrying out the strategy. Finally, it should design various systems of analysis, planning, and control to support the effective implementation of the strategy.

Unfortunately, institutions in Pakistan often run a reverse, and disharmonious, process. Structures and systems are persevered with because they might have worked in previous years. Strategy itself has not changed (and in many cases has not even been formulated), even though the environment has changed rapidly. The resulting downslide in educational standards then becomes 'institutionalized'. Another danger is the discordant timing in parts of the chain. Thus, the various components might reflect the reality of different periods, or over

time they might have changed at different rates. This could be depicted as:

**Structure -> Systems -> Objectives -> Strategy -> Environment**  
1980                      1970                      1987                      1984                      1992

The desirable sequence and timing should be:

**Environment -> Objectives -> Strategy -> Structure -> Systems**  
1994                      1994                      1994                      1994                      1994

#### **4.1. MACRO ENVIRONMENT**

As stated, the broad context in which the macro environment is analyzed is in terms of economic, political, social, and technological factors. Threats and opportunities need to be identified, and the ways in which the environment is changing should be assessed.

##### **4.1.1 ECONOMIC FACTORS**

The nature and direction of the economy in Pakistan affects the sustainability of the AUP system. In particular, the developments in the agricultural and agro-industrial sectors. Economic trends will determine the readiness with which AUP graduates will be absorbed in the workplace. A growing economy will also influence the market for income from research and projects. Such trends will also affect the demand for leasing AUP facilities for income from conferences, seminars, and workshops. All these are functions that will affect AUP's drive for sustainability. We will recommend in this report that student fees should be increased appreciably, but the viability of this enhancement will depend on the availability of higher paid jobs for graduates; and this in turn will depend on economic trends. Economic buoyancy will also affect the readiness and frequency of clients to utilize AUP conferencing facilities. Similarly contract research and consulting income will be more readily forthcoming during

economic upturn rather than recession.

Economic conditions and the nation's and province's economic performance might not on the surface appear directly related to AUP's concerns. Yet sound strategic decisions will depend on a considered assessment of these trends. Many examples can be given of this linkage. The rate of improvement in the country's infrastructure, and especially transport and communications, will affect the degree of commercialization of the NWFP's agricultural sector. If new markets can be accessed, cropping patterns and investment decisions will be affected. AUP's capabilities in identifying these trends will position it for a superior impact on agricultural performance.

The access to Central Asian markets is another example of the changing economic scenario. AUP is well placed to benefit from this development, for a number of activities. If this opening up is fully achieved, then Peshawar and the NWFP can become the focal point of a large economic region, rather than the somewhat fringe position with which they were previously perceived. Agriculture and agri-business can greatly benefit from this situation, if they can properly utilize the new market opportunities being created. It will, indeed, become more onerous for NWFP's agricultural education and research system to supply appropriate skills to gear the agricultural sector for exploiting these new opportunities.

If and when Afghanistan returns to normal, then over the next decade there might be a major opportunity for AUP to be involved in economic development activities in that country. Various development projects might be initiated, as international aid arrives to secure the return to economic viability. With its large group of highly qualified staff, AUP can generate substantial revenues through contracting out its personnel. However, this emergence of work opportunities can also become a major threat to AUP. It can lose staff permanently to such development projects, if it does not develop its capability for managing the relationship with this economic process.

While AUP can operate mainly within a provincial context, it can also regard the entire Pakistani economy as its sphere of interest. With the upgrading of skills under TIPAN, perhaps AUP should look

beyond the NWFP for tapping revenue generating avenues. Certainly, Balochistan can provide similar ecological and socio-economic conditions, for which the staff skills will be appropriate. However, the extensive irrigated zone in Punjab and Sind, and the agri-business operations there, might well contain customers for AUP's human skills. This 'heartland' of Pakistan agriculture should not be neglected, especially after the capacity built under TIPAN. Much of agro-industry is located outside NWFP, and it can be an important client for AUP's services and outputs. Analyzing economic conditions and changes in the national context might well provide dividends.

#### **4.1.2 SOCIAL FACTORS**

AUP is really in the 'people business', and so it is important first to keep track of social and demographic considerations. A proper understanding of demographic trends is useful, such as population growth, the rate of urbanization, and internal and external migration. If the rate of urbanization, for example, goes up dramatically, then this has implications for agriculture. Similarly, migration to other parts of Pakistan, and in the past two decades to the Middle East, has often removed workers from agriculture. Efforts are being made to establish industrial zones in the NWFP, and this might further divert labor supply. The areas where such trends are most pronounced might well require special attention. With the proper analysis, AUP can evolve a strategy of addressing the problems of labor drain from certain areas. Conversely, returning migrants might affect agricultural and processing operations by investing their savings, or adding new skills to the community. Understanding of such demographic trends will be an important input into AUP's strategy formulation.

Social factors also include the values, beliefs, attitudes, opinions, and lifestyles of the population. Changing social attitudes could affect the kind of student body AUP is likely to have. One example could be an increase in female enrollment as a function of social change. The demographic changes noted above might well create pools of potential students in certain areas, with the capacity

perhaps to pay high fees. Since we will recommend later that AUP levy higher user charges, it will be important for it to analyze where higher fee-paying capacity exists, and then perhaps target those regions or social groups for recruitment. Obtaining full fee-paying students from other provinces, and indeed from abroad, could be one option to AUP for generating revenues. With its high quality faculty, AUP could be well placed for tapping these markets. Knowing where exactly to advertise and promote itself will be important, and for this social data can be useful.

Returning to the implications of population change, the country is faced with a high population growth rate of around 3 percent. This has major implications for both agriculture and education. There will be ever-increasing demands on food-grain and other agricultural products in NWFP with rising population over the next 10-30 years. AUP could use demographic forecasting, in order to identify those parts of its operations on which such trends will place greatest demands. It would then be able to reach better long term decisions on where to allocate resources.

The rise in the number of younger people seeking school and college education can pose both threats and opportunities to AUP. There will be an enlarged pool of potential applicants, and with a larger population the upper income bracket will also be larger, from which enhanced-fee payers can be drawn. However, a rising population could also draw scarce resources away from higher education towards elementary education. The government might well reallocate relative resources to other educational segments, owing perhaps to potential pressures, or perhaps from notions of social equity. AUP would need to position itself favorably, to avoid being the victim of such resource reductions. These are examples where social considerations can play an important part in determining strategic decisions, and where social data can be purposively utilized for long term decision making.

#### 4.1.3 POLITICAL FACTORS

Political considerations can impact on the AUP system at four different levels. AUP's strategic planning process should analyze trends and developments at all four levels. It should then incorporate this analysis in its strategy formulation. The four levels are the international, national, provincial, and local. Political factors can be identified, firstly, as the political conditions and trends that exist, and are likely to occur, in each of the four levels. Secondly, AUP needs to analyze the attitudes and policies of the governmental authorities at these levels, and likely changes in them.

The international context has already had a considerable impact on AUP. The TIPAN project was a product of bilateral cooperation between the United States and Pakistan. This project will dramatically alter the AUP system. The Soviet invasion of Afghanistan brought the NWFP into international focus, making it a major recipient of donor funding. In the 1970s, Pakistan received considerably less foreign aid. Developments in agricultural research and education that occurred in NWFP in the 1980s might not have been possible in the 1970s.

The emergence of independent Central Asian States again indicates that this is a region of rapid political change. These developments pose both threats and opportunities. Foreign assistance might indeed be diverted away from Pakistan towards these new states. Competing institutions could emerge there which could draw off donor assistance for funded research. On the other hand, if there is political will to open up economic cooperation, AUP could benefit from an emerging West Asian economic community. While a number of initiatives and developments will take place at the inter-governmental level, AUP should remain aware of emerging opportunities, so as to best utilize this potential.

At the national level, analyzing Government of Pakistan (GOP) policies is of primary importance to AUP. Here again rapid change is being experienced. In the past the federal government has provided university funding. With decentralization, this might revert to provincial funding. Government policies regarding privatization and

economic liberalization will also affect the higher education sector. It is not beyond contemplation that the state's resource scarcity might impel it even to 'privatize' universities. Short of this, some degree of financial autonomy and delinking could take place. The priorities that the government attaches to education, and within that to which educational sub-sector, will be important determinants of the GOP-AUP financial relationship. The attitudes of the various competing political parties, the approach of the bureaucracy and even the military, are further variables.

Additionally, AUP strategy will be affected by the political will and the implementational abilities of the government in halting the slide in standards of university education and research. Effectiveness in carrying out much needed reforms in the university system will fundamentally affect staff and student activities, and their interaction with the university administration. Excessive centralization and bureaucratic rigidity have resulted in the removal of incentives within institutions to seek higher quality. Even maintenance of normal procedures (such as integrity in the examination process) are being undermined. Educational reform will depend on the government's ability to reverse these trends. Otherwise, higher education will contribute less and less to national development, calling into question its share of the public budget.

Within the federal government, AUP should be specifically aware of the policies of the Ministries of Finance, Education, and Food and Agriculture. These impact on AUP's own functioning, and their ministers and senior officials often set the prioritization towards education as a whole and towards particular institutions. AUP will need to pursue the case that, despite its smaller numbers, it will require the continuance of special funding, in order to fully realize the TIPAN initiative and because of the critical national importance of AUP's work.

The provincial level political environment is also of concern to AUP. Firstly, the provincial government funds the agricultural research stations (ARS). Any future devolution of university financing from federal to provincial governments will make the NWFP government

the predominant funding source. AUP strategic planners should be aware of the educational and economic policies of the major political parties in the province. The University should also make its needs and problems known to these political bodies. The long term commitment of the government towards teaching and research should be assessed, as well as the prospects of any substantial changes in funding levels and practices. The role of agricultural development in the provincial annual development plans should also be examined, to assess how AUP can benefit from resource allocation. AUP should keep particular watch on the Departments of Planning and Development, Education, Agriculture, and Finance.

AUP decision makers should also keep themselves aware of the political factors and processes operating at the more local level. Many AUP operations, and particularly outreach activities take place in the local context. Information would be useful for the receptivity for such programs among local communities. The capacity should be assessed of local bodies to provide, say, scholarships for students, or to fund participants for shorter courses. Such understanding of local conditions, and variations within the province, can help to identify the appropriate locations for AUP programs and activities.

#### **4.1.4 TECHNOLOGICAL FACTORS**

Technological factors are important for AUP, because it is essentially a technology-based institution. Its teaching, research, and outreach activities are all geared at providing technological information and expertise, in order to achieve innovations in agriculture. The teaching and research process itself is a 'technology' that needs constant improvement and must keep abreast of the latest developments and innovations in content and process. Identifying the real economic requirements of agriculture and agro-industry will bring a more demand-driven orientation to the AUP system. The weaknesses stemming from not being aware of real economic and technological needs can lead to outdated and increasingly irrelevant methods for design and delivery of education and research

programs. The need, therefore, is to keep away from a purely supply-driven approach where training is imparted or knowledge is produced without reference to real needs.

AUP is faced with the context of declining standards in the educational sector as a whole. In response, it will need to resolutely implement adjustments in its institutional framework, its level of efficiency and its resource mobilization. These measures will be necessary to achieve improved quality. If the search for quality becomes AUP's response to the threats facing the technological environment, then it will have established a major goal for which it can then begin to select administrative and financial sustainability strategies.

The improvement of NWFP's agricultural productivity levels has already been identified as a major goal of TIPAN. To continue with technological development, AUP will need to assess the adequacy of existing technologies; and to assess their continuing relevance in the context of changing product markets and factor endowments. AUP will need to examine proven foreign technologies, and assess whether any can be adapted to local needs and conditions. AUP will need to generate new technologies where necessary; and expedite the transfer of technological advance to productive processes. In achieving its quality improvement goals, AUP will have to become a technologically 'active' institution.

#### **4.2. OPERATING ENVIRONMENT**

Universities have various organizations and groups with which they interact. Universities and their 'publics' can mutually influence and effect each other through their actions. For business firms such agencies can be grouped under the following variables: competitive position, customers, suppliers and creditors, and the accessible labor market. For a university, similar forces would constitute its operating environment. AUP would need to identify these stakeholders, to see how their interests are being affected by the University, and conversely to assess how their actions are affecting the University.

Thus, when assessing conditions in the operating environment, AUP can be much more proactive in strategic planning, since it can influence the variables and publics in this environment. By contrast, it will have to be more reactive when dealing with factors in the macro environment.

AUP can identify various agencies or 'publics' with which it constantly interacts. Other forces can be identified with whom it might want to develop links in the future (an example being potential donors for an endowment). Existing 'publics' can be prospective students, alumni, government and government agencies, donor agencies, agricultural research institutes in other parts of Pakistan or abroad, other agricultural universities in Pakistan, other universities and colleges in NWFP, the farming community, the business community, prospective employers of graduates, suppliers of services and equipment, etc. The requirements of these organizations or groups of people need to be considered. This requires a kind of industry analysis in strategic planning.

#### **4.2.1. COMPETITIVE POSITION**

AUP, perhaps in common with the rest of the university sector in Pakistan, could hardly have considered that the term 'competitive' would be in any way relevant to it. As public institutions, universities were virtual monopolies in their provinces and in their own fields. Prospective students were left with no other choice but to join them. These universities did not need to look beyond the virtually assured annual government budgetary allocation. Funding for expansion also came from the same source. In the perceived absence of competition, they did not need to raise standards. Indeed, standards started slipping across the spectrum, and in time this became an inexorable and seemingly irreversible downturn. Systems and procedures began to be eroded, either for personal or factional gain; or under the pressure of politicization, whether from student groups or government. The end result was a major loss in the reputation of Pakistani universities.

Now that Pakistani universities are facing major deficits, and their degrees mostly fail to be recognized internationally, it is time to take stock of the situation. The fact is that universities did face competitive situations, but they failed to meet them. The better off and the really talented students sought education overseas. The brightest minds clearly did not enter university employment, a contributory factor being the low incentive and compensation levels for faculty. The universities also failed to provide high quality output, so that the economy and the nation suffered, and became less able to compete for industrial investment with other countries that had superior human resources, such as the so-called Asian tigers. For AUP, it is necessary to try and remedy its situation; firstly because of the huge capital investment it has entailed; and secondly because that capital investment makes it possible, perhaps uniquely among Pakistani universities, for AUP to climb out of the morass. A clearer understanding of its competitive position, as a part of strategic planning, will help AUP to redress the balance.

First, it is necessary to identify who exactly are AUP's competitors, and what are their competitive strengths and weaknesses. The areas in which competition is occurring, and in which competition is most intense, should be highlighted. Clearly, one obvious competitor is the other universities in the NWFP. If government policy liberalizes student admissions to include non-domicile candidates, then AUP will be competing with all other universities in Pakistan. If user charges are introduced, as we would strongly recommend, then AUP must have a quality premium over other institutions that continue to charge lower fees.

A looming threat is now coming from 'private universities'. These will charge higher fees, but they will also tend to attract the brighter students. If AUP is not proactive, they might take away the higher fee-paying market from it. This might not happen through direct competition in agricultural sciences. Indeed no new institute might be set up to compete with AUP in its areas of expertise. But, by setting up good quality programs in other fields, these institutions might draw away students from agricultural studies itself. Thus, the G.I.

Khan Institute of Technology in NWFP, for example, might be successful in promising graduates brighter job prospects. In that case better students might decide to opt for engineering courses rather than the agriculture sciences. New, more vibrant institutes, in such disciplines as medicine, business studies, and computer sciences, can also be formidable competitors, again as substitutes for those seeking a career in agriculture-related subjects. The problem is not that AUP will not get students. Rather, its competitive position might weaken for attracting the upper segment of the student market, which will pay higher fees for the prospect of getting better paid jobs.

Such threats to AUP's competitive position are, therefore, more likely to come from other subject areas. We do not foresee a broad-based competitive entry in the agricultural sciences in NWFP. However, quality improvements in other agricultural universities in Pakistan could pose such a threat. More likely in NWFP, there might be niche-entrants, who could chip away at AUP's more attractive offerings. AUP faculty could also be drawn away by smaller, more focussed institutes of learning, operating in the private sector, and offering better incentives to faculty.

The successful example of niche-players has been the emergence of several smaller 'computer colleges' in Pakistan. These have effectively prevented the established universities in Pakistan from making inroads into this emerging, lucrative student market. As a consequence, universities have also failed to attract quality faculty in computer sciences.

Competitive forces might also emerge in neighboring Central Asian states. These have very high literacy rates, and a strong tradition in higher education. They are also rapidly moving towards the market economy, in part supported by institution-building donor assistance. These centers could draw away both students and faculty from AUP. Currently, higher education in Central Asia is focussed towards the Russian language, but efforts are under way to acquire English language skills. These centers in the future could pose a more formidable threat than other Pakistani institutions. Several western universities could set up joint cooperation programs with new or

existing institutions in Central Asia, where they might find greater flexibility for cooperation than with Pakistani universities.

Therefore, it is essential for AUP to build its competitive strength. It should maintain a 'competitor profile', of existing and potential competitors, in order to devise the optimal strategy to counter them. It should strengthen its administrative or human resource capabilities, so that it can field a strong and motivated team of people in the marketplace. To achieve this goal it must strive simultaneously for financial sustainability, through a greater flexibility of approach and a diversity of programs than in the past. Thus, there is no reason why the 'threats' discussed above cannot become opportunities, which through its own strengths AUP can use to its best advantage.

The agricultural research system will have its own competitive dynamics, for which AUP should also do a thorough competitor analysis. The strengths and weaknesses of other research institutes, in agricultural and related fields, should be analyzed. Their customers should be listed, and targeted for marketing by the appropriate AUP research stations. Information should thus be maintained on programs, capacities, and sources of funding of other research centers in Pakistan and in the region.

#### **4.2.2. CUSTOMERS AND BUYERS**

There are several distinct groups of customers for AUP programs and services, ranging from students to agri-businesses to farmers. These need to be identified and approached with 'right' marketing strategy. A detailed analysis of various AUP customers and how best to approach them is made in Chapter 8.

#### **4.2.3. SUPPLIERS AND CREDITORS**

As with customers and buyers, AUP should build a database on its suppliers and creditors. AUP should be clearly aware of who are its suppliers, what services and goals they provide, and the competitive

forces and key trends operating in its major supplier markets. It should assess what its bargaining position could be with these suppliers, whether it is weak or strong, and whether there are possibilities of supplier selection. Being in a strong bargaining position with suppliers can be an important ingredient in administrative and financial sustainability.

One major supplier source is prospective students, and the organizations from which they emerge. AUP should assess the quality of its intake, and then seek to improve that quality. There will be various benefits in improving applicant quality. It will raise faculty motivation, while better graduates will raise AUP's market reputation and have a greater impact on agriculture. AUP should develop links with schools and colleges which it identifies as sources of better quality students. It should market itself in these institutions, through public relations and promotional campaigns.

The government plays a vital supplier function for AUP. The various forms in which the government performs this function should be clearly identified, and ways of improving upon or adding to this source should be evolved. Both the federal and provincial governments will need to be assessed for this purpose. The key trends in government's financial support and regulatory control need to be identified. The future lack of growth in funding, and changes in regulation, can dramatically effect the conditions under which AUP operates. Both opportunities and threats involved in such changes need to be clearly understood.

International agencies have been extremely important suppliers of resources to AUP system. By far the most prominent has been USAID, through the TIPAN project. AUP should arrive at a clear understanding of the priorities, resources, and technical requirements of different donor agencies. It can tap assistance on an array of services, facilities, and programs. Often such assistance goes to those institutions that can present a properly formulated needs assessment, and display a worthwhile absorption capacity. AUP should gear itself purposively for utilizing these opportunities. It should be fully familiar with the actual and planned activities and programs of these

agencies, not only within Pakistan but also for the Central Asian region.

