

“The Challenge for Utility Regulators in the Caribbean”

**Human Resource Systems for Regulatory Institutions: An Imperative for
the Caribbean**

A paper presented to the 1st Annual Conference of Utility Regulators in the Caribbean
16 to 19 September 2003 -Trinidad &Tobago

Prepared by
Professor Andrew Downes and Avril Husbands (MBA)

Human Resource Systems for Regulatory Institutions: An Imperative for the Caribbean

1. Introduction:

Within the last decade, there has been a call for general economic reform in the Caribbean. As part of structural adjustment programs, several Caribbean governments have privatized a number of public corporations in order to enhance efficiency and to ease the pressure on public finances caused by the granting of subsidies and other special concessions. Reform programs have taken place in the financial, commodity and labour markets, aimed at making these markets much more efficient and competitive. Economic liberalization and competitiveness have been the buzzwords of economic policy making in the region.

Caribbean governments have taken on a more regulatory role in economic activity. Regulation refers to the set of governmental actions (that is, rules and controls) which are designed to influence the behaviour of economic agents in order to achieve some socially desirable goal.

Such regulation may be undertaken via *direct* measures such as the rate setting functions for public utilities or *indirect* measures such as the general rules or laws which ensures the orderly conduct of economic activity. Two classes of regulation have emerged in the literature; namely *economic* regulation and *social* regulation. Economic regulation is the classical form of regulation and refers to rules and controls directed at special industries or markets. The regulation of 'natural' monopolies, the direct government provisions of goods and services and various forms of price and entry regulation constitute forms of economic regulation. While economic regulation focuses on market outcomes, social regulation addresses problems which are not adequately addressed in the market place, namely, health, safety and environmental issues.

Changes in the international economic environment and developments in the form of trade liberalization and the removal of trade preferences have resulted in markets becoming more competitive. Governments have therefore established regulations to ensure that the competitive process is 'fair' and that consumer interests are protected. For example, as part