Another source of funds for AUP can be donations towards an endowment. We will suggest in more detail later the need for developing this source. To successfully generate donations AUP will need to focus on those institutions and sections of business that are involved with agricultural development. A large number of firms in Pakistan are directly or indirectly involved in agri-business, and these can be targeted. Firms located in NWFP can also become potential donors, even if their businesses are in other sectors. The farming community, especially larger farmers, could prove a further source. Again, the large pool of expatriate workers in the Middle-East could be tapped, especially since they mostly come from and will perhaps return to the rural sector. With the right marketing strategy, and the proper effort and input, fund-raising should take its proper place in AUP's revenue generation priorities.

Another form of supplier to the University is the labor market. The quality of both faculty and administrative staff is of major importance in AUP's drive for higher standards. The sources from where staff and faculty are drawn need to be identified and their capabilities assessed. For administrative staff, if AUP is to commercialize its operations, as recommended in this report, trained managers will need to be inducted. It is vital that administrative staff be selected purely on merit, rather than through nepotism or patronage. Selection of staff will be an important element in achieving administrative and financial sustainability, but only if it has the proper capabilities; and these can only come from selection on merit and in the open market for skills.

**CHAPTER 5**

**INTERNAL RESOURCE ANALYSIS**

## **5. INTERNAL RESOURCE ANALYSIS**

The internal resource analysis of an organization comprises an essential stage in effective strategy formulation. In the previous chapter we have stressed that AUP's strategy must be consistent with conditions in the external environment. It should take advantage of existing or projected opportunities, and try to minimize the impact of major threats. Equally important is the consideration that AUP's strategy must place realistic requirements on its internal resources and capabilities. Therefore, the goal pursuing opportunities should be based on the internal strengths, and not simply on the existence of such opportunities.

In this chapter, we will put forward the second ingredient for strategic success: the need for a realistic analysis of AUP system's internal capabilities. Internal analysis is not a simple exercise: indeed it is difficult and challenging. Value judgements and even educated guesses often accompany objective analysis. But, its importance should not be slighted. Systematic internal analysis can lead to an objective profile of the institution; and this is essential in the development of a realistic and effective strategy.

We recommend that the structure that internal analysis of AUP should take be based on administrative, financial, and marketing aspects. Sustainability in these three areas is of vital importance to AUP's future, and strengths and weaknesses in these areas need to be identified.

### **5.1. ADMINISTRATIVE CONSIDERATIONS**

The upgrading of faculty skills arranged through TIPAN will result in around 140 teaching and research staff obtaining Ph.Ds and M.ScS from American universities. This will become a major strength of the University. However, the problem will arise of retaining them within the AUP system. Because of their improved qualifications, they will now enjoy a market demand, from international organizations, business organizations, and other educational and research institutes.

The current level of compensation offered by a Pakistan public sector university might not be sufficient for them to remain within AUP. Therefore, a system of incentives, or some form of addition to the compensation package, will need to be developed.

Nonmonetary incentives will also need to be provided, such as the need to overcome intellectual isolation. This is a further potential source of weakness for the institution, especially since people with improved qualifications will need an improved flow of information to satisfy their professional needs. These needs will suffer, with consequent morale problems, unless AUP can devise ways of overcoming such isolation. Thus, library acquisitions will need to keep up with current literature. The subscription to relevant journals will be required, both for the campus and research stations. Contacts with outside scholars, through conferences or exchange visits, will be needed.

While the training needs of the institution have been substantially met through TIPAN, there will still remain need for training of some faculty and research staff in the coming decade. This training will be needed for the skill upgrading of new entrants, as well as for older staff not selected under TIPAN. Since USAID, in its current policy position, will no longer be able to assist in this training process, alternative funding will need to be developed.

AUP has bachelors and masters level courses, but it does not offer a program of shorter term courses. The current faculty-student ratio for its normal courses appears to be below the average of Pakistani universities. However, AUP faculty also engages in 'rural development', in the form of outreach activities and applied research through the research stations. Moreover, it should be recognized that the current faculty and staff were trained in preparation for the anticipated increase in student body. Nevertheless, there is a tremendous opportunity for developing shorter courses, aimed at audiences that are currently untapped by AUP. There are farmers, state officials, business executives, for all of whom attractive shorter courses can be devised.

The problem of faculty's low compensation levels can be alleviated through extra income from teaching in the shorter courses. As we will see in the next section, AUP is likely to face serious financial problems. It will need to overcome these by broadening its revenue generating capacity. One source could be fees from short courses, part of which go to improving faculty compensation. The absence of such arrangements is presently a source of weakness for AUP.

Research output is a critical activity for university staff. AUP must try and avoid the replication of the decline in research standards suffered by Pakistani universities as a whole. One reason for this is the lack of proper performance evaluation. Quality research goes largely unrewarded, and promotions occur on considerations of seniority rather than performance. Many of the benefits of TIPAN will be eroded if adequate methods of gauging quality are not introduced. The lack of research will also affect the quality of teaching, so that the student community would get intellectually degraded over time. Moreover, the capacity to produce promising prospective faculty from among the brighter students would also deteriorate.

AUP should also foster contract research, both on campus and in the research stations. Such work indicates that faculty skills are in demand in the marketplace. This can also become a source of revenue for the University, since a certain proportion of such income (say 25-30%) can be retained by the institution. A certain amount of contract work is being undertaken at AUP; but this has yet to appear as a noticeable item in its income. The research stations, in particular, must make a concerted effort to generate client-based work.

On the organizational side, one of the constraining factors for AUP is that it is tied into the 'university system' in Pakistan. There appears no single authority in charge of this system; and as a result it becomes virtually devoid of responsibility. Finance is provided by the federal government, through the UGC, but it does not seem to have much powers of governance. Much of the control is at the provincial

level. AUP's complicating factor is that the research system gets provincial funding. Political pressures can be brought to bear through provincial legislative and executive authorities. This duality of responsibility and control leads to a divorce of administrative and financial responsibility. This in turn means that no one authority can be held accountable for overall management. This makes rational planning very difficult, since there is confusion over who is really empowered to make the key decisions.

Constraints on autonomy of action means that the University's ability to restructure a number of important aspects of administrative and financial sustainability is severely restricted. Unless these constraints are removed it will be very difficult to achieve sustainability goals. We have already mentioned rules on performance evaluation and staff compensation packages as not being responsive to the institution's need to attain higher quality. Vital areas where revenue generation possibilities exist will also need more rationalized decision-making. This is possible, but the University administration will need to aggressively push through these policies against the existing constraints.

One very important example is that of tuition fees and user charges. While so many positive changes were occurring in AUP over the past decade, there was virtually no movement in the fee structure. This should be seen as a considerable weakness. Existing fees are nominal, so that students are going through the system without incurring a financial risk or investment. We feel this breeds a lack of motivation and intensity in pursuing academic study. We have recommended later in one of our scenarios an appreciable rise in fees, starting with the 1994-95 entrant group. There is a strong argument that in a poor country like Pakistan imposing university fees would discriminate against lower income groups. Higher fees would restrict the social base obtaining university education. There are two points to counter this argument. In Pakistan only about 2 percent of the relevant age group seek higher education, so it is already a privileged resource. Those who enter higher education can probably pay the higher fees that are necessary for the viability of this sector.

Secondly, really meritorious cases can be provided financial support if they are financially deserving.

Like fees, user charges have not been instituted over a wide array of services at the University. Student hostel accommodation is heavily subsidized, and utilities such as electricity are not charged at cost. Such subsidies to students are admirable: they represent an investment in the next generation. However, where a university is facing financial exigencies, which in the future threaten to turn into uncontrollable deficits, then such subsidies become anomalous. AUP will need to make a hard decision after evaluating whether revenue generation from students is not in the end in their own best interest, as it has become necessary for retaining institutional viability.

AUP has major strengths which can lead it to a position of leadership among Pakistani universities, and enable it to make a positive contribution to NWFP and Pakistani agriculture. However, this potential can be threatened and eventually undermined if AUP does not rectify several adverse processes.

## **5.2. FINANCIAL CONSIDERATIONS**

AUP has been running a budgetary deficit since 1989-90, with a cumulative resource gap of over Rs -47 million in 1992-93. In 1993-94 it will have an additional expenditure of approximately Rs 20 million for the operation of the new building.

The main causes of the resource gap are:

- (i) Reluctance , or inability, of UGC to increase its grants to AUP commensurate with the increase in AUP's expenditures,
- (ii) Impact of inflation on expenditures, and
- (iii) Not enough generation of funds by AUP from its own resources.

To determine the financial sustainability of AUP till the year 2003-04, we considered several scenarios, using following key variables:

- Rate of inflation
- UGC grant<sup>1</sup>
- AUP's own resources
- Endowment fund.

The scenarios considered are:

1. Resource gap at historical rates (Appendixes 2-A and 2-B)
2. Projected resource gap under moderate expected increase in inflation, salaries and other costs, and revenue from own resources (Appendixes 2-C, 2-D, and 2-E)

The results of these scenarios are summarized in Table 1, while detailed projections are given in Appendixes 2-A to 2-E. Note that in the financial scenarios given here we did not include agricultural research stations (ARS).

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<sup>1</sup> For our projections we take 5 percent annual increase in UGC grant to AUP. Historically, the annual increase has been higher than this figure. However, our discussions with the UGC officials indicate that future annual grants are expected to increase by around 5 percent.

**TABLE 1: SUMMARY OF FINANCIAL SCENARIOS**

SCENARIO	CUMULATIVE RESOURCE GAP (2003-2004)	PRESENT VALUE (PV) OF ANNUAL DEFICITS AT 15%	FOR FULL ANALYSIS, SEE APPENDIX NO.
1: ANNUAL INCREASE IN UGC GRANT, SALARIES, OTHER COSTS, AND OWN RESOURCES AT HISTORICAL RATES	Rs -1467 m	Rs -519 m	2-A
2: SAME AS SCENARIO 1 EXCEPT ANNUAL INCREASE IN UGC GRANT ASSUMED AT 5%	Rs -2217 m	Rs -765 m	2-B
3: 10% ANNUAL INCREASE IN OWN RESOURCES; INCREASE IN SALARIES AND OTHER COSTS AT THE INFLATION RATE	Rs -1059 m	Rs -398 m	2-C
4: 10% ANNUAL INCREASE IN OWN RESOURCES; INCREASE IN SALARIES AT 1/2 TIMES THE INFLATION RATE; AND INCREASE IN OTHER COSTS AT THE INFLATION RATE	Rs -815 m	Rs -314 m	2-D
5: INCREASE IN OWN RESOURCES AT 20% PER ANNUM; AN ENDOWMENT FUND OF Rs 50 m IN 10 YEARS; SALARIES AND OTHER COSTS INCREASING AT TWICE THE INFLATION RATE	Rs -2344 m	Rs -803 m	2-E

In the case of scenario 1 given in Table 1, the cumulative resource gap, defined as the difference between total receipts and expenditures, for the period 1993-94 to 2003-04 was Rs -1,467 million. The present value of the yearly deficits discounted at 15% was Rs -519 million.

One way of interpreting the present value figures is that in the case of expenditures growing at the historical rates, AUP will need to raise Rs 519 million from some other source today and invest it at 15% to meet the deficits over the next ten years.

In the case of scenario 2 where salaries and other costs are increasing at the historical rates and the UGC grant is increasing at the expected rate of 5% the cumulative resource gap is Rs -2,217 million with a present value of the yearly deficits at 15% to be Rs -765 million.

If own resources are assumed to grow at 10% (with no endowment income), and salaries and other costs increasing at inflation rate then the cumulative resource gap is Rs -1,059 million with a present value of all the yearly deficits at 15% to be Rs -398 million (scenario 3 above).

In scenario 4 above, we assume that salaries increase annually at one-half the inflation rate. In this case the cumulative resource gap decreases to Rs -815 million with the present value at 15% of Rs -315 million. In scenario 5 we assume that in addition to having a growth in own resources of 20% AUP also makes an effort to make a permanent endowment fund invested at 15%. Interest from this fund is used to cover some of the expenditures. Some suggestions about how to market this endowment fund are given in Section 8.3. In our projections for this scenario we assume that starting from 1994-95 AUP is able to raise Rs 5 million annually for this fund. In addition for this scenario we used an inflation rate of 20% for increase in salaries and other costs, which given more recent unofficial estimates may be more plausible. Given these assumptions, the cumulative resource gap increases to Rs -2,344 million with a present value of yearly deficits at Rs -803 million.

In our financial scenarios above we did not include a major possible source of reducing AUP deficits, namely, cost reductions. The biggest source of cost reduction is the cut in staffing levels. This is not recommended here, however, for two reasons. Firstly, UGC budget is tied to the staffing levels, reduction in staff resulting in a reduction in funding. Secondly, with enhancement of physical resources and programs of AUP under TIPAN there may actually be a need for additional recruitment. In fact, there are still a number of vacant positions requested under PC-1. Wherever there is some duplication of staff, split assignments or reassignments provide a better solution than retrenchment. Moreover, any cost reductions through economy in utilities and less waste should be encouraged.

#### **5.2.1. BREAK EVEN ANALYSIS**

Table 2 summarizes the various scenarios considered for break even analysis. The detailed break even analyses are given in Appendixes 3-A to 3-D.

**TABLE 2: BREAK EVEN ANALYSIS**

SCENARIO	ANNUAL GROWTH	FOR FULL ANALYSIS, SEE APPENDIX NO.
1: ANNUAL GROWTH IN UGC GRANT REQUIRED TO BREAK EVEN: ASSUMING ANNUAL GROWTH IN OWN RESOURCES OF 10%, AND SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE.	23.00%	3-A
2: ANNUAL GROWTH IN OWN RESOURCES REQUIRED TO BREAK EVEN: ASSUMING UGC GRANT INCREASING AT 1/2 TIMES THE INFLATION RATE, AND SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE.	58.50%	3-B
3: ANNUAL GROWTH IN ENDOWMENT FUND REQUIRED TO BREAK EVEN: ASSUMING UGC GRANT INCREASING AT 1/2 TIMES THE INFLATION RATE, ANNUAL INCREASE IN OWN RESOURCES OF 10%, SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE, AND A SEED MONEY OF Rs 270 m.	Rs 100 m	3-C
4: MONTHLY TUITION FEE REQUIRED PER STUDENT TO BREAK EVEN: ASSUMING UGC GRANT INCREASING AT 1/2 TIMES THE INFLATION RATE, ANNUAL INCREASE IN OWN RESOURCES OF 10%, AND SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE.	Rs 3450 per month	3-D

Resource gap and break even analysis (Tables 1 and 2) depict a very serious financial sustainability problem for AUP. The size of the cumulative resource gap facing AUP in the next ten years is somewhere between Rs -815 and Rs -2,344 million, depending on the assumptions made for the key variables, namely, rate of inflation, growth in UGC grant, own resources, and endowment fund. The resource gap and break even analyses show that no one source of revenue can be realistically expected to cover financial shortfalls.

### 5.3. MARKETING CONSIDERATIONS

There is virtually no marketing activity at AUP. With guaranteed annual funds from the government and with only a small proportion (7%) of total annual income generated from University's own resources, marketing function has been non-existent. This has to change radically, if AUP were to achieve financial sustainability. Proactive marketing will be critical in attracting revenues for the University from various sources. AUP planners have to devise an effective marketing strategy to attract funds from government and other local

and foreign donor agencies, as well as for increasing revenues from University's own programs and facilities. The implementation of the marketing strategy will entail improving University's product offerings, and proper pricing, distribution, and promotion of these offerings.

**CHAPTER 6**

**OBJECTIVES AND STRATEGIES**

## **6. OBJECTIVES AND STRATEGIES**

Having analyzed its external environment and assessed its internal resources, AUP, will need to establish its objectives, and decide upon a strategy to achieve them. Long-term objectives are the major variables that the institution will emphasize and to which it will need to give an operational and measurable form. The strategy will provide the direction on how these objectives are to be achieved. Both objectives and strategy will need to be consistent with the mission of the institution.

### **6.1. LONG TERM OBJECTIVES**

While an institution's mission describes what the institution stands for and whom it will serve, objectives are needed to guide its efforts. For AUP, there are a number of pressing objectives that we recommend should be adopted in order to steer a path towards sustainability. Some of these are already current objectives, but new ones need to be added if sustainability is to be achieved.

We also recommend that AUP institute on its own a process for formulating future objectives. Responses can be obtained from various sub-groups, such as faculty, students, administrators, government officials, community leaders, business persons, and alumni. Valuable perspectives can be obtained by comparing responses from different sub-groups. This will provide a broader input than the setting of goals simply by AUP's top administrators or by senior government officials.

A number of objectives can be suggested for AUP, and it might then have to choose among them, as some may be incompatible with each other. There might also be need to prioritize these objectives, as it may not be possible to pursue them simultaneously. However, we feel that the objectives we have formulated below are not only compatible, but they provide the 'least common denominator' for galvanizing AUP into a vibrant, viable, and intellectually effective institution. Indeed, the list is not exhaustive, but reflects rather the primary

stimuli for a sustainability action plan.

AUP's long-term objectives should be:

- (1) To achieve high quality undergraduate and postgraduate education in agricultural sciences.
- (2) To enhance on-campus faculty research capabilities and output.
- (3) To improve the effectiveness of the agricultural research system for achieving identifiable innovations in agricultural development.
- (4) To establish an effective outreach program for dissemination of agricultural education and research.
- (5) To improve the level of compensation and incentives for University staff.
- (6) To create a challenging intellectual environment for AUP staff through exposure to seminars, workshops, and conferences.
- (7) To institutionalize criteria for performance evaluation that rewards quality and hardwork and reflects high University standards.
- (8) To sustain the momentum established by TIPAN for high quality training of AUP staff.
- (9) To create state-of-the-art library and reference materials structure throughout the AUP system.
- (10) To enhance opportunities for contract research and consulting, for purposes of raising University revenue and faculty compensation, and to enhance AUP's reputation for applied, problem-solving work.
- (11) To enhance University revenues through a more commercial utilization of its services and facilities such as conference and computing facilities.
- (12) To aggressively promote a program of shorter courses.
- (13) To institutionalize the fund-raising function for AUP and establish a sizeable endowment fund.

- (14) To enhance University revenues through raising tuition fees and introducing user charges for hostels and other facilities.
- (15) To increase income from farms at the disposal of the AUP system.
- (16) To develop marketing and business development capabilities at all relevant levels in order to maximize client-based revenue opportunities.
- (17) To recognize and act upon the occasional need for restructuring or retrenchment in University operations including University courses, manpower levels, and physical operations.

The objectives stated above are contextual, i.e., they are formulated to address the actual problems and issues facing AUP. Long-term objectives also include generic criteria, and these are important for the well-being of the organization. Thus, AUP's strategic planners should try and ensure that the long-term objectives encompass the following areas:

- Financial Viability
- Productivity
- Competitive Position
- Employee Development
- Employee Relations
- Technological Leadership
- Public Responsibility.

Moreover, AUP's strategic planners should assess the qualities of an objective to see whether it is a good or a bad one. The following criteria for objectives will help to improve their quality: they should be acceptable, flexible, measurable over time, motivating, suitable, understandable, and achievable.

## **6.2. STRATEGY FORMULATION AND STRATEGIC CHOICE**

The stages discussed above will make it possible for AUP to formulate a major or 'grand' strategy. This will provide a basic direction for strategic actions, as well as a basis of coordinated and sustained efforts directed towards achieving long-term objectives. A number of generic grand strategy options can be considered, though AUP strategic planners might prefer a more contextual formulation of strategy. The latter approach would tend to build incrementally from the status quo. We will briefly assess some major strategy options that are normally applicable to a corporate business organization, but elements of which can also provide useful strategic options for an educational institution like AUP. We will then examine how these strategies can be modified to formulate an appropriate contextual strategy for the AUP system.

### **6.2.1. CONCENTRATION**

A common grand strategy is concentration on the current business. An institution directs its resources to the profitable growth of a single product, in a single market and with a single technology. This focus on specialization can give competitive advantage over more diversified competitors, since it is possible for the more focussed institution to excel in its particular field.

To a large extent AUP's mission is that of concentration: on the agricultural sciences. It thereby varies from more broad-based universities. The latter might have a faculty of agriculture as one of several faculties. The reason for establishing AUP was to focus on a particular sector, and this mission has been carried out faithfully, in that there has been no diversification into other disciplinary fields. We do not foresee any change in direction here. Concentration should, therefore, remain the underlying strategic consideration for AUP.

### 6.2.2. MARKET DEVELOPMENT

Market development, in the context where it might be applicable to an educational institution, is the strategy of offering existing products in new markets. Such expansion could be geographical in nature, or it could mean attracting other market segments.

The geographical aspect would entail regional expansion, national expansion, or even international expansion. The aspect of attracting other market segments would entail developing AUP's 'products' so that they appeal to other customers than those presently served.

Taking the geographical aspect of market development, we do not foresee the opening up of new outlets for AUP operations. There have been many examples in recent years of universities setting up subsidiary campuses, often outside their country of origin. The built area at AUP's existing campus has been greatly expanded under TIPAN. It will adequately meet the on-campus needs for the foreseeable future. Establishing locations of any substantial size in other parts of NWFPP is not really feasible, owing to the large capital costs, the presumable absence of concentrated demand, and difficulties of locating and sustaining faculty.

However, AUP could seriously consider establishing smaller sized teaching outlets for the shorter courses that we propose AUP should develop. Multi-locational teaching would be highly effective if it is decentralized. If courses for farmers, small businesses, local bodies, and local officials are given close to their place of work and residence, new market segments can be accessed. To save costs, perhaps the network of agricultural stations, interspersed throughout the province, can provide the locations for such short courses.

Opening up new market segments for AUP's products is already part of AUP's strategy, which it intends to achieve through outreach. Apart from farmers, who will be accessed through 'technology packages' and perhaps short courses, we recommend that local businesses, involved with agricultural trade and agro-processing, also be targeted as a potential market. A new market segment will also need to be developed when higher tuition fees and user charges are introduced. Those with

the capacity to meet such costs will need to be targeted for enrollment. They will join AUP if they feel the investment is worthwhile.

In opening up new markets, high quality is an important factor in attracting new customers. We can see that market development will be an element in AUP's proposed new strategy, especially in the context of market segments. To achieve sustainability, a number of revenue generating sources will need to be tapped. Contract research will require clients from business firms, from government, and from international organizations. Similar kinds of clients will need to be targeted for the hiring of physical facilities, for conferences, workshops, and seminars.

#### **6.2.3. PRODUCT DEVELOPMENT**

This strategy involves substantial modification of existing products, or creation of new but related products that can be marketed to current customers through existing channels. This clearly will need to be incorporated into AUP's strategy. The outreach program is already designed to make academics offer a different product, additional to their University courses. The shorter courses proposed, the contract research and consulting, and the hiring of facilities are going to be significant additions to AUP's product portfolio. A more 'commercialized' approach from the agricultural research stations will also mean developing new products for clients, in the way of applied research. The setting up of an endowment fund can also be seen as a new 'product', which we strongly propose should be added to AUP's 'portfolio'. Thus, there will be a mixture of both market development and product development in AUP's sustainability strategy.

#### **6.2.4. RETRENCHMENT/TURNAROUND**

Retrenchment or turnaround strategies might be required when institutions are faced with declining profits or have already gone into the red, i.e., are experiencing deficits. Despite its adverse

position, the institution's strategic decision makers might feel that it can survive and eventually recover if a concerted effort is made over a period of years to build on strengths and to overcome weaknesses. To be successful in this turnaround, a strategy of **retrenchment** might be necessary.

Retrenchment can entail cost reduction. Cutting costs can be achieved through decreasing the work force, by such means as redundancies. Other options are cutting back on replacement of retiring staff, reducing salaries and fringe benefits, and eliminating unessential 'ceremony'.

Retrenchment can also entail asset reduction. Thus fixed assets like land and buildings, not essential to the organization's operations, can be disposed off. Unessential equipment can also be sold.

Costs can also be reduced by cutting back on the 'product portfolio'. For AUP, this might mean reducing the range and number of courses, by perhaps closing off those with low student enrollment. The faculty-student ratio can be increased, along with an increase in faculty teaching load. A number of benefits can be removed, such as research grants, foreign training visits, and visits to conferences. The more subsidized 'customers', or students in this case, might need to be shed, and emphasis placed on higher fee-paying candidates. The objective would be to achieve turnaround by reversing current negative trends.

AUP could face cuts in budgetary levels, or more likely it could keep getting low nominal increases that do not keep up with inflation rates. This might force a retrenchment strategy on the institution. If the negative trends are not halted, more and more drastic action would be needed. The final end game, which in fact is a strategy that several organizations have had to adopt, is that of liquidation. This would happen in extreme cases, and we need not pursue this particular sequence.

Although, as mentioned earlier, there seems little room for cost cutting in case of AUP. However, given AUP's existing resource position and the fact that it is faced with growing future deficits if

current trends continue, we can realistically foresee the retrenchment mode eventuating. It is precisely to avoid this situation from occurring that we have recommended a bold departure from previous parameters, cultures, and practices. Only through sustained action on a number of fronts can the threats facing AUP system be overcome.

### **6.3. STRATEGY**

On the basis of the above considerations, we recommend that AUP's strategy should be to seek a high quality level of performance, and to achieve financial and administrative sustainability through revenue generation and effective human resource management.

**CHAPTER 7**

**FINANCIAL STRATEGY**

## 7. FINANCIAL STRATEGY

Broadly speaking, AUP has three means for handling its deficit:

- (a) UGC grant,
- (b) Outside fund raising to create a permanent endowment fund,
- (c) Increased income from own resources such as higher tuition fees, greater contract research, and renting of facilities.

The generation of revenue from own resources and raising funds from outside sources basically depends on the marketing strategy of the University (See Chapter 8). Details of the heads under own resources and the assumptions used in their projection are given in Appendix 4.

From the various resource gap and break even scenarios we have examined in Chapter 5 (Tables 1 and 2), it is evident that meeting the deficit through any one source is not likely. The only solution is to make the effort in all areas. Thus, we recommend the following targets:

- (a) Convince UGC to increase its grant annually by the inflation rate.
- (b) Keep salary increases equal to the inflation rate. Given the severe budgetary restrictions increasing the staff salaries at the inflation rate may seem generous, but we feel that this is the minimum increase necessary to keep the highly qualified staff from leaving AUP.
- (c) Increase the number of students to 1,750 in the next five years.
- (d) Increase the tuition fee to Rs 1,000 per month.
- (e) Create a permanent endowment fund through seed money of Rs 200 million and add Rs 10 million per year to it starting in 1994-95.
- (f) Increase the income generated from own resources (excluding tuition fee) by an average 25% each year, starting in 1994-95.

The financial impact of the recommended strategy is shown in Table 3.

Each one of the above targets may appear to be daunting. However, AUP has no other choice. An enormous amount of financial and other resources have gone into the TIPAN project to bring it at a stage where benefits from investment appear within reach. Pakistan has already under invested in agricultural research compared to other

**TABLE 3: FINANCIAL IMPACT OF THE RECOMMENDED STRATEGY**

**KEY VARIABLES:**

Expected Inflation	10.00%	Starting Endowment	Rs 200 m
Increase in Salaries	10.00%	Annual Incr. in Endowment	Rs 10 m
Increase in Other Costs	10.00%	Growth in Own Resources	25.00%
Growth in UGC Grant	10.00%	Monthly Tuition	Rs 1000

**CUMULATIVE RESOURCE GAP 2003-04:** Rs 18.67 m

**DISCOUNT RATE** 15.00%  
**PRESENT VALUE OF ANNUAL DEFICITS** Rs 0.58 m

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b>												
<b>(Rs m)</b>												
Open. Bal	-24.72	0.00	0.00	-5.47	-9.52	-11.66	-11.31	-8.61	-5.69	-2.16	2.52	9.11
UGC Grant	38.45	42.30	46.52	51.18	56.29	61.92	68.12	74.93	82.42	90.66	99.73	109.70
Own Resources	3.58	4.47	5.59	6.99	8.74	10.92	13.65	17.07	21.33	26.67	33.33	41.67
Endowment Income	0.00	0.00	30.00	31.50	33.00	34.50	36.00	37.50	39.00	40.50	42.00	43.50
Tuition Income*	0.18	0.20	12.00	15.84	20.33	25.56	30.75	33.82	37.20	40.92	45.02	49.52
<b>Total Receipts</b>	<b>17.49</b>	<b>46.97</b>	<b>94.12</b>	<b>100.03</b>	<b>108.84</b>	<b>121.24</b>	<b>137.20</b>	<b>154.71</b>	<b>174.27</b>	<b>196.59</b>	<b>222.59</b>	<b>253.50</b>
<b>EXPENDITURES:</b>												
<b>(Rs m)</b>												
Salary	44.70	49.17	54.09	59.50	65.45	71.99	79.19	87.11	95.82	105.41	115.95	127.54
Other Charges	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16	51.87	57.06
Maint. New Fac.	0.00	0.00	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
Library	0.00	0.00	1.00	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.14	2.36
Mkting Expend.	0.00	0.00	0.30	0.33	0.36	0.40	0.44	0.48	0.53	0.58	0.64	0.71
<b>Total Expend.</b>	<b>64.70</b>	<b>71.17</b>	<b>99.59</b>	<b>109.55</b>	<b>120.50</b>	<b>132.56</b>	<b>145.81</b>	<b>160.39</b>	<b>176.43</b>	<b>194.07</b>	<b>213.48</b>	<b>234.83</b>
Annual deficit	0.00	0.00	-5.47	-4.04	-2.14	0.35	2.70	2.92	3.53	4.68	6.60	9.55
<b>CUM. RESOURCE GAP:</b>	<b>0.00</b>	<b>0.00</b>	<b>-5.47</b>	<b>-9.52</b>	<b>-11.66</b>	<b>-11.31</b>	<b>-8.61</b>	<b>-5.69</b>	<b>-2.16</b>	<b>2.52</b>	<b>9.11</b>	<b>18.67</b>
<b>(Rs m)</b>												

\* Starting 1994-95 tuition fee is proposed to increase to Rs 1,000 per month, increasing annually at the rate of inflation. (See also Appendix 4)

**NOTE: IN THIS RECOMMENDED FINANCIAL SCENARIO, IT IS ALSO ASSUMED THAT AUP'S CUMULATIVE RESOURCE GAP UNTIL 1993-94 WILL BE WIPED OFF.**

Asian countries, as shown in Table 4.

**TABLE 4: RESEARCH EXPENDITURE PER SCIENTIST IN SELECTED ASIAN COUNTRIES**

<b>COUNTRY</b>	<b>RESEARCH EXPENDITURE PER SCIENTIST</b> <b>('000 \$)</b>
Malaysia	56.4
Papua New Guinea	45.9
Indonesia	30.2
India	21.8
Bangladesh	16.2
Philippines	15.5
Thailand	15.3
Nepal	12.4
Sri Lanka	10.9
Pakistan	8.9

**Source: World Bank Report 1988.**

This neglect of the agricultural research in Pakistan has been particularly detrimental to the nation. Various studies have consistently shown very high rates of return from investment in agricultural research compared to investments in other public projects. Results of some of these studies are summarized in Tables 5 and 6.

**TABLE 5: MARGINAL INTERNAL RATES OF RETURN (MIRR) FROM AGRICULTURAL RESEARCH**

COUNTRY	TYPE OF RESEARCH	TIME PERIOD	MIRR (%)
Pakistan	Applied	1956-85	82%
	General	1956-85	56%
	Commodity	1956-85	88%
	All research	1956-85	57-65%
India	All research	1958-83	65%
	All research	1959-71	100%
Bangladesh	All research	1948-81	100%

**Source: 'Agricultural Research Productivity in Pakistan', PARC/Economic Growth Center (Yale University), 1990.**

Note that typical return on investment in infrastructure such as roads and bridges is approximately 15-20 percent.

**TABLE 6: ESTIMATES OF MARGINAL INTERNAL RATES OF RETURN FOR CROP SPECIFIC RESEARCH INVESTMENTS**

COUNTRY	COMMODITIES	TIME PERIOD	MIRR (%)
Pakistan	Wheat	1956-85	76%
Pakistan	Wheat	1967-81	58%
India	Wheat	1959-83	50%
Pakistan	Rice	1956-85	84-89%
India	Rice	1959-83	155%
Pakistan	Maize	1956-85	46%
India	Maize	1959-83	94%
Pakistan	Bajra	1956-85	44%
India	Bajra	1959-83	107%
Pakistan	All cereals	1956-85	84%
India	All cereals	1959-83	218%

**Source: 'Agricultural Research Productivity in Pakistan', PARC/Economic Growth Center (Yale University), 1990.**

Possible explanation for the difference between India and Pakistan may be the ratio of basic to applied research. India has 2:1 edge over Pakistan. The AUP system may help in bridging this gap through the high concentration of Ph.Ds and state-of-the-art facilities.

Furthermore, PC-1 (1991) for the TIPAN project shows that if there is only a 5 percent increase in agricultural production as a result of the AUP strategy after 1998-99 even then the present value of these additional revenues will be 60 percent greater than total cost of the project. Judging from the marginal internal rates of return estimated for Pakistan, the benefit calculated in the PC-1 may be grossly understated.

To summarize, the potential benefits accruing from the TIPAN project justify continuing financial and political support. Failure to provide this support will indicate a poor original investment strategy, with the consequent loss of a tremendous opportunity for improving the productivity of the agricultural sector.

In the following chapters we discuss the marketing and administrative strategies required to achieve these targets.

**CHAPTER 8**

**MARKETING STRATEGY**

## **8. MARKETING STRATEGY**

AUP can enhance its revenues through the following three sources:

- (a) University Grants Commission (UGC),
- (b) The University's own resources, and
- (c) Donations and return on endowment fund.

All the above three sources of revenue for AUP have to increase significantly in order to cover the cumulative resource gap by year 2003-04. An aggressive marketing strategy is required to generate income from these sources. The University's marketing strategy will be instrumental in AUP's transition from a wholly government-funded institution to a semi-private institution which generates an increasing share of its total income through its own programs and efforts. Only by doing this the University can have funds to maintain quality education which can attract and retain 'customers'. An institution starved of funds will be subject to further deterioration in quality and service and physical decay of building and other facilities.

### **8.1. INCREASING UGC FUNDING**

It is absolutely vital for AUP to secure enhanced funding from the University Grants Commission, pegging it at least to the official annual rate of inflation. UGC grant to AUP is expected to increase by about 5 percent annually. Surely, with significantly larger human and physical resource of AUP after TIPAN, UGC funding has to increase much higher than 5 percent. Table 3 in the previous chapter shows that despite an annual increase of 25 percent in AUP's own resources (excluding tuition fee, for which a monthly rate of Rs 1,000 is proposed) and an initial endowment fund of Rs 200 million, with an annual increase of Rs 10 million, AUP deficit will persist, unless UGC funding increase at an annual rate of 10%.

In fact apart from an annual increase in grant of at least 10%, the University should also seek help from UGC and other government bodies in establishing an endowment fund. In preparing a proposal for the UGC, AUP management should point out that the expected 5 percent annual increase in funding is inadequate for the new, expanded human and physical resources of the University. It will also be important for AUP top management to apprise UGC officials of AUP's efforts in generating income from other sources, namely, own resources and donations.

## **8.2. ENHANCING INCOME FROM UNIVERSITY'S OWN RESOURCES**

The first step is to identify the University's **product portfolio**, that is, what the University can offer to the market, at a price. AUP's product offering includes:

- Curriculum (undergraduate, and graduate courses)
- Highly qualified faculty
- Hostels
- Conference facilities (complete with large auditorium, and state-of-the-art audio-visual facilities)
- Improved library
- Improved laboratory and field equipment
- Agricultural farms.
- Short courses (continuing education)

Other items in the AUP's product portfolio could be the University's endowment fund which can be promoted to various customer segments to attract donations. Under each of these product offering there could be several items for revenue generation. For example, the students who enroll for B.Sc. and M.Sc. courses at the University pay admission, registration, tuition, and examination fees, hostel rent, etc.

Similarly, contract research by the faculty can be a source of substantial income. Both public sector and private sector

organizations should be targeted.

Renting conference facilities is another potentially significant source of revenue. The new auditorium at AUP has sophisticated acoustics and audio-visual aids. The facilities can command rates comparable to those charged by 5-star hotels.

Also, income could be generated from developing semi-commercial projects such as seed nurseries, vegetable and fruit preservation, bakery items, pilot feed plant for poultry, and dairy animals.

Appendix 4 outlines the sources/items of revenue along with suggested annual growth in each of the items. The growth rates suggested are arbitrary, but not unrealistic. A better estimation of the actual potential of each item can only be made by a combination of several factors including past experience, faculty judgement, information about future trends, etc. However, there seems a tremendous potential of generating substantial revenues from various University services. Take for example, the revenue opportunities in offering short courses to a variety of clientele, including government officials, farmers, women, and agribusiness professionals. The facilities available to the Continuing Education Division at AUP are second to none in the province or perhaps the country. These include a large auditorium, lecture rooms, computer unit, a hostel for 100 persons, and cafeteria. These facilities together with carefully chosen curricula and quality faculty will attract a large clientele from home and abroad for short-term training.

It is important to approach revenue generation under each source with the right marketing strategy in order to make the achievement of growth targets more likely. The first step in preparing a marketing strategy is to thoroughly understand the market. A 'market' can be defined as 'a set of all people who have an actual or potential interest in a product or service and the ability to pay for it.'

Thus, the agricultural-student market can be defined as the set of all people who have an actual or potential interest in

studying agriculture-related disciplines and the qualifications and ability to buy this education. The University would benefit from preparing a market segmentation scheme, and deciding upon the segment (target market) to concentrate on. A market can be segmented by age, sex, income, geography, etc. For example, for its B.Sc. and M.Sc. courses AUP might aim at Pakistani as well as foreign students with the ability to pay high tuition fees.

The concept of target marketing is applicable to the various publics AUP needs to serve to achieve its objectives. Apart from students, AUP should target agri-businesses, donors, and other markets and publics.

The next step in marketing strategy for AUP is to devise the 'marketing mix' (product, price, place (how educational programs and services are made available), and advertising and promotion) and to determine a marketing expenditure level that supports the product offering in each of the chosen target markets. Marketing expenditure for offering student programs will include a part of faculty salaries, and cost of preparing and sending high-quality University catalogs and brochures to potential students in the 'target market'.

#### **8.2.1. AUP 'PRODUCT'**

Although high-quality agricultural education is the 'generic' product of the University, AUP's more tangible products include its curriculum, high-quality faculty, and physical facilities (new campus, hostels, conference facilities, etc). AUP officials should review their product portfolio in order to match each product to its target market. Some modification of product(s) may be needed to obtain a better product-market fit.

An example of where a product modification could be particularly relevant is in the case of AUP's curriculum. It seems that there is a considerable duplication of courses and course contents between and within departments. Also, during the past several years, none or very few students have opted either for a

specialization or for a master's degree in some of the departments.

Departments/courses should be evaluated on the basis of 'centrality to the University's mission', on the 'quality' of the program, and on 'market viability'. See Appendix 5 for criteria for investing in a department.

The above example is a case of modification where deletion of some courses/services seems appropriate. An example where an introduction of a service is recommended is the suspended internship program. An effective internship program must be maintained, especially in applied disciplines like crop production, crop protection, and animal husbandry and veterinary sciences. A properly planned internship on a private farm, a research station, or in an agriculture-related business or industry will lead to career-related learning experience and will contribute to student's capacity to effectively and successfully enter the job market upon graduation.

#### **8.2.2. PRICING**

Pricing various educational and other programs and services of AUP will depend on a number of factors including the cost, quality, demand, prices charged by comparable competing institutions, the desired level of revenue to be generated, and the ability of the prospective customers to pay. Of course, a great deal of managerial judgement will also need to be exercised in setting prices.

For example, in Table 3 of this report we have proposed a monthly tuition fee of Rs 1,000, growing annually at the rate of inflation. While setting prices, the University management will consider various factors stated above, it will also probably need to consider a number of subjective factors like political and social impact of a price increase. The management will also probably decide about the criteria for waiving tuition fees, basis for any differential in tuition fees charged, etc. For example, in the academic year 1992-93, AUP admitted 65 students under a self-financed scheme paying Rs 1,000 tuition fee a month, with all other

students paying nominal charges (Rs 30) for tuition. Furthermore, tuition fee schedule will differ for undergraduate and graduate students. Tuition differentials could also exist for different courses.

### 8.2.2.1. THE REVENUE FUNCTION

AUP's revenue function is summarized in Table 7.

**TABLE 7: AUP REVENUE FUNCTION**

AVERAGE ANNUAL TUITION PER STUDENT PER YEAR	x	NUMBER OF STUDENTS ENROLLED
	+	
AVERAGE ROOM AND BOARD PAYMENT PER PERSON PER YEAR	x	NUMBER OF STUDENTS IN RESIDENCE HALLS
	+	
		NET REVENUE FROM OTHER SERVICES -- CONFERENCES, PROGRAMS, FACILITIES, RENTALS, ETC.
	+	
		NET REVENUE FROM CONTRACT RESEARCH
	+	
		DONATIONS
	+	
		RETURN ON ENDOWMENT
	+	
		UGC GRANT
<b>TOTAL AUP REVENUE</b>		

The University can improve its revenue by increasing efforts in any one or more of the avenues shown in Table 7, as long as an increase in price is not offset by a decrease in quantity.

Several options are available to AUP to increase revenues from own resources. AUP can consider raising tuition fee. It can seek to attract and retain more students. It can increase room and board charges (this increase could be pegged to cost increases) or, if rooms are vacant, consider ways to increase the attractiveness of campus living. The University can rent its facilities or offer workshops and other programs to private and government institutions that will return a surplus. It can also encourage sponsored (contract) research.

AUP will also require a major effort to start fund-raising efforts (seeking donation and establishing an endowment fund). Section 8.3. deals with how to initiate and manage AUP fund-raising activities.

With maximum effort to raise revenues, AUP should also monitor its costs and find ways to reduce them. Some cost-saving measures that could be taken include energy-conservation, and reducing waste.

### **8.2.3. AVAILABILITY OF EDUCATION AND RESEARCH SERVICES**

The basic distribution question for an educational institution is, 'How can we make our programs and services available and accessible to our target customers'? The accessibility of a program can be enhanced by offering it closer to the potential participants and by scheduling the program in a manner that makes it convenient for prospective participants to attend.

AUP campus has a prime location in the city center, adjacent to the University of Peshawar. The new 700-room campus, with hostels, library, computing, auditorium, and other facilities, is one of AUP's major strengths. AUP planners should have a comprehensive plan for how the campus will be used and what types of spaces will be needed. In addition to classroom theaters, study

areas and areas for meals and social hours will be needed. The rooms and corridors must be planned in a way to handle all those likely to be attending programs in the campus at one time. Although the new campus is almost ready and structures for various activities are already in place, there needs to be a plan for optimal utilization of the huge space available, along with equipment and other facilities.

Apart from the agricultural education (B.Sc. and M.Sc. programs) and research at the campus, AUP has agricultural research stations (ARS) located in several towns in NWFP. The research done at the University and the research stations is disseminated to the farmers through provincial agricultural extension network. The 'distribution' network of the University is diagrammatically shown below:



As part of the TIPAN concept, a directorate of outreach has been established in the University for identification of problems, development of packages of technology and their efficient dissemination to farmers through provincial agricultural extension.

Through liaising with AUP, ARS, and directorate provincial agricultural extension, the directorate of outreach conducts diagnostic surveys, farmer systems research (FSR) programs, specific field-problem based campaigns, training programs for field staff, farmers, and women, and prepare farmer related audio visual films.

Through outreach, AUP also offers continuing education program for the upgrading of teaching and research skills of its faculty and researchers. The service is offered both in-house as well as at the research stations.

The issue of availability and accessibility will also be very important for development of the recommended short programs catering to agro-businesses, employees of agricultural and other government departments (a program equivalent to the executive development programs offered by business schools).

The objective of AUP's distribution strategy should be how best to deliver to target customers the various products including educational programs, extension services, publications, research findings in agricultural fields, and farm produce.

#### **8.2.4. PROMOTION**

AUP needs effective communication with its various markets and publics. Developing good programs and services, pricing them attractively, and making them readily available to target customers is not enough. The institution must also inform customers and others about its goals, activities, and offerings and motivate them to take an interest in the institution.

AUP's communications agenda should include:

- Enhancing the image of the institution
- Providing information about the institution's offerings
- Attracting prospective students and encouraging application and enrollment
- Building alumni loyalty and support
- Attracting prospective donors
- Correcting inaccurate or incomplete information about the University.

In addition, the University should determine and meet the information needs of faculty, staff, current students, and others in the internal environment.

For effective communications strategy AUP will devise public relations and advertising plans in line with the characteristics of

the 'target market'. For example, in preparing student catalog, there first has to be an understanding of the factors influencing student choice of a university, which could include quality education, fees, availability of financial aid, competent faculty, job prospects, location of campus, library and laboratory facilities, computer facilities, general reputation, hostel accommodation, campus environment, transport facilities, extra-curricular activities, etc. These factors can then be emphasized in the student catalog.

Similarly, to generate external funding attractive documentation and audio-visual material will be needed to 'sell' the Project. The University should emphasize its mission, report on the success of its research and course development efforts, and state plans for the future. Potential role of the University in training manpower for agricultural development in other developing countries of the region especially Afghanistan and Central Asian Republics could be attractive to many donors interested in economic development of the region, and can thus be termed as a key point to be included in communication plan for the donor segment.

One of the most critical communication plan which AUP needs to prepare is to convince UGC and other government agencies/ministries to actively support TIPAN Project, both financially and politically. For this a serious personal selling effort is required on the part of the top officials of the University and some key officials of the TIPAN technical assistance team.

Prior to the shifting of the facilities to the new campus provides an excellent opportunity for utilizing print media for promoting the University. AUP should capitalize on this by featuring enhancement in physical, human (trained faculty and staff), and other strengths in preparing its overall promotional program. Since its inception in 1981, the University has not held its convocation. After the completion of the new campus, the first convocation could be held as a major event to promote the cause of University.

### **8.3. ESTABLISHING ENDOWMENT FUND AND ATTRACTING DONATIONS**

In addition to attracting more students, charging higher tuition and other fees, and increasing income from contract research, and farms, etc, AUP must attract donations to fulfill its mission.

Given the pressing financial needs of AUP, a seed grant of Rs 200 million is proposed. This money will not only contribute significantly in meeting annual deficits, but will establish a base for AUP to build on. Considering that the TIPAN project is being wound up before its final third phase, it is imperative on the USAID and GOP to contribute towards the seed money. The total TIPAN allocation was about Rs 1.6 billion (with approximately 85% of this total amount provided by USAID). To provide Rs 200 million (about US \$ 6.7 million) in seed grant to sustain a project on which such a huge amount of money was spent seems reasonable. After the seed grant of Rs 200 million, starting 1994-95, donations of Rs 10 million annually to the endowment fund will be required to cover AUP deficits.

Attracting donations will require a considerable amount of preparation and effort by AUP management.

#### **8.3.1. LAYING GROUNDWORK FOR FUND RAISING**

The strategic planning framework used in this report to evaluate sustainability of AUP has resulted in the following advantages:

- Awareness of the key strengths and weaknesses of the University and the major threats and opportunities that the environment poses
- Identification of the University's key publics
- Understanding of its major markets -- students, donors, and

others

- Identification of AUP's competition
- Identification of the overall goals and objectives the University needs to pursue.

With this preparation at the institutional level, AUP management can proceed to determine the best features of the institution that would merit donor support; set fund-raising goals; research donor markets; and develop and implement fund-raising action plans.

### **8.3.2. SETTING FUND-RAISING GOALS**

The University should set annual and long-range goals for fund raising. The goals state the uses for the donated funds, rather than just desired total amount. In the process of developing fund-raising goals, the University's management should consult with key people, including deans and faculty heads, to determine their most pressing needs. These needs and 'wishes' should reflect strategic planning at the University and faculty level. The projects need to be prioritized as a basis for determining the amount the institution would like to raise and the amount that is of greatest importance.

Setting a total goal each year for contributions will establish a budget for fund-raising activities, motivate the management and volunteers to increase efforts, and measure fund-raising effectiveness.

After setting its fund-raising goal, the institution has to develop an overall strategy, identifying the most promising donors and determining how to present its case to the donors.

### **8.3.3. RESEARCHING AND APPROACHING DONOR MARKETS**

First, prepare a list of potential donors and potential partners in raising funds. Potential donor markets include federal and provincial government, private sector (individuals, agribusinesses, etc.), foreign donor agencies, and alumni. An example of potential partners could be landlords, who could also be potential targets for donations.

Second, select donors on the basis of 'giving potential' and 'interest potential'. Preferably, concentrate on large potential donors.

Third, prepare the case to be put to a donor or a group of donors. Different pitches may well be required for different donor markets. These pitches should highlight the best features of the University that would merit donor support. Also, prepare for answers for the prospective donor who wants evidence that the University knows where it is going and will spend donated money wisely to further significant goals. Present donations as an 'investment' in some aspect of the University that the donor cares about. One of the most powerful appeals in attracting donations is an offer to have donors' names (or the names of their loved ones) attached to campus buildings, distinguished chairs, and the like.

Different modes could be used to approach potential donors, including personal solicitation by University managers and direct mail. However, large contributions should always be sought through personal solicitation by top management of the University.

The vice-chancellor should be the chief fund-raiser for AUP and should be involved in meeting major prospects and asking for their support. To assist in his fund-raising efforts, he will establish committees and working groups or task forces.

### **8.4. ORGANIZATION FOR MARKETING**

AUP's faculty, research, and other staff should all take an active role in marketing the University more effectively. Formally,

however, the Directorate of Outreach could take on the responsibility of implementing marketing programs. In the TIPAN concept, the outreach program was designed to link the teaching and research functions of AUP to various extension services that work directly to serve farmers and their families. Organizationally, the Directorate of Outreach appears to be a logical center for marketing implementation. In a business organization, the marketing department liaise with production, R&D, finance, and personnel departments to serve chosen customer segments with the company's products and services. The marketing department engages in market research, new product development, sales and distribution, pricing, and advertising and promotion activities. Some of these activities are jointly conducted with other departments. For example, new product development would involve marketing, R&D, production, and finance departments. Similarly, in pricing decisions marketing and finance departments are involved.

The Directorate of Outreach could perform the marketing function at AUP. It could help various faculties in curriculum development by assessing the demand in the market for different courses offered. It could help the admissions office by identifying and attracting prospective students. The Directorate of Outreach could also help in the development and execution of various technology, training, and service packages for farmers, research stations and extension staff, and other publics served by the University. Another important role of the Directorate will be the provision of communication services in the form of bulletins, brochures, and audio-visual aids for students, farmers, and donor agencies, etc.

With the construction of a new outreach center and an auditorium, and provision of sophisticated audio-visual equipment, AUP has the necessary infrastructure to provide effective communication services. After adequate staffing, the Directorate of Outreach can utilize these and other facilities to perform the marketing function. At the head of the Directorate, could be the University's 'business manager', in charge of University's

marketing strategy and implementation.

As stated earlier, all three possible sources of revenue generation (namely, UGC grant, University's own resources, and income from endowment fund) will need to be tapped vigorously to achieve financial sustainability of AUP. Pragmatically, however, the key to putting the University on the road to financial sustainability is to increase UGC funding and to establish an endowment fund. The government backing will be especially necessary in the establishment of an endowment fund, which we believe is absolutely necessary for sustaining AUP programs and services. Possible sources are USAID and other foreign agencies, government departments, local and foreign donors, agri-businesses, large farmers, and alumni.

**CHAPTER 9**

**ADMINISTRATIVE SUSTAINABILITY**

## **9. ADMINISTRATIVE SUSTAINABILITY**

Linked with AUP's financial sustainability is its administrative sustainability. An organization cannot survive without proper human resource management (HRM). In this chapter, we deal with the pressing issues of administrative sustainability of AUP.

### **9.1. LINKING HUMAN RESOURCE STRATEGY TO OVERALL STRATEGY**

The theme of personnel management has typically been to develop uniform policies and procedures. However, the portfolio concept of strategy formulation maintains that, just as capital requirements differ according to the strategic posture of the business unit, so do human resource requirements. Implicit in the view of an institution as a portfolio of diverse business assets is the concept that human resource systems must be congruent with the strategy of the business unit. They are meant to support the overall strategy, even if this leads to considerable variation in programs across the institutions. For example, at AUP while the research strategy calls for high risk-taking, longer time horizon, and innovation, the teaching strategy calls more for continuation and gradual change. In such a diversified institution, the challenge for human resource professionals becomes one of designing systems that will support a diversity of business unit strategies without losing sight of overall institutional objectives and the need for a certain equity across the two activities.

### **9.2. STRATEGIC HUMAN RESOURCE MANAGEMENT**

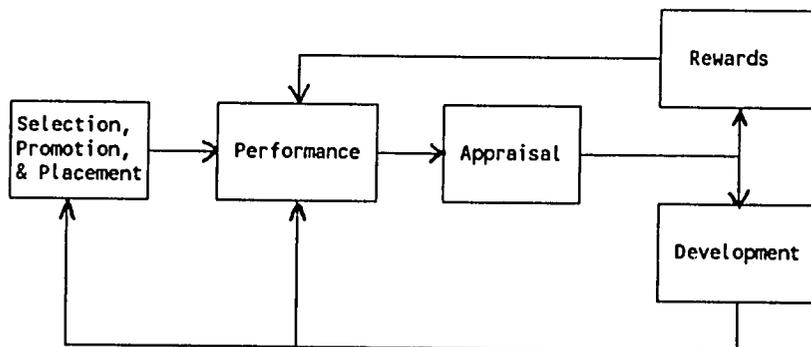
Human Resource Management policies affect certain immediate organizational outcomes and have some long term consequences. Policy choices made by the management will affect the overall 'compliance' of all employees, the 'commitment' of employees, the degree of 'congruence' between the goals of employees and those of

the University, and the overall 'cost effectiveness' of the University.

In the long run, striving to enhance the four C's above will lead to favorable consequences for individual well-being, societal well-being, and organizational effectiveness. By organizational effectiveness we mean the capacity of the University to be responsive and adaptive to its environment.

The human resource management system can be described in terms of four generic processes shown in Figure 3.

**FIGURE 3: HUMAN RESOURCE MANAGEMENT SYSTEM**



These four processes reflect sequential managerial tasks. The dependent variable is performance. The human resource elements are designed to impact performance at both the individual and the organizational levels.

### **9.2.1. SELECTION, PROMOTION, AND PLACEMENT PROCESS**

The selection, promotion, and placement process includes all those activities related to the internal movement of people across positions and to the external hiring into the organization.

Three strategic selection concerns are particularly salient. The first involves devising an organization-wide selection and promotion system that supports the organization's business

strategy. The second strategic concern requires creating internal flows of people that match the business strategy. The third strategic concern is matching key managers to the business strategy. With the strategic emphasis on revenue generation from AUP's product portfolio it will need a greater meshing of executive skills with the strategic plans.

The initial step in the selection and recruitment process is the determination of human resource requirements. The organizations must decide what sort of people are required to support current and future strategic directions. Since commercialization is the recommended strategy for the AUP system, a marketing focus is necessary. Currently at AUP no one is handling the marketing function. Thus, one of the key need of the AUP system is hiring some marketing professionals to handle promotional and fund raising activities. This recruitment need not only be from outside, but people from within the organization may also be used, after proper training.

#### **9.2.2. APPRAISAL PROCESS**

Perhaps the least liked activity in any organization is doing the annual performance appraisal. The activity is often only a perfunctory paper exercise. The problems with appraisal systems include poorly designed procedures, a psychological resistance of appraisers to give negative evaluations, and a perceived invalidity. The appraisal system, nonetheless, is central to the human resource cycle. It contributes to three essential processes:

1. Rewards can be allocated in relation to performance only through the use of an appraisal system by which performance can be measured. Such appraisal systems range from subjective personal evaluations to impersonal criteria based on scores.
2. Human resource planning relies on valid appraisals. A current inventory of talent can be made only through a valid appraisal

process that shows who have been performing well and who have not. In addition, future human resource projections must be based on an assessment of the potential of the employees, which is indicated by the appraisal process. Without the data provided by a valid appraisal, such forecasting is impossible as there is no basis for making predictions.

3. The development process is also built on the appraisal process. Based on assessment of an individual's performance and potential, both the individual and the organization can plan for future training and development. A weak data base leads to a hit or miss training program and retards the development process.

A strategic concern of AUP is to develop an appraisal process that is supportive of its mission and business strategy.

### **9.2.3. REWARD PROCESS**

Once people are in their jobs, they need to be rewarded for good performance. A partial list of potential rewards is:

- Pay in its various forms: salary, bonuses, benefits, and perquisites
- Promotion: both upward mobility and lateral transfer into desirable position
- Management praise
- Career opportunities: a long term chance for growth and development
- Personal sense of well-being: feeling good about oneself for accomplishing objectives
- Opportunity to learn: a chance to expand one's skills and knowledge base
- Security: a sense of job and financial security
- Responsibility: providing individuals with a sense of organizational responsibility.

Most organizations, however, do not do a very good job of managing these rewards to produce desired organizational behaviors. As a result, the reward system is one of the most under-utilized and mishandled managerial tools for driving organizational performance. As can be seen from Figure 3 (p. 104), rewards are a major factor influencing performance. Assuming that an organization can appraise performance, the organization then has a rationale for allocating rewards based on how well people perform. Frequently, organizations think of rewards only in terms of managing pay.

A major strategic issue concerning the reward system is how to use it to overcome the tendency toward short-sighted management. It is, however, unreasonable and unwise to recommend that managers be rewarded only for long term strategic goals, as businesses must perform in the present to succeed in the future. Thus, the reward system should provide balanced support to short-term and long-term strategic goals.

The above translates for AUP in a concern in their reward system for not only rewarding excellence in current teaching and research but also rewarding development of future courses and doing basic research which may become a commercial success only in the long term.

#### **9.2.4. MANAGEMENT DEVELOPMENT**

Activities designed to ensure that individuals are properly equipped with skills and knowledge to carry out their jobs falls into the management development category. This area is of particular importance to AUP because its development needs are twofold: one is the development of teaching and research skills and the other is skills needed to manage the University. The three major areas of the developmental process are: (1) job improvement: the development of specific job skills and competencies, (2) career planning: a longitudinal focus on individual growth and development in relation to organizational opportunities, and (3) succession planning: the organizational focus on ensuring an adequate supply

of human resource talent for projected needs in the future based on strategic plans.

Training programs are a major component of the development process. They can serve many purposes. Most generally they serve as key interventions in large organizational changes, or as individual development efforts designed to improve the immediate performance or longer term preparedness of workers.

At AUP, in addition to the marketing effort, there is a need to focus on renewal of employee motivation and retraining for changing skill requirements, especially in areas of administration, fiscal management, and planning. Given the strategic and individualized appraisal and reward system to be discussed in detail later, greater autonomy in decision making will have to be given to various departments and centers in the AUP system. Along with this autonomy will come the need for the decision makers to have a greater appreciation for strategic, marketing, finance, accounting, HRM, and organizational issues.

The steps in developing training programs are, first, to assess the organization's training goals and the training requirements of individuals; second, to plan a curriculum, taking into account the time frame (whether the training will have immediate or longer term applicability?); third, to choose pedagogical techniques appropriate to the people being trained and the things being taught. Lastly, the organization must evaluate the success of the training effort: Was the proper material taught? Were the right people involved? Did the training address the immediate and long term needs of the organization?

One problem that AUP can expect to have, especially if no effort is made to prevent it, is to lose some of its most qualified staff to the outside job market. Organizational exit is typically the single worst managed process in the career system. Even when the reasons for exit are clear cut, for example, a retirement or a resignation in order to pursue a better opportunity, the processes are unnecessarily destructive to the departing individual and the organization they leave behind.

In order to manage exits effectively organizations must understand the reason for employee's departure. High turnover may be symptomatic of underlying problems in the organization, or may be typical of certain industries and markets. Exit interviews and research on resignations may help determine causes.

Organizations must also be certain which workers they are better off losing and which are hard to replace. Carefully tailored approach to exits can improve an organization's ability to keep employees it needs and remove it does not. Selective salary cuts, job redesign, changes in hours, and retraining of experienced and motivated personnel may all be more effective ways of workforce management than broad-based exit plans.

In the discussion above we briefly explained the four processes in the human resource management: selection, appraisal, reward, and development. The following two sections give a detailed account of the performance appraisal and reward (compensation) processes. In our discussions with the AUP personnel, these two areas seemed to be of particular concern.

### **9.3. PERFORMANCE APPRAISAL**

The evaluation of individual performance is an inevitable part of organizational life. Every one is constantly evaluated by his or her boss, peers, and subordinates. Much of the evaluation is informal, but most organizations have a formal appraisal system designed to collect systematic information about the performance of employees. The formal system usually includes a form on which supervisors indicate their evaluations of subordinate's performances. These appraisals become part of the individual's formal record and are used to make decisions about his or her pay and career. Supervisors are usually expected to sit down with the subordinate once a year to discuss the appraisal.

Despite their value, managers and subordinates alike seem to be ambivalent about performance appraisal systems. Managers recognize performance appraisal as a potentially useful tool for

improving the performance of subordinates and the effectiveness of their organizational unit; yet they also sense that performance appraisal inherently poses some dangers to the motivation of their subordinates and their relationship with them. On the other hand, subordinates want, and often ask for, feedback about how they are doing because they want to know where they stand, but they prefer feedback that is consistent with their image of themselves as good performers. Thus, both managers and subordinates have ambivalent feelings about performance appraisal and share a natural tendency to underplay or avoid dealing with the negative aspects of the procedure.

#### **9.3.1. PROBLEMS WITH PERFORMANCE APPRAISALS**

Many of the problems in performance appraisal stem from the fact that the manager must use performance appraisal in two quite contradictory ways: he has to be an evaluator as well as a coach for development goals. Similarly, individuals have conflicting objectives as they approach a performance appraisal. The most significant conflict, however, is between the individual and the organization. The individual desires to confirm a positive self image and to obtain organizational rewards of promotion or pay. The organization wants individuals to be open to negative information about themselves so they can improve their performance. It also wants individuals to be helpful in supplying this information. The conflict is over the exchange of valid information. As long as individuals see the appraisal process as having an important influence on their rewards, their careers, and their self image, they will be reluctant to engage in the kind of open dialogue required for valid evaluation and personal development. The poorer the performance of the individual involved, the worse the potential conflict and the less likely the exchange of valid information. Performance appraisal runs well and is a pleasure in the case of good performers who are eager to give and receive valid data.

### **9.3.2. OBJECTIVES OF PERFORMANCE APPRAISAL**

The following three points may be taken as a general statement of objectives for an appraisal system.

1. The first and focal objective is the improvement of performance in the job now held. This suggests that the appraisal procedure should not stop at an examination of the past; it should move on to the preparation of some plan for future action based on what has been learned from the past.
2. The second goal is in the development of people in two senses; (a) as providing the organization with people qualified to step into higher positions as they open up; (b) serving as a help to the individual who wishes to acquire the knowledge and abilities he needs to become eligible for a higher job.
3. The appraisal procedure should also provide answers to the two questions which seem to be the recurrent concern of almost every organization member: "How am I doing"? and "Where do I go from here"?

### **9.3.3. A FIVE STEP PLAN TO SOLVE APPRAISAL PROBLEMS**

Having understood the causes of appraisal problems and its objectives we are now ready to present a plan which has the potential of alleviating most of the problems of the appraisal process.

To begin with, it is assumed that institution-wide objectives have been established and communicated to subordinate levels. It is further assumed that these objectives have been expressed as targets whenever possible. By target we mean a clearly defined objective to be attained by a stipulated date. Thus 'increase revenues' is an objective, while increase revenues 10 percent by December 31, 1993 is a target.

#### **9.3.3.1. JOB CONTENT**

In step one, the individual's job description is discussed, and he and her superior agree on what is involved in each of the major areas of his job. There should be a full understanding and a common accord on how much importance is attached to the various aspects of the person's job.

#### **9.3.3.2. PERFORMANCE TARGETS**

In step two, the individual draws up a program of performance targets for his job in the immediate period ahead. Six months or a year is usually an appropriate time period. This list of targets embodies his plans in all of the major areas of his job. The targets he selects should be challenging; they should represent improvements over the results thus far achieved. At the same time, they should be realistic; they should be attainable within the period selected. Of utmost importance, the entire target program should be manageable.

In addition to these job oriented goals, the individual may, if he wishes, include in his program targets related to his promotional aspirations. Inclusion of personally oriented targets as the one just cited strengthens the role of this performance appraisal program as a means of developing people. In some respects training experiences vie for the person's time with his immediate job duties. So his target program should grant explicit recognition to his self development goals and bring them into some sort of balance with goals concerning his job responsibilities.

#### **9.3.3.3. DISCUSSION OF PLAN**

In step three, the individual and his supervisor meet to discuss the target plan. The subordinate sets the pace: the discussion is centered around the plan he has formulated. Under normal circumstances, the superior should not overrule him.

Exercising a veto power may douse the enthusiasm a person normally feels about having the chance to plan his own affairs. The superior should adopt the role of counselor or consultant. Hopefully, both will learn more about the problems they face if the boss relies on discussion rather than orders as the means of influencing his subordinate. However, during times of economic crisis, the superior may want to take a stronger hand if the subordinate sets unmanageable targets or chooses targets which fail to meet pressing organizational needs.

The key step in this entire appraisal process is this third step, the superior-subordinate conference over the subordinate's target schedule. The process of setting one's own performance targets is highly valuable both as a training experience and as a source of personal motivation. These advantages may be lost if the superior goes to the extreme of handling the conference in such a way as to make the subordinate doubt that he really has been granted the freedom to establish his own goals. At the opposite extreme, the superior who does not voice his thoughts about the subordinate's targets may destroy the merit of this appraisal program as a means of directing human efforts towards organizational goals.

#### **9.3.3.4. DETERMINING CHECK POINTS**

In step four, the subordinate and his superior select check points for the targets established. Check points are merely appropriate points at which progress can be evaluated. The end of the appraisal period is not necessarily the best time at which to assess progress toward some of the targets selected. A project completion date is an obviously suitable check point. It will be necessary to create check points for some target projects without clear ending or division times. This whole process may be highly rewarding as a source of greater understanding of company problems.

Closely connected with the selection of check points is the desirability of stating in advance what measures are to be used in

appraising progress toward each target. It need hardly be said that means of measurement will seldom be perfect. It is hoped that this phase of the appraisal program will lead participants to devise better ways of evaluating organizational phenomenon.

#### **9.3.3.5. CHECKING THE RESULTS**

In step five, at the end of the agreed upon time period, the superior and the subordinate meet to discuss the operating and other results that the subordinate has obtained. Here is a key point in the understanding of this appraisal program: hitting the target is not the measure of success. It is to be expected that some targets will be surpassed, some never even approached. The person who sets meager targets and always hits them is certainly of no greater value to the institution than the person who sets unreachable targets, falls short consistently, yet in doing so makes substantial improvements over his past work.

If one's ability to hit the bull's eye is not important, then what is? Simply this: the results achieved by the total process of establishing targets, striving to attain them, and analyzing what intervenes between planned and actual performance. When a judgement must be made, the individual is evaluated on his ability to set targets as well as his ability to attain them.

In checking results, the superior should do all he can to emphasize successes -- to build on successful accomplishment. In the case of unsuccessful accomplishment, the superior should help the subordinate. This help takes many forms: checking, training, clarifying work assignment, etc.

We are not suggesting that the subordinate should abdicate his responsibility. Suppose that after checking, training, and other help, a subordinate still fails to set and reach targets deemed realistic by his superior. At this point the boss should act, even though it might mean demotion, transfer, or release of the subordinate.

#### 9.3.4. ADVANTAGES GAINED

This appraisal program can be criticized on the grounds that it takes too much time. True, it does take time -- certainly more time than is required to put a few check marks on a rating sheet. But how is that time spent? The superior and the subordinate spend their time planning, organizing, directing, controlling, innovating, and motivating. But, this is management.

In addition, the proposed program has following advantages to consider:

1. The subordinate knows in advance the basis on which he is going to be judged.
2. The superior and subordinate both agree on what the subordinate's job really is.
3. The program takes place within the superior-subordinate relationship and should strengthen this relationship.
4. The program has a self-correcting characteristic which tends people to set targets that are both challenging and reachable.
5. The program provides a method of spotting training needs.
6. This appraisal approach treats as a total process a person's ability to see an organizational problem, devise ways of attacking it, translate his ideas into action, incorporate new information as it arises, and carry his plans through to results.

### **9.3.5. MAKING THE TRANSITION**

How does an organization move over to this kind of performance appraisal? There can be various ways, but two ways should be given particular consideration.

The first avenue is the familiar "start at the top". The vice-chancellor should be the first to use the program, and its adoption would then proceed down the successive levels of the University. This way of going about the task has the strong virtue of emphasizing the relationship of University-wide objectives to those set at subordinate levels. It also allows people to experience first as subordinates a technique they will later use as superiors. In addition, adoption from the top down tends to minimize the problems that might arise because a manager employs a practice his superior does not understand or sanction.

A second general way to make the transition to this new appraisal program is to install it in one segment of the institution, for example, either at AUP or ARS, or may be even first at a research station. This might allow some degree of learning through experience before the program is extended to other segments of the University. It also has the virtue of allowing comparisons between units under the new program and those not yet involved.

### **9.3.6. TEMPTATIONS TO AVOID**

Following cautions are recommended:

1. Don't rush it! Appraisal through the target setting approach involves ways of handling people that may differ greatly from the way people have been treated up to now in a given organization. For one thing, the subordinate is granted a stronger voice in mapping out the content of his job. Not only that, he is allowed to speak first; his target plans are the starting point in his discussions with his superior. The

organization also grants a form of recognition to his personal promotional goals.

Not rushing the program suggests: (a) adoption of the program should be announced well in advance of the time initial actions are to take place, (b) each person involved should have time to talk the new procedures over with his superiors, subordinates, and other associates, (c) everyone involved should be given time to think through his ideas about the relative importance of various parts of his job. It seems advisable that a series of meetings be planned to ensure that people have a chance to discuss the full implication of self-target-setting. In addition to this, expect that the actual drafting of targets will take time, especially the first time an individual is involved.

2. Don't force it! This suggests that there may be some people who are strongly committed to the authoritarian system of human motivation. They will find some way to avoid the procedure, misinterpret it, or thwart it. No one should be forced to participate in target-setting appraisal as outlined above. Instead, time should be allowed for such persons to observe the results and judge the effectiveness of the approach where it has been installed. It would be logically inconsistent to force a person to adopt against his wishes a program built around the notion that a manager should have a strong voice in planning the conduct of his job.

#### **9.4. TOTAL COMPENSATION: STRATEGIC ISSUES**

The amount of an individual's total compensation is important for several reasons. From the organization's point of view, it is a major cost, reaching for an educational institution such as AUP as high as 60% of the total operating cost. In addition to being a critical cost factor, the total compensation awarded an individual

can have an important influence on his or her behavior. The total rewards an individual receives, when compared with what the individual feels he or she should receive, determine satisfaction. In turn, satisfaction strongly determines turnover and, to a lesser extent, absenteeism and tardiness. It does not, however, directly affect the individual's motivation to perform. Motivation is a function of the degree to which pay is tied to performance and is only indirectly influenced by how much an individual receives in total compensation.

From an individual's point of view, total compensation is an important determinant of lifestyle and of the kind of activities that one can engage in off the job. In addition, it can be an important determinant of social status and esteem in our society. To many people, compensation is more than just a given amount of money and benefits that can buy a certain set of goods and services; it means social respectability, power, and influence.

Determining what is an appropriate compensation level for an individual is an extremely important, difficult, and value-laden issue, as is determining the appropriate mix of benefits and cash compensation.

#### **9.4.1. COMPENSATION PHILOSOPHY**

Many, but certainly not all, organizations develop a compensation philosophy. Nor does having a well-developed compensation philosophy guarantee an effective compensation system. However, it can help to articulate the purpose of the compensation system and give the people in the day-to-day administration of the system an anchor to which they can tie their decisions and practices. A well-developed philosophy can also provide an important stability to the compensation practices of an organization. In turn this can give the compensation system the integrity and credibility that are so necessary if it is to be effective. While no consensus exists on what should be included in an organization's compensation philosophy statement, however, the

following list represents some of the issues that should be included:

1. **Goals of a Compensation System.** Pay systems should have a purpose and this should be communicated to the employees.
2. **Desired Market Position.** The determination of whether an organization intends to be high, low, or average payer needs to be made, and it needs to be made as part of an overall strategic business plan that looks at what an organization is trying to accomplish and how it intends to accomplish it. A good example is provided by IBM who state that they intend to employ the best available people by being the highest paying firm in their industry.
3. **Centralization and Decentralization in Compensation Policy Formation and Administration.** For AUP it will be important to decide and communicate whether AUP and ARS compensation will be decided together or separately.
4. **Desired Mix between Benefits and Cash.** There is no right answer to this, except that it often helps if an organization makes its strategy known.
5. **Role of Performance-Based Pay.** It is important that its existence be part of the compensation philosophy if it is to have its desired effect.
6. **Performance Appraisal.** Most organizations do performance appraisals, but it is often unclear why they do them and what they are supposed to consist of. This confusion can be minimized if it is dealt with effectively in a compensation philosophy.

7. **Approach to Change in Compensation Policy.** Good compensation systems are always changing. This change can be managed in a number of different ways. It may be done through a participative process or through a top-down approach. A clear statement of philosophy can help whichever one is used to be more effective.

#### **9.4.2. PAYING THE JOB VERSUS PAYING THE PERSON**

Almost all job evaluations are keyed to determining the total compensation levels for jobs. Characteristics of the person are used to make small adjustments in what an individual is paid. In many cases this is a reasonable approach, but not always. In fact, many times it can be dysfunctional for the organization in several respects. It can lead to further bureaucratization of the organization, and it can decrease people's motivation to acquire new skills and abilities.

The obvious alternative to basing total compensation levels on the job a person does is to base them on the skills and abilities the person has. This can have two potentially positive effects. It can lead to increased rewards for highly skilled individuals and for individuals who require new skills, even though they are not promoted. It can also help tie compensation levels more closely to the value the person has to the organization, rather than to the value of the person's job.

It is not being suggested that person-based job evaluation systems should totally replace job-content-based evaluation systems. Person-based systems are limited in their applicability. Nevertheless, they have proved to be useful in certain situations, and the decision to encourage them and allow them where appropriate is a key strategic issue in the design of compensation systems.

One place in organizations where person-based evaluation systems are clearly appropriate is in those groups where technical expertise, rather than managerial responsibility, is critical. Both AUP's teachers and researchers fit this definition.

In people-based plans, people are paid according to what they can do, rather than what they actually do. Most of these plans pay individuals according to the number of jobs in the organization they can perform, and do not take into account the job the individuals are actually performing at a given time. This has the effect of focusing on the individual rather than the job, and it encourages individuals to learn new skills.

Because compensation system is such a dominant tool in the management and control of organizational behaviour there is always the danger that an effective compensation system becomes the end state that is sought by some, rather than organizational effectiveness.

There is no magic formula for preventing the pay system from becoming an end rather than a means. There is a strategic approach that can help, however. A means-end displacement is particularly likely to occur when a compensation system has been in place for a long period of time, and individuals have a particularly strong interest in seeing it maintained as it is. This suggests that at a strategic level, fairly frequent changes, adaptations, and updating of the compensation system are needed, and that it should always be treated as a system that is open to change. It also suggests that as a matter of basic corporate philosophy the pay system should be identified as a tool that is supposed to produce certain outcomes. The outcomes are things such as attraction, retention, and effective performance, rather than such pay system goals as internal equity and well developed policies and procedures.

#### **9.4.3. INTERNAL VERSUS EXTERNAL EQUITY**

In any compensation system, individuals can compare their pay to people both inside and outside the organization. Similarly, an organization can place primary emphasis on its internal or external pay relationships; which it chooses is a key issue in any organization's compensation strategy and one that need to be considered very carefully because it can influence turnover and job

satisfaction.

In most cases, it makes sense to focus on external pay comparisons as the major criteria for determining total compensation levels. Both internal and external inequity have serious consequences for the organization. However, the consequences of external inequity (e.g., turnover and absenteeism) are the most severe for the organization. Strategically, unless there is some particular need for internal equity to be exceptionally high, it would seem to be advisable for organizations to emphasize external pay comparisons.

#### **9.4.3.1. SURVEYING THE RIGHT MARKETS**

Establishing external equity demands good market data. The problem is that organizations often do not spend time determining what constitutes the correct market data for the different types of jobs they have. The key is to gather market data on those jobs that the individuals whose jobs are being evaluated might move to. This is no simple task because people tend to make very different comparisons and have different mobility opportunities. For AUP faculty and research staff it might be a large number of jobs located all over the country, or even abroad.

One thing is certain: in most organizations there is no single set of organizations that can be surveyed that will constitute an appropriate market for all the jobs in the organization. This suggests that, as a strategy, organizations should use a wide range of surveys and should be open to individuals bringing in survey data that are relevant to their particular specialty. It also suggests that they may want to make the survey data they collect public within the organization so that such data can be understood and challenged. In other words, the suggestion is that the salary survey process be 'demystified' and made subject to participation, due process, and open communication. Open discussion may also help to disabuse some individuals of the view that 'all those other organizations are paying a lot more'.

#### 9.4.4. ROLE OF PERFORMANCE IN DETERMINING TOTAL COMPENSATION

Performance does not have to play a role in determining an individual's total compensation. In many organizations it in fact plays a very minor role. This comes about either because performance is not used to determine pay changes or because the only things that is determined by performance is an individual's raise and the variance between the best and the worst performer is so small as to be insignificant. The result is that performance has a minimum impact on total compensation. Much more important is seniority.

In some cases, not relating pay to performance is best, but it eliminates pay as a motivator and can lead to a number of severe problems. Most important of these is the under payment of outstanding performers and over payment of poor performers. This comes about because poor performers and good performers are paid about the same. This puts poor performers in a relatively favorable situation because if they were paid according to performance they would receive a much lower pay; and, indeed, they are probably paid more than they could receive in the outside market. In the case of good performers, just the opposite is true. They are paid less than what is perceived to be fair by them. In addition, they are also likely to be paid less than the outside market is willing to pay. The result is predictable: turnover of the good performers. The poor performer, of course, is hardly motivated to leave and is likely to be locked into the organization permanently because of his or her relatively high level of compensation.

Not paying for performance can also have an impact on who is attracted to the organization. There is reason to believe that individuals who are highly motivated towards achievement and accomplishment tend to stay away from those organizations that do not reward performance. For them, it is a comparative disadvantage to be in such a system. Overall, then, it appears that whether performance has a key impact on total compensation is a very important strategic issue for organizations.

**CHAPTER 10**

**EVALUATION AND MONITORING**

## 10. EVALUATION AND MONITORING

To be effective, all organizations must control their activities. Control ensures that the efforts of all members of an organization will be coordinated through standards, rules, norms, budgets, and reporting systems. In a sense, control provides mechanism for providing order to the diverse activities of an organization.

### 10.1. THE CONTROL PROCESS

The basic control process involves four steps: establishing standards, measuring performance, comparing performance, and correcting deviations from performance. Each of these steps is briefly discussed below.

**1. Establishing Standards:** A standard is a target against which subsequent performance is measured. The purpose of a standard is to help monitor performance. The two components of a standard are variable and par value. The variable is what is being measured (for example, revenue). Par is the level of achievement desired for each variable measured (for example, 15% growth in revenues for next year). To know when corrective action is or is not called for, an acceptable par for each variable must be established.

**2. Measuring Performance:** Having first determined the standards of performance, the manager must then decide a mechanism for measuring actual results. The first step establishes what should be. The second step determines what is.

Any measurement of performance must be directly related to standards. A measurement not linked directly to the organization's standards provides irrelevant information. Superfluous measurement is a particular problem when data are easy to gather. For instance, in an organization that makes extensive use of computers, it is easy to collect vast quantities of information about detailed but

irrelevant aspects of work. Although some measures are intangible, any measurement can be related to standards. Indirect measures may be required. Company morale, for example, is difficult to measure directly, but items such as employee turnover, number of employee grievances, and tardiness can be measured.

**3. Comparing Performance to Standards:** Comparing what is to what should be is the focus of this step. In this phase, the manager determines how well results have met the expectations. It is also important to determine how much variation from standards is permissible.

Actual performance seldom conforms perfectly to plans. In fact, deviations from plans are to be expected and are the normal state of affairs. The question is how far can actual performance deviate from planned performance before the system is judged out of control? Management cannot react to every small performance deviation, so a range of deviation must be established.

**4. Correcting Deviations:** The first three steps in the control process are the siren, but it is the fourth step, corrective action, that actually fights the fire. This step involves decision making. Corrective action demonstrates the integral nature of the various management processes. For example, this stage may reveal that plans may have been inappropriate for the actual conditions that prevailed. Or it may show that the plans may not have been implemented properly because of poor communication or employee resistance. Control assists management in detecting deviations; however, correcting the deviation requires astute problem solving and an understanding of the total management process. An understanding of the management process enables managers to decide when to modify standards, replace key managers, restructure the organization, implement new personnel programs, and so forth.

## 10.2. LEVELS OF CONTROL

The nature of control in an organization changes with the level of management. Upper level management is concerned with issues relating to strategic control, while lower management level is concerned with operational issues.

Strategic control concerns the direction of an organization, the evaluation of strategy, the interrelationships of subunits, external reporting, and the maintenance of cash flows. One of the roles of upper management is that of a figurehead which controls the organization by influencing the employees and gaining their commitment to organizational goals. Upper level management is responsible for keeping all of the subunits' performance in line with corporate goals even though each subunit may have different interests. Frequently, control at this level is that of overseeing and monitoring the implementation of strategy and making changes as events change. Decisions are made to determine the priorities of the firm and its various activities. Control is also concerned with organization-wide capital expenditures, performance of subunits, environmental monitoring, and external reporting.

Managerial control allocates resources so that units, and departments have what they need to accomplish their goals, to schedule activities, and to monitor progress. It pertains to a business unit, a department, or a division as a whole and has a periodic time schedule. The collection of data and its compilation into meaningful reports help evaluation process. Managerial control is also concerned with scheduling, taking corrective actions, and rewarding the functional areas.

Operational control oversees individual tasks and performance and concerns the integration of work groups. Operational controls usually deal directly with getting the job done, monitoring absenteeism, and keeping to a schedule. This type of control ensures compliance with rules and regulations and assures that work will be completed within the constraints given. The time frame is short, and most of the information is concrete and quantitative.

### 10.3. APPROPRIATE CONTROL PROCEDURES FOR AUP

There are many facets of AUP operations where effective control procedures will be required. The foremost being financial and budgetary controls. Strict budgetary controls should be in place so that activities in various departments are undertaken as planned. Although any substantive recommendation on budgetary controls can only be based after a full understanding of the structure and process of AUP's budgeting system, there are some indications that budgetary controls need to be improved. For instance it is difficult to understand how is the current, cumulative resource gap of Rs -47 million is being met. There appears to be no legal capacity of the University to extend the level of its annual deficit. Also, there is a problem in the way budgetary allocations are made by the government. The AUP sends its budget estimates to the University Grants Commission (UGC), which in turn sends the estimates to the Ministry of Finance. The allocated funds are then disbursed to AUP through the UGC. It is relevant to note here that the estimates sent to the UGC by AUP are first revised downwards by the UGC and then a further cut is made by the Ministry of Finance in making the final allocation. This suggests distrust in the AUP's budgetary linkages with the government funding bodies. This whole process of budget allocation is not conducive to a strict budgetary control, and thus, some major changes need to be made in government allocations to universities.

Apart from the problems with financial controls, AUP needs to make sure that proper administrative controls are in place. These include adequate faculty and staff workload, standard procedures for recruitment, training, promotion, and compensation of University employees. AUP will also need to emphasize strict control procedures for student admissions, student conduct, and examinations. The key, generic offering of an educational institution is high quality education, and it is imperative that control procedures are in place to ensure that high standards of education are set and maintained.

**CHAPTER 11**

**IMPLEMENTATION OF BUSINESS PLAN**

## **11. IMPLEMENTATION OF BUSINESS PLAN**

We will briefly suggest here the facilitation of the implementation process of the recommended strategic plan. There are two aspects of implementation: The institutionalization of the strategic management process, and the actual realization of the strategic plan.

### **1. The Institutionalization of the Strategic Management Process:**

Work is needed to ensure that a range of personnel are involved with formulating AUP and ARS strategies. Even beginning from the formulation of a mission, strategic management will be more successful if it incorporates the needs and aspirations of different layers and sections of the organization. It would be helpful, for instance, if each research station evolves its own mission. Going into other parts of the strategic planning process will also need to involve a number of functionaries. Again, research stations, as well as on-campus faculties and even departments should have their own goals and targets. The AUP system's top management will need to ensure that the process is being effectively followed. For this some workshops might be needed initially to get the process moving. This could be followed up with workshops concentrating on coordination and evaluation of the process.

**2. The Actual Realization of the Strategic Plan:** To achieve and retain financial and administrative sustainability, various scenarios have been shown in this report. The AUP system will need to embark on one of these paths. Each scenario entails revenue generation and resource build-up from several sources. Major effort will be required to generate and maintain this momentum. Apart from this demanding activity, there will be need to properly monitor and evaluate the progress of this resource mobilization.

To properly implement these two aspects, the AUP system's top management should be supplemented with a support system. There could be two alternatives. One could take the form of either a full time 'strategic manager', who will act as an internal agency for expediting the process. The second option could be to have an external consultant input. The trade-off with the lack of full time involvement of the latter would be that the consultant would remain a more neutral agency that would be less subject to be influenced by internal tensions or interests within the AUP system. We would strongly recommend that some agency, whether internal or external, be involved with realizing the various aspects of sustainability. The implementation of the recommended plan will need an unprecedented change in culture and existing structure of the AUP system. Adequate supplementary support will be needed for success in tackling the difficult but challenging terrain ahead.

**CHAPTER 12**

**CONCLUSION**

## 12. CONCLUSION

For financial and administrative sustainability of the Agricultural University Peshawar (AUP), a two-pronged approach is emphasized in this report: a) institutionalize a strategic planning process, and b) initiate a proactive marketing plan. The strategic planning process will enable the University to better cope with changes in its internal and external environment. This process involves definition of organizational mission, analysis of external and operating environment, internal resource analysis, setting of long-term objectives, formulation of a 'grand' strategy, devising functional strategies, and controlling activities.

To achieve financial sustainability for AUP, a grand strategy of enhancing revenues from internal and external sources is recommended. A detailed marketing plan is given to implement this strategy. Although it is highlighted that financial and administrative sustainability of an organization are interlinked, our emphasis has been more on the financial sustainability of AUP. There are two reasons for this. First, given rising annual deficits of the University financial sustainability precedes any thing else. Second, we believe that human resource management policies need to be customized to the various sub-units, levels, and departments in the AUP system, and hence no one overall human resource management plan can be recommended. With regard to human resource management plan there is also the problem of uncertainty about the AUP merger with the Agricultural Research Stations (ARS). This makes it difficult to approach the administrative issue with any specific plan. However, we have given some generic guidelines for an effective recruitment, training, performance appraisal, and compensations systems, which would be helpful for AUP planners in devising human resource management policies.

AUP's current and projected financial picture is very serious. If no action is taken the 1992-93 cumulative resource gap of Rs -47 million is projected to reach Rs -1,059 million ten years from now,

in 2003-04.

There are basically three sources of revenue available to AUP:

- University Grants Commission (UGC)
- University's own resources
- Donations and return on endowment fund.

All the above three sources of revenue will have to increase significantly in order to cover the cumulative resource gap by year 2003-04. No one source will be sufficient. For example, a break even analysis, shows that an annual increase of 23% will be required in UGC grants alone to cover AUP shortfalls by year 2003-04. Similarly, if no increase in UGC grants is achieved and also without an endowment fund, AUP will have to increase revenue from own resources (tuition fee, contract research, etc.) by 58% per annum to break even. Or an unrealistic increase of Rs 100 million per annum (starting with a seed money of Rs 270 million) in endowment fund will be required to break even, if UGC grant and revenue from own resources increase at annual rate of 5% and 10% respectively.

From the break even analysis it is evident that meeting the resource gap through any one source is not likely. The only solution is to make efforts in several avenues. Thus, we recommend the following targets:

- (a) Convince UGC to increase its grant annually by the inflation rate.
- (b) Keep salary increases equal to the inflation rate.
- (c) Increase the number of students to 1,750 in the next five years.
- (d) Increase student tuition to Rs 1,000 per month, increasing at the rate of inflation.
- (e) Create a permanent endowment fund through seed money of Rs 200 million and add Rs 10 million per year to it starting in 1994-95.

- (f) Increase the income generated from own resources (excluding tuition fee) by an average 25 percent each year.

An active marketing strategy is proposed to generate income from the various sources outlined above. This strategy will be instrumental in AUP's transition from a wholly government-funded institution to a semi-private institution which generates a significant share of its total revenue through its own programs and services. Only by doing this the University can have funds to maintain quality education which can attract and retain 'customers'.

We believe that it is absolutely vital for AUP to secure enhanced funding from the UGC, pegging it at least to the official annual rate of inflation of 10 percent. With significantly larger human and physical resources of AUP under TIPAN, UGC funding has to increase much higher than 5 percent. In addition, AUP should highlight that it is making maximum efforts to generate funds through sources other than UGC, such as University programs and services, and donations. The message that the AUP top management must carry to influentials in the federal and provincial government is that AUP needs financial help, has unrealized potential, and facilities second to none for bringing about improvement in agricultural production and profitability in the NWFP and Pakistan. This will require strong leadership.

Several options are available to AUP to increase revenues from own resources. These are:

- Raising tuition fee
- Increasing annual intake of students
- Increasing room and board charges
- Renting University conference facilities
- Offering workshops and other programs to private and government institutions that will return a surplus
- Encouraging sponsored (contract) research.

While pricing various educational and other programs and services, AUP will need to take into account the ability of the prospective customers to pay and possible resistance from several quarters. However, it is important to exert considerable efforts to convince all concerned that such increases are not only crucial for University's financial sustainability, they are also beneficial for the students themselves. By paying a reasonable amount for their education the students will feel more committed to their studies. They will also demand better value for money and, thus, will help University upgrade its educational standards and facilities. Also, the University with more funds will be in a position to increase the quality of its service, which will attract and retain 'customers'.

The proposed increase in own resources average 25 percent per annum across the board, except tuition fee. We have proposed a monthly tuition fee of Rs 1,000 starting 1994-95, growing annually at the rate of inflation. Given a very small percentage of current revenue from own resources to total funds available to the University and good potential for growth, the proposed increase in own resources is not unrealistic. For some items the initial increase may appear substantial. However, such increases are necessary as well as practicable.

In addition to seeking higher grant from UGC and generating more revenue from own resources, AUP must attract donations to sustain. A seed grant of Rs 200 million is proposed to provide the necessary base for an effective fund-raising campaign. Considering that the TIPAN project is being wound up before its final third phase, it is imperative that the USAID and GOP contribute towards the seed money. The total TIPAN allocation was about Rs 1.6 billion (with approximately 85 percent of this total amount provided by USAID). To provide Rs 200 million (about US \$ 6.7 million) in seed grant to sustain a project on which such a huge amount of money was spent seems reasonable. After the seed grant of Rs 200 million, starting 1994-95, donations of Rs 10 million annually to the endowment fund will be required to cover AUP's cumulative resource

gap by 2003-04.

AUP's faculty, research, and other staff should all take an active role in marketing the University more effectively. Formally, however, the Directorate of Outreach could take on the responsibility of implementing marketing programs. In the TIPAN concept, the outreach program was designed to link the teaching and research functions of AUP to various extension services that work directly to serve farmers and their families. Organizationally, the Directorate of Outreach appears to be a logical center for marketing implementation. It could help various faculties in curriculum development by assessing the demand in the market for different courses offered. It could help the admissions office by identifying and attracting prospective students. The Directorate of Outreach could also help in development and execution of various technology, training, and service packages for farmers, research stations and extension staff, and other publics served by the University. Another important role of the Directorate will be the provision of communication services in the form of bulletins, brochures, and audio-visual aids for students, farmers, and donor agencies, etc.

AUP needs effective communication with its various markets and publics. Developing good programs and services, pricing them attractively, and making them readily available to target customers is not enough. The institution must also inform consumers and others about its goals, activities, and offerings and motivate them to take an interest in the institution.

For effective communications strategy AUP should devise public relations and advertising plans in line with the characteristics of the 'target market'. For example, in preparing student catalog, there first has to be an understanding of the factors influencing student choice of a university, which could include quality education, fees, availability of financial aid, competent faculty, job prospects, location of campus, library and laboratory facilities, computer facilities, general reputation, hostel accommodation, campus environment, transport facilities, extra-

curricular activities, etc. These factors can then be emphasized in the student catalog.

Similarly, to generate external funding attractive documentation and audio-visual material will be needed to 'sell' the project. The University's top management should emphasize its mission, report on the success of its research and course development efforts, and state plans for the future. Potential role of the University in training manpower for agricultural development in other developing countries of the region especially Afghanistan and Central Asian countries could be attractive to many donors interested in economic development of the region, and can thus be termed as a key point to be included in communication plan for the donor segment.

It is critical for AUP survival to convince UGC and other government agencies/ministries to actively support the TIPAN project, both financially and politically. For this, a serious personal selling effort is required on the part of the top officials of the University and some key officials of the TIPAN technical assistance team.

The vice-chancellor should be the chief fund-raiser for AUP and should be involved in meeting major prospects and asking for their support. To assist in his fund-raising efforts, he will establish committees and working groups or task forces.

Linked to the financial sustainability is the issue of administrative sustainability. In our investigations we found certain human resource management (HRM) issues leading to the problem of administrative sustainability. These problems included fears related to the AUP-ARS merger, leadership, control, compensation, evaluation, and intellectual isolation. In resolving these problems it is important that HRM policies and practices are linked to the overall strategy of enhancing revenues recommended for AUP. Given the diversified organizational setup of the AUP system, comprising the University, agricultural research stations, and outreach-extension there cannot be a single set of HRM policies that satisfy all the stakeholders. The two major HRM policy areas

which we believe are root cause of AUP's current HRM problems are the appraisal process and the compensation system. While we were asked to prepare detailed appraisal and compensation plans, we believe that no single appraisal form or a compensation package can be appropriate for all situations. The approach that we recommend is that the HRM policies should be linked to the overall strategy of AUP and should be tailored to meeting the needs of each stakeholder. We propose a five-step appraisal process which treats as a total process a person's ability to see an organizational problem, devise ways of attacking it, translate his ideas into action, incorporate new information as it arises, and carry his plans through to results.

The five steps are:

1. The individual's job description is discussed, and he and his superior agree on what is involved in each of the major areas of his job.
2. The individual draws up a program of performance targets for his job in the immediate period ahead. In addition to these job oriented goals, the individual includes in his program targets related to his promotional aspirations.
3. The individual and his supervisor meet to discuss the target plan. The subordinate sets the pace and the discussion is centered around the plan he has formulated. This is the key step in the entire appraisal process.
4. The subordinate and his superior select check points for the targets established. Check points are merely appropriate points at which progress can be evaluated.
5. At the end of the agreed upon time period, the superior and the subordinate meet to discuss the operating and other

results that the subordinate has obtained. The key point of this appraisal program is that hitting the target is not the measure of success but rather the results achieved by the total process of establishing targets, striving to attain them, and analyzing what intervenes between planned and actual performance.

The compensation plan should be such that it motivates employees in the direction set by the overall strategy. Again, given the diversified nature of AUP stakeholders, this calls for tailor-made compensation packages. One of the central ideas of the compensation plan recommended by us is that it should reward the person and not the job. This means that people are paid according to what they can do, rather than what they actually do. Most of these plans pay individuals according to the number of jobs in the organization they can perform, and do not only take into account the job the individuals are actually performing at a given time. This has the effect of focusing on the individual rather than the job, and it encourages individuals to learn new skills.

Given the highly qualified faculty at AUP, one of the major concerns is turnover. The main factor in turnover is a pay difference between comparable organizations for the same job. Establishing external equity requires good market data. The key is to gather market data on those jobs that the individuals whose jobs are being evaluated might move to. For AUP faculty and research staff it might be a large number of jobs located all over the country or even abroad.

Finally, we strongly recommend that AUP management monitor and evaluate the impact of AUP programs and activities on the overall agricultural performance in NWFP. This will not only indicate how far TIPAN has succeeded in achieving its mission, but it will also be the strongest marketing tool to achieve financial sustainability.

**APPENDIX 1: AGRICULTURAL UNIVERSITY PESHAWAR: PROFILE 1992-93**

<b>HUMAN RESOURCES</b>			
<b>TOTAL EMPLOYEES:</b>			850
FACULTY	200		
OTHER STAFF	650		
<b>FACULTIES AND DEPARTMENTS</b>			
<b>NO. OF FACULTIES:</b>			5
- Crop Production Sciences			
- Crop Protection Sciences			
- Nutrition Sciences			
- Animal Husbandry and Vet. Sciences			
- Rural Social Sciences			
<b>NO. OF DEPARTMENTS:</b>			19
<b>STUDENTS</b>			
<b>TOTAL:</b>			743
B.Sc.	467		
M.Sc.	276		
(FEMALE STUDENTS:	60)		
<b>PHYSICAL RESOURCES</b>			
<b>TOTAL AREA: (Acres)</b>			2,446
CAMPUS			420
BUILDINGS	70		
RESEARCH FARMS	350		
OFF-CAMPUS			2,026
<b>COVERED AREA OF AUP NEW CAMPUS:</b>			600,000 SQ.FT.
<b>BUDGET</b>			
<b>1992-93 BUDGET: (Rs million)</b>			
<b>RECEIPTS</b>		<b>EXPENDITURE</b>	
Opening Balance	-24.72	Salary	44.70
UGC Grant	38.45	Other Charges	20.00
AUP's own resources	3.58		
<b>1992-93 DEFICIT:</b>			<b>Rs -22.67 m</b>

**APPENDIX 2-A: RESOURCE GAP WITH:**

**ANNUAL INCREASE IN UGC GRANT, SALARIES, OTHER COSTS, AND OWN RESOURCES AT HISTORICAL RATES**

**KEY VARIABLES:**

Expected Inflation	10.00%	Starting Endowment	Rs 0 m
Increase in Salaries	21.85%	Annual Incr. in Endowment	Rs 0 m
Incr. in Other Costs	16.04%	Growth in Own Resources	17.31%
Growth in UGC Grant	18.23%		

**CUMULATIVE RESOURCE GAP 2003-04:** Rs -1466.90 m

**DISCOUNT RATE** 15.00%  
**PRESENT VALUE OF ANNUAL DEFICITS** Rs -518.86 m

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b>												
<b>(Rs m)</b>												
Open. Bal	-24.72	-47.39	-75.41	-130.04	-194.84	-271.95	-363.95	-474.03	-606.08	-764.87	-956.23	-1187.32
UGC Grant	38.45	45.46	53.75	63.54	75.13	88.82	105.02	124.16	146.80	173.56	205.20	242.61
Own Resources	3.58	4.20	4.93	5.78	6.78	7.95	9.33	10.94	12.84	15.06	17.66	20.72
Endowment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Receipts</b>	<b>17.31</b>	<b>2.27</b>	<b>-16.74</b>	<b>-60.72</b>	<b>-112.94</b>	<b>-175.17</b>	<b>-249.60</b>	<b>-338.92</b>	<b>-446.45</b>	<b>-576.25</b>	<b>-733.37</b>	<b>-923.99</b>
<b>EXPENDITURES:</b>												
<b>(Rs m)</b>												
Salary	44.70	54.47	66.37	80.87	98.55	120.08	146.32	178.29	217.24	264.71	322.55	393.02
Other Charges	20.00	23.21	26.93	31.25	36.26	42.08	48.83	56.66	65.75	76.30	88.53	102.73
Maint. New Fac.	0.00	0.00	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
Library	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mkting Expend.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Expend.</b>	<b>64.70</b>	<b>77.68</b>	<b>113.30</b>	<b>134.13</b>	<b>159.01</b>	<b>188.78</b>	<b>224.43</b>	<b>267.16</b>	<b>318.42</b>	<b>379.98</b>	<b>453.95</b>	<b>542.92</b>
<b>Annual deficit</b> (Rs m)	<b>-22.67</b>	<b>-28.02</b>	<b>-54.63</b>	<b>-64.80</b>	<b>-77.10</b>	<b>-92.00</b>	<b>-110.08</b>	<b>-132.05</b>	<b>-158.79</b>	<b>-191.36</b>	<b>-231.09</b>	<b>-279.59</b>
<b>CUM. RESOURCE GAP:</b> (Rs m)	<b>-47.39</b>	<b>-75.41</b>	<b>-130.04</b>	<b>-194.84</b>	<b>-271.95</b>	<b>-363.95</b>	<b>-474.03</b>	<b>-606.08</b>	<b>-764.87</b>	<b>-956.23</b>	<b>-1187.32</b>	<b>-1466.90</b>

**APPENDIX 2-B: RESOURCE GAP WITH:**

**5% ANNUAL INCREASE IN UGC GRANT**

**ANNUAL INCREASE IN SALARIES, OTHER COSTS, AND OWN RESOURCES AT HISTORICAL RATE**

**KEY VARIABLES:**

Expected Inflation	10.00%	Starting Endowment	Rs 0 m
Increase in Salaries	21.85%	Annual Incr. in Endowment	Rs 0 m
Incr. in Other Costs	16.04%	Growth in Own Resources	17.31%
Growth in UGC Grant	5.00%		

**CUMULATIVE RESOURCE GAP 2003-04:** Rs -2217.38 m

**DISCOUNT RATE** 15.00%  
**PRESENT VALUE OF ANNUAL DEFICITS** Rs -764.90 m

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b>												
<b>(Rs m)</b>												
Open. Bal	-24.72	-47.39	-80.50	-146.48	-230.32	-335.82	-467.57	-631.14	-833.25	-1082.03	-1387.30	-1760.95
UGC Grant	38.45	40.37	42.39	44.51	46.74	49.07	51.53	54.10	56.81	59.65	62.63	65.76
Own Resources	3.58	4.20	4.93	5.78	6.78	7.95	9.33	10.94	12.84	15.06	17.66	20.72
Endowment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Receipts</b>	<b>17.31</b>	<b>-2.82</b>	<b>-33.18</b>	<b>-96.20</b>	<b>-176.81</b>	<b>-278.79</b>	<b>-406.71</b>	<b>-566.09</b>	<b>-763.61</b>	<b>-1007.32</b>	<b>-1307.00</b>	<b>-1674.47</b>
<b>EXPENDITURES:</b>												
<b>(Rs m)</b>												
Salary	44.70	54.47	66.37	80.87	98.55	120.08	146.32	178.29	217.24	264.71	322.55	393.02
Other Charges	20.00	23.21	26.93	31.25	36.26	42.08	48.83	56.66	65.75	76.30	88.53	102.73
Maint. New Fac.	0.00	0.00	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
Library	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mkting Expend.	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
<b>Total Expend.</b>	<b>64.70</b>	<b>77.68</b>	<b>113.30</b>	<b>134.13</b>	<b>159.01</b>	<b>188.78</b>	<b>224.43</b>	<b>267.16</b>	<b>318.42</b>	<b>379.98</b>	<b>453.95</b>	<b>542.92</b>
<b>Annual deficit</b>	<b>-22.67</b>	<b>-33.11</b>	<b>-65.99</b>	<b>-83.84</b>	<b>-105.49</b>	<b>-131.75</b>	<b>-163.57</b>	<b>-202.11</b>	<b>-248.78</b>	<b>-305.27</b>	<b>-373.66</b>	<b>-456.43</b>
<b>CUM. RESOURCE GAP:</b>	<b>-47.39</b>	<b>-80.50</b>	<b>-146.48</b>	<b>-230.32</b>	<b>-335.82</b>	<b>-467.57</b>	<b>-631.14</b>	<b>-833.25</b>	<b>-1082.03</b>	<b>-1387.30</b>	<b>-1760.95</b>	<b>-2217.38</b>
<b>(Rs m)</b>												

**APPENDIX 2-C: RESOURCE GAP WITH:**

**10% ANNUAL INCREASE IN OWN RESOURCES  
INCREASE IN SALARIES AND OTHER COSTS AT THE INFLATION RATE**

**KEY VARIABLES:**

Expected Inflation	10.00%	Starting Endowment	Rs 0 m
Increase in Salaries	10.00%	Annual Incr. in Endowment	Rs 0 m
Incr. in Other Costs	10.00%	Growth in Own Resources	10.00%
Growth in UGC Grant	5.00%		

**CUMULATIVE RESOURCE GAP 2003-04:** Rs -1059.26 m

**DISCOUNT RATE** 15.00%  
**PRESENT VALUE OF ANNUAL DEFICITS** Rs -397.69 m

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b>												
<b>(Rs m)</b>												
Open. Bal	-24.72	-47.39	-74.25	-127.12	-187.40	-255.93	-333.64	-421.59	-520.90	-632.85	-758.84	-900.41
UGC Grant	38.45	40.37	42.39	44.51	46.74	49.07	51.53	54.10	56.81	59.65	62.63	65.76
Own Resources	3.58	3.94	4.33	4.76	5.24	5.76	6.34	6.97	7.67	8.44	9.28	10.21
Endowment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Receipts</b>	<b>17.31</b>	<b>-3.08</b>	<b>-27.53</b>	<b>-77.85</b>	<b>-135.42</b>	<b>-201.09</b>	<b>-275.78</b>	<b>-360.51</b>	<b>-456.42</b>	<b>-564.77</b>	<b>-686.93</b>	<b>-824.43</b>
<b>EXPENDITURES:</b>												
<b>(Rs m)</b>												
Salary	44.70	49.17	54.09	59.50	65.45	71.99	79.19	87.11	95.82	105.41	115.95	127.54
Other Charges	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16	51.87	57.06
Maint. New Fac.	0.00	0.00	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
Library	0.00	0.00	1.00	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.14	2.36
Mkting Expend.	0.00	0.00	0.30	0.33	0.36	0.40	0.44	0.48	0.53	0.58	0.64	0.71
<b>Total Expend.</b>	<b>64.70</b>	<b>71.17</b>	<b>99.59</b>	<b>109.55</b>	<b>120.50</b>	<b>132.56</b>	<b>145.81</b>	<b>160.39</b>	<b>176.43</b>	<b>194.07</b>	<b>213.48</b>	<b>234.83</b>
<b>Annual deficit</b>	<b>-22.67</b>	<b>-26.86</b>	<b>-52.87</b>	<b>-60.28</b>	<b>-68.53</b>	<b>-77.72</b>	<b>-87.94</b>	<b>-99.31</b>	<b>-111.95</b>	<b>-125.99</b>	<b>-141.57</b>	<b>-158.86</b>
<b>CUM. RESOURCE GAP:</b>	<b>-47.39</b>	<b>-74.25</b>	<b>-127.12</b>	<b>-187.40</b>	<b>-255.93</b>	<b>-333.64</b>	<b>-421.59</b>	<b>-520.90</b>	<b>-632.85</b>	<b>-758.84</b>	<b>-900.41</b>	<b>-1059.26</b>
<b>(Rs m)</b>												

**APPENDIX 2-D: RESOURCE GAP WITH:**

**10% ANNUAL INCREASE IN OWN RESOURCES  
INCREASE IN SALARIES AT 1/2 TIMES THE INFLATION RATE  
INCREASE IN OTHER COSTS AT THE INFLATION RATE**

**KEY VARIABLES:**

Expected Inflation	10.00%	Starting Endowment	Rs 0 m
Increase in Salaries	5.00%	Annual Incr. in Endowment	Rs 0 m
Incr. in Other Costs	10.00%	Growth in Own Resources	10.00%
Growth in UGC Grant	5.00%		

**CUMULATIVE RESOURCE GAP 2003-04:** Rs -814.86 m

**DISCOUNT RATE** 15.00%  
**PRESENT VALUE OF ANNUAL DEFICITS** Rs -314.17 m

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b> (Rs m)												
Open. Bal	-24.72	-47.39	-72.02	-120.08	-172.61	-230.02	-292.80	-361.46	-436.56	-518.73	-608.66	-707.09
UGC Grant	38.45	40.37	42.39	44.51	46.74	49.07	51.53	54.10	56.81	59.65	62.63	65.76
Own Resources	3.58	3.94	4.33	4.76	5.24	5.76	6.34	6.97	7.67	8.44	9.28	10.21
Endowment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Receipts</b>	<b>17.31</b>	<b>-3.08</b>	<b>-25.30</b>	<b>-70.81</b>	<b>-120.63</b>	<b>-175.19</b>	<b>-234.93</b>	<b>-300.38</b>	<b>-372.08</b>	<b>-450.64</b>	<b>-536.74</b>	<b>-631.12</b>
<b>EXPENDITURES:</b> (Rs m)												
Salary	44.70	46.94	49.29	51.75	54.34	57.05	59.91	62.90	66.05	69.35	72.82	76.46
Other Charges	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16	51.87	57.06
Maint. New Fac.	0.00	0.00	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
Library	0.00	0.00	1.00	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.14	2.36
Mkting Expend.	0.00	0.00	0.30	0.33	0.36	0.40	0.44	0.48	0.53	0.58	0.64	0.71
<b>Total Expend.</b>	<b>64.70</b>	<b>68.94</b>	<b>94.79</b>	<b>101.80</b>	<b>109.39</b>	<b>117.61</b>	<b>126.52</b>	<b>136.18</b>	<b>146.65</b>	<b>158.02</b>	<b>170.35</b>	<b>183.74</b>
<b>Annual deficit (Rs m)</b>	<b>-22.67</b>	<b>-24.63</b>	<b>-48.06</b>	<b>-52.52</b>	<b>-57.42</b>	<b>-62.78</b>	<b>-68.66</b>	<b>-75.10</b>	<b>-82.17</b>	<b>-89.93</b>	<b>-98.44</b>	<b>-107.77</b>
<b>CUM. RESOURCE GAP: (Rs m)</b>	<b>-47.39</b>	<b>-72.02</b>	<b>-120.08</b>	<b>-172.61</b>	<b>-230.02</b>	<b>-292.80</b>	<b>-361.46</b>	<b>-436.56</b>	<b>-518.73</b>	<b>-608.66</b>	<b>-707.09</b>	<b>-814.86</b>

**APPENDIX 2-E: RESOURCE GAP WITH:**

**20% INCREASE IN OWN RESOURCES  
AN ENDOWMENT FUND OF Rs 50 m IN 10 YEARS  
SALARIES AND OTHER COSTS INCREASING AT TWICE THE INFLATION RATE**

**KEY VARIABLES:**

Expected Inflation	10.00%	Starting Endowment	Rs 5 m
Increase in Salaries	20.00%	Annual Incr. in Endowment	Rs 5 m
Incr. in Other Costs	20.00%	Growth in Own Resources	20.00%
Growth in UGC Grant	5.00%		

**CUMULATIVE RESOURCE GAP 2003-04: Rs -2343.69 m**

**DISCOUNT RATE 15.00%**  
**PRESENT VALUE OF ANNUAL DEFICITS Rs -802.72 m**

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b>												
<b>(Rs m)</b>												
Open. Bal	-24.72	-47.39	-80.37	-146.54	-231.72	-340.15	-476.98	-648.38	-861.80	-1126.17	-1452.23	-1852.89
UGC Grant	38.45	40.37	42.39	44.51	46.74	49.07	51.53	54.10	56.81	59.65	62.63	65.76
Own Resources	3.58	4.29	5.15	6.18	7.42	8.91	10.69	12.82	15.39	18.47	22.16	26.59
Endowment Income	0.00	0.00	0.75	1.50	2.25	3.00	3.75	4.50	5.25	6.00	6.75	7.50
<b>Total Receipts</b>	<b>17.31</b>	<b>-2.72</b>	<b>-32.07</b>	<b>-94.35</b>	<b>-175.31</b>	<b>-279.17</b>	<b>-411.01</b>	<b>-576.96</b>	<b>-784.35</b>	<b>-1042.05</b>	<b>-1360.68</b>	<b>-1753.04</b>
<b>EXPENDITURES:</b>												
<b>(Rs m)</b>												
Salary	44.70	53.64	64.37	77.25	92.70	111.24	133.48	160.18	192.21	230.66	276.79	332.15
Other Charges	20.00	24.00	28.80	34.56	41.47	49.77	59.72	71.66	86.00	103.20	123.83	148.60
Maint. New Fac.	0.00	0.00	20.00	24.00	28.80	34.56	41.47	49.77	59.72	71.66	86.00	103.20
Library	0.00	0.00	1.00	1.20	1.44	1.73	2.07	2.49	2.99	3.58	4.30	5.16
Mkting Expend.	0.00	0.00	0.30	0.36	0.43	0.52	0.62	0.75	0.90	1.07	1.29	1.55
<b>Total Expend.</b>	<b>64.70</b>	<b>77.64</b>	<b>114.47</b>	<b>137.37</b>	<b>164.84</b>	<b>197.81</b>	<b>237.37</b>	<b>284.84</b>	<b>341.81</b>	<b>410.18</b>	<b>492.21</b>	<b>590.65</b>
<b>Annual deficit</b>	<b>-22.67</b>	<b>-32.98</b>	<b>-66.18</b>	<b>-85.17</b>	<b>-108.43</b>	<b>-136.83</b>	<b>-171.41</b>	<b>-213.42</b>	<b>-264.37</b>	<b>-326.06</b>	<b>-400.67</b>	<b>-490.80</b>
<b>CUM. RESOURCE GAP:</b>	<b>-47.39</b>	<b>-80.37</b>	<b>-146.54</b>	<b>-231.72</b>	<b>-340.15</b>	<b>-476.98</b>	<b>-648.38</b>	<b>-861.80</b>	<b>-1126.17</b>	<b>-1452.23</b>	<b>-1852.89</b>	<b>-2343.69</b>
<b>(Rs m)</b>												

**APPENDIX 3-A: ANNUAL GROWTH IN UGC GRANT REQUIRED TO BREAK EVEN**

**ANNUAL GROWTH IN OWN RESOURCES OF 10%  
SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE**

**KEY VARIABLES:**

Expected Inflation	10.00%	Starting Endowment	Rs 0 m
Increase in Salaries	10.00%	Annual Incr. in Endowment	Rs 0 m
Incr. in Other Costs	10.00%	Growth in Own Resources	10.00%
<b>GROWTH IN UGC GRANT</b>	<b>23.00%</b>		

**CUMULATIVE RESOURCE GAP 2003-04:** Rs 166.16 m

**DISCOUNT RATE** 15.00%  
**PRESENT VALUE OF ANNUAL DEFICITS** Rs -5.40 m

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b>												
<b>(Rs m)</b>												
Open. Bal	-24.72	-47.39	-67.33	-104.42	-137.66	-164.92	-183.46	-189.78	-179.43	-146.75	-84.62	15.93
UGC Grant	38.45	47.29	58.17	71.55	88.01	108.25	133.15	163.77	201.44	247.77	304.75	374.85
Own Resources	3.58	3.94	4.33	4.76	5.24	5.76	6.34	6.97	7.67	8.44	9.28	10.21
Endowment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Receipts</b>	<b>17.31</b>	<b>3.84</b>	<b>-4.83</b>	<b>-28.11</b>	<b>-44.41</b>	<b>-50.90</b>	<b>-43.97</b>	<b>-19.04</b>	<b>29.68</b>	<b>109.45</b>	<b>229.41</b>	<b>400.99</b>
<b>EXPENDITURES:</b>												
<b>(Rs m)</b>												
Salary	44.70	49.17	54.09	59.50	65.45	71.99	79.19	87.11	95.82	105.41	115.95	127.54
Other Charges	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16	51.87	57.06
Maint. New Fac.	0.00	0.00	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
Library	0.00	0.00	1.00	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.14	2.36
Mkting Expend.	0.00	0.00	0.30	0.33	0.36	0.40	0.44	0.48	0.53	0.58	0.64	0.71
<b>Total Expend.</b>	<b>64.70</b>	<b>71.17</b>	<b>99.59</b>	<b>109.55</b>	<b>120.50</b>	<b>132.56</b>	<b>145.81</b>	<b>160.39</b>	<b>176.43</b>	<b>194.07</b>	<b>213.48</b>	<b>234.83</b>
<b>Annual deficit (Rs m)</b>	<b>-22.67</b>	<b>-19.94</b>	<b>-37.09</b>	<b>-33.24</b>	<b>-27.26</b>	<b>-18.54</b>	<b>-6.32</b>	<b>10.35</b>	<b>32.68</b>	<b>62.13</b>	<b>100.55</b>	<b>150.23</b>
<b>CUM. RESOURCE GAP: (Rs m)</b>	<b>-47.39</b>	<b>-67.33</b>	<b>-104.42</b>	<b>-137.66</b>	<b>-164.92</b>	<b>-183.46</b>	<b>-189.78</b>	<b>-179.43</b>	<b>-146.75</b>	<b>-84.62</b>	<b>15.93</b>	<b>166.16</b>

**APPENDIX 3-B: ANNUAL GROWTH IN OWN RESOURCES REQUIRED TO BREAK EVEN:**

**UGC GRANT INCREASING AT 1/2 TIMES THE INFLATION RATE  
SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE**

**KEY VARIABLES:**

Expected Inflation	10.00%	Starting Endowment	Rs 0 m
Increase in Salaries	10.00%	Annual Incr. in Endowment	Rs 0 m
Incr. in Other Costs	10.00%	<b>GROWTH IN OWN RESOURCES</b>	<b>58.50%</b>
Growth in UGC Grant	5.00%		

**CUMULATIVE RESOURCE GAP 2003-04:** Rs 396.09 m

**DISCOUNT RATE** 15.00%  
**PRESENT VALUE OF ANNUAL DEFICITS** Rs 3.39 m

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b>												
<b>(Rs m)</b>												
Open. Bal	-24.72	-47.39	-72.52	-120.73	-171.51	-222.69	-270.37	-307.91	-324.26	-301.32	-209.79	-2.50
UGC Grant	38.45	40.37	42.39	44.51	46.74	49.07	51.53	54.10	56.81	59.65	62.63	65.76
Own Resources	3.58	5.67	8.99	14.25	22.59	35.80	56.75	89.94	142.56	225.96	358.14	567.65
Endowment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Receipts</b>	<b>17.31</b>	<b>-1.34</b>	<b>-21.14</b>	<b>-61.96</b>	<b>-102.19</b>	<b>-137.82</b>	<b>-162.10</b>	<b>-163.87</b>	<b>-124.89</b>	<b>-15.72</b>	<b>210.98</b>	<b>630.92</b>
<b>EXPENDITURES:</b>												
<b>(Rs m)</b>												
Salary	44.70	49.17	54.09	59.50	65.45	71.99	79.19	87.11	95.82	105.41	115.95	127.54
Other Charges	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16	51.87	57.06
Maint. New Fac.	0.00	0.00	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
Library	0.00	0.00	1.00	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.14	2.36
Mkting Expend.	0.00	0.00	0.30	0.33	0.36	0.40	0.44	0.48	0.53	0.58	0.64	0.71
<b>Total Expend.</b>	<b>64.70</b>	<b>71.17</b>	<b>99.59</b>	<b>109.55</b>	<b>120.50</b>	<b>132.56</b>	<b>145.81</b>	<b>160.39</b>	<b>176.43</b>	<b>194.07</b>	<b>213.48</b>	<b>234.83</b>
<b>Annual deficit</b> <b>(Rs m)</b>	<b>-22.67</b>	<b>-25.13</b>	<b>-48.21</b>	<b>-50.79</b>	<b>-51.18</b>	<b>-47.68</b>	<b>-37.54</b>	<b>-16.35</b>	<b>22.94</b>	<b>91.53</b>	<b>207.29</b>	<b>398.59</b>
<b>CUM. RESOURCE GAP:</b> <b>(Rs m)</b>	<b>-47.39</b>	<b>-72.52</b>	<b>-120.73</b>	<b>-171.51</b>	<b>-222.69</b>	<b>-270.37</b>	<b>-307.91</b>	<b>-324.26</b>	<b>-301.32</b>	<b>-209.79</b>	<b>-2.50</b>	<b>396.09</b>

**APPENDIX 3-C: ANNUAL GROWTH IN ENDOWMENT FUND REQUIRED TO BREAK EVEN (WITH SEED MONEY OF Rs 270 m):**

**UGC GRANT INCREASING AT 1/2 TIMES THE INFLATION RATE  
ANNUAL INCREASE IN OWN RESOURCES OF 10%  
SALARIES AND OTHER COSTS INCREASING AT THE INFLATION RATE**

**KEY VARIABLES:**

Expected Inflation	10.00%	Starting Endowment	Rs 270 m
Increase in Salaries	10.00%	<b>ANNUAL INCR. IN ENDOWMENT</b>	<b>Rs 100 m</b>
Incr. in Other Costs	10.00%	Growth in Own Resources	10.00%
Growth in UGC Grant	5.00%		

**CUMULATIVE RESOURCE GAP 2003-04:** Rs 20.74 m

**DISCOUNT RATE** 15.00%  
**PRESENT VALUE OF ANNUAL DEFICITS** Rs 0.53 m

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b>												
<b>(Rs m)</b>												
Open. Bal	-24.72	-47.39	-74.25	-86.62	-91.40	-89.43	-81.64	-69.09	-52.90	-34.35	-14.84	4.09
UGC Grant	38.45	40.37	42.39	44.51	46.74	49.07	51.53	54.10	56.81	59.65	62.63	65.76
Own Resources	3.58	3.94	4.33	4.76	5.24	5.76	6.34	6.97	7.67	8.44	9.28	10.21
Endowment Income	0.00	0.00	40.50	55.50	70.50	85.50	100.50	115.50	130.50	145.50	160.50	175.50
<b>Total Receipts</b>	<b>17.31</b>	<b>-3.08</b>	<b>12.97</b>	<b>18.15</b>	<b>31.08</b>	<b>50.91</b>	<b>76.72</b>	<b>107.49</b>	<b>142.08</b>	<b>179.23</b>	<b>217.57</b>	<b>255.57</b>
<b>EXPENDITURES:</b>												
<b>(Rs m)</b>												
Salary	44.70	49.17	54.09	59.50	65.45	71.99	79.19	87.11	95.82	105.41	115.95	127.54
Other Charges	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16	51.87	57.06
Maint. New Fac.	0.00	0.00	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
Library	0.00	0.00	1.00	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.14	2.36
Mkting Expend.	0.00	0.00	0.30	0.33	0.36	0.40	0.44	0.48	0.53	0.58	0.64	0.71
<b>Total Expend.</b>	<b>64.70</b>	<b>71.17</b>	<b>99.59</b>	<b>109.55</b>	<b>120.50</b>	<b>132.56</b>	<b>145.81</b>	<b>160.39</b>	<b>176.43</b>	<b>194.07</b>	<b>213.48</b>	<b>234.83</b>
<b>Annual deficit (Rs m)</b>	<b>-22.67</b>	<b>-26.86</b>	<b>-12.37</b>	<b>-4.78</b>	<b>1.97</b>	<b>7.78</b>	<b>12.56</b>	<b>16.19</b>	<b>18.55</b>	<b>19.51</b>	<b>18.93</b>	<b>16.64</b>
<b>CUM. RESOURCE GAP: (Rs m)</b>	<b>-47.39</b>	<b>-74.25</b>	<b>-86.62</b>	<b>-91.40</b>	<b>-89.43</b>	<b>-81.64</b>	<b>-69.09</b>	<b>-52.90</b>	<b>-34.35</b>	<b>-14.84</b>	<b>4.09</b>	<b>20.74</b>

# APPENDIX 3-D: MONTHLY TUITION FEE REQUIRED PER STUDENT TO BREAK EVEN

## KEY VARIABLES:

Expected Inflation	10.00%	Starting Endowment	Rs 0 m
Increase in Salaries	10.00%	Annual Incr. in Endowment	Rs 0 m
Incr. in Other Costs	10.00%	Growth in Own Resources	10.00%
Growth in UGC Grant	5.00%	<b>MONTHLY TUITION FEE</b>	<b>Rs 3450</b>

**CUMULATIVE RESOURCE GAP 2003-04:** Rs 13.89 m

**DISCOUNT RATE** 15.00%  
**PRESENT VALUE OF ANNUAL DEFICITS** Rs 0.57 m

US 1

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
<b>RECEIPTS:</b>												
<b>(Rs m)</b>												
Open. Bal	-24.72	-47.21	-73.88	-85.34	-90.97	-89.37	-78.92	-60.79	-43.42	-27.03	-11.83	1.91
UGC Grant	38.45	40.37	42.39	44.51	46.74	49.07	51.53	54.10	56.81	59.65	62.63	65.76
Own Resources	3.58	3.94	4.33	4.76	5.24	5.76	6.34	6.97	7.67	8.44	9.28	10.21
Endowment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuition Income	0.18	0.20	41.40	54.65	70.13	88.17	106.07	116.68	128.35	141.18	155.30	170.83
<b>Total Receipts</b>	<b>17.49</b>	<b>-2.70</b>	<b>14.25</b>	<b>18.58</b>	<b>31.14</b>	<b>53.63</b>	<b>85.02</b>	<b>116.97</b>	<b>149.41</b>	<b>182.25</b>	<b>215.39</b>	<b>248.72</b>
<b>EXPENDITURES:</b>												
<b>(Rs m)</b>												
Salary	44.70	49.17	54.09	59.50	65.45	71.99	79.19	87.11	95.82	105.41	115.95	127.54
Other Charges	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16	51.87	57.06
Maint. New Fac.	0.00	0.00	20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
Library	0.00	0.00	1.00	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.14	2.36
Mkting Expend.	0.00	0.00	0.30	0.33	0.36	0.40	0.44	0.48	0.53	0.58	0.64	0.71
<b>Total Expend.</b>	<b>64.70</b>	<b>71.17</b>	<b>99.59</b>	<b>109.55</b>	<b>120.50</b>	<b>132.56</b>	<b>145.81</b>	<b>160.39</b>	<b>176.43</b>	<b>194.07</b>	<b>213.48</b>	<b>234.83</b>
Annual deficit	-22.49	-26.67	-11.47	-5.63	1.60	10.45	18.13	17.37	16.40	15.20	13.74	11.98
<b>CUM. RESOURCE GAP:</b>	<b>-47.21</b>	<b>-73.88</b>	<b>-85.34</b>	<b>-90.97</b>	<b>-89.37</b>	<b>-78.92</b>	<b>-60.79</b>	<b>-43.42</b>	<b>-27.03</b>	<b>-11.83</b>	<b>1.91</b>	<b>13.89</b>
<b>(Rs m)</b>												

## APPENDIX 4: PROPOSED INCREASE IN OWN RESOURCES

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
# of Students	808	873	1000	1200	1400	1600	1750	1750	1750	1750	1750	1750
1 Admission fee	4500	4950	200000	264000	338800	425920	512435	563679	620046	682051	750256	825282
2 Tuition fee	180000	198000	1200000	1584000	2032800	2555200	30746100	33820710	37202781	40923059	45015365	49516902
3 Registration fee	3000	3300	50000	66000	84700	106480	128109	140920	155012	170513	187564	206320
4 Examination fee	120000	132000	200000	264000	338800	425920	512435	563679	620046	682051	750256	825282
5 Hostel Admission	6000	6600	15000	19800	25410	31944	38433	42276	46503	51154	56269	61896
6 Hostel rent	90000	99000	2700000	3564000	4573800	5749920	6917873	7609660	8370626	9207688	10128457	11141303
7 Hostel service charges	110000	121000	133100	146410	161051	177156	194872	214359	235795	259374	285312	313843
8 Hostel Electricity	940000	1034000	1137400	1251140	1376254	1513879	1665267	1831794	2014973	2216471	2438118	2681930
9 House rent	680000	748000	822800	905080	995588	1095147	1204661	1325128	1457640	1603404	1763745	1940119
10 Sui Gas	75000	82500	90750	99825	109808	120788	132867	146154	160769	176846	194531	213984
11 Busses	120000	132000	145200	159720	175692	193261	212587	233846	257231	282954	311249	342374
12 Misc. receipts	200000	220000	242000	266200	292820	322102	354312	389743	428718	471590	518748	570623
13 Dairy Farm Income	200000	220000	253000	290950	334593	384781	442499	508873	585204	672985	773933	890023
14 Horticulture Farm	200000	220000	253000	290950	334593	384781	442499	508873	585204	672985	773933	890023
15 Poultry Farm	50000	55000	63250	72738	83648	96195	110625	127218	146301	168246	193483	222506
16 Sale of Trees	500	550	633	727	836	962	1106	1272	1463	1682	1935	2225
17 Contract Research	600000	660000	858000	1115400	1450020	1885026	2450534	3185694	4141402	5383823	6998970	9098660
18 Conference Facilities	0	0	100000	115000	132250	152088	174901	201136	231306	266002	305902	351788
19 Continuing Education	0	0	500000	575000	661250	760438	874503	1005679	1156530	1330010	1529511	1758938
<b>TOTAL (Rs)</b>	<b>3579000</b>	<b>3936900</b>	<b>19764133</b>	<b>25306940</b>	<b>31797912</b>	<b>39381989</b>	<b>47116617</b>	<b>52420692</b>	<b>58417552</b>	<b>65222888</b>	<b>72977537</b>	<b>81854020</b>

### ASSUMPTIONS:

- |  |  |
|--|--|
| 1 Rs 200 per student, starting 1994, growth = inflation    | 10 Increase by inflation rate                          |
| 2 Rs 1,000 per student/per month, '94, growth = inflation  | 11 Increase by inflation rate                          |
| 3 Rs 50 per student, '94 growth = inflation                | 12 Increase by inflation rate                          |
| 4 Rs 200 per student, '94 growth = inflation               | 13 Increase by 1 1/2 times inflation                   |
| 5 15% of students, Rs 100/student, '94, growth = inflation | 14 Increase by 1 1/2 times inflation                   |
| 6 Rs 1500/student, '94, growth = inflation                 | 15 Increase by 1 1/2 times inflation                   |
| 7 Increase by inflation rate                               | 16 Increase by 1 1/2 times inflation                   |
| 8 Increase by inflation rate                               | 17 Increase by 30% per annum                           |
| 9 Increase by inflation rate                               | 18 Start Rs 100,000, increase by 1 1/2 times inflation |
|  | 19 Start Rs 500,000, increase by 1 1/2 times inflation |

## APPENDIX 5: CRITERIA FOR INVESTING IN A DEPARTMENT

### 1. Centrality to the Purpose of a Distinguished University

- A. The field must be important to the intellectual life of the University.
- B. Strengthening the field should contribute directly to strengthening the achievement and academic reputations of at least some other field in the University.
- C. The cutting edge of the field should be identifiable so that the investment can be targeted appropriately and so that the risks associated with an investment are well understood.
- D. The field must have an important teaching role at the undergraduate and/or graduate level.

### 2. Visibility

- A. The field must be broadly visible to academics.
- B. There should be a substantial external constituency for the research and scholarly output of the field.
- C. The field should be a principal field in almost all distinguished universities so that distinction at the University will be broadly recognized.

### 3. Potential

- A. The potential for intellectual development and vitality must be substantial; if it is a growth area, that is even better.
- B. The potential for external funding is important but should not be a necessary condition for selection.
- C. There should be potential for important research achievements that will benefit other fields within the University.

### 4. Present Status

- A. University's present activities in the field must be sufficiently strong so that an investment can cause University to be clearly recognized as one of the top ten in its field and, hopefully, one of the top five.

**Source:** Adapted from: Kotler, Philip, and Fox, Karen, F. A., (1985), *Strategic Marketing for Educational Institutions*, Prentice-Hall, Inc., Englewood Cliffs, New Jersey.

## APPENDIX 6: LIST OF PERSONS INTERVIEWED

NAME	TITLE	FACULTY/DEPARTMENT/INSTITUTION
Mr Hafiz Inayatullah	Director	Teaching
Prof Tajammal Hussain	Dean	Nutrition Sciences
Prof Muhammad Nawab Khan	Dean	Rural Social Sciences
Prof Jehangir Khan Khalil	Chairman	Agricultural Chemistry/Human Nutrition
Mr Muhammadullah	Director	Finance
Dr Donald E. Kuhlman	Continuing Education Specialist	TIPAN
Mr Mohammad Atta Shuja	Director	Planning and Development
Prof Jehangir Khan Khattak	Dean	Crop Production Sciences
Prof Muhammad Shahid	Dean	Crop Protection Sciences
Prof Mohammad Tariq	Chairman	Agricultural Mechanization and Water Management
Prof Fazal Hayat Taj	Chairman	Agronomy
Mr Fida Mohammad	Chairman	English
Mr Muhammad Ahmad Khan	Chairman	Institute of Development Studies
Prof Mushtaq Ahmad Mian	Chairman	Poultry Science
Mr Abdul Qadim Syed	Director	Research
Prof Mohammad Asrar	Director	Continuing Education
Prof Sharafat Khan	Chairman	Horticulture
Prof Syed Iqbal Shah	Director	Outreach
Mr S. Mehfooz A. Shah	Former Director	Outreach
Prof Mohammad Siraj	Chairman	Plant Breeding and Genetics
Dr Ahmad Gul	Chairman	Plant Pathology
Mr Mohammad Ayaz	Director	Communications
Dr Said Khan Khalil	Chairman	Plant Protection
Dr Oval Myers	Team Leader	TIPAN
Dr Abdul Qayyum Khan	TIPAN Project Officer	USAID, Islamabad
Mr Dennis J. Weller	Chief, ASPPD, ARD	USAID
Mr Abdur Rauf Khattak	Director General	Agricultural Research Institute, Tarnab
Dr Salim	Senior Research Officer	Tarnab
Mr Homeed	Agricultural Chemist	Tarnab
Dr Mahmood Khan	Plant Pathologist	Tarnab
Mr Abdul Wadood Khattak	Station Director	Cereal Crops Research Institute, Pirsabak (Nowshera)

Mr Sher Bahadur	Research Officer and President Frontier Agricultural Research Scientists Association (FARSA)	Pirsabak
Mr Qazi Mohammad Idrees	Statistician	Pirsabak
Mr Mian Liaqat Ullah	Assistant Entomologist	Pirsabak
Mr Abdur Rehman	Assistant Agricultural Chemist	Pirsabak
Mr Buzarg Jamiah	Research Officer	Pirsabak
Mr Ghulam Sarwar Khan	Station Director	Sugar Crops Research Institute, Mardan
Mr Ahmed Jan	Entomologist	Mardan
Mr Gul Rehman Khan	Assistant Agronomist (sugar cane)	Mardan
Mr Inamullah	Additional Secretary Agriculture	Planning and Development, NWFP
Mr Yusaf Said	Architect	Islamabad
S. Amirul Hassan Zaidi	Information Officer	Directorate of Outreach, AUP
Mr Nadeem Khattak	SDO Works Department	Agricultural University Peshawar (AUP)
Mr Nasimullah	Research Accounts Officer	AUP
Mr Mohammad Atta Shuja	Director Planning	AUP
Mr Mohammad Anwar	Deputy Director Planning	AUP
Prof G.M. Khattak	Ex Vice-Chancellor	AUP
Mr Hafiz Mansoor Ahmed	Additional Secretary	Department of Food and Agriculture, NWFP
Mr Qadim Syed	Director Research	AUP
Dr Waheed	Chief Planning Officer	Department Food and Agriculture, NWFP
Mr Nasirullah Jan	Secretary	Department of Education, NWFP
Mr Farhat Qazi	Chief Planning Officer	Department of Education, NWFP
Prof Fazle Kadir	Deputy Secretary	Department of Education, NWFP
Mr Saeed Ullah Shah	Advisor (Finance and Planning)	UGC, Islamabad
Mr Abdul Rashid	Director	UGC
Mr Mirza Mohammad Mushir	Joint Secretary, Higher Education	Ministry of Education
Dr Ghulam Farid Malik	Chief (Education) Planning Commission	Planning Commission, Islamabad
Dr Rashid Al Qayyum	Director	World Bank
Mr A. H. Qureshi	Industries and Finance Advisor	World Bank, Islamabad
Mr Philip J. Regan	Deputy Resident Representative	UNDP, Islamabad
Mr John H. Gerstle	Consultant	UNDP
Mr Hans von Spaneck	Country Representative	UNDP
Mr Mahmood A. Jilani	Chief Program Officer	Japan International Cooperation Agency (JICA), Islamabad

Mrs Louis Marchand	Counsellor	CIDA, Islamabad
Mr John B. Richey	Management Consultant	University of Maryland, U.S.A.
Ms Susan Scribner	Sustainability Specialist	University of Maryland

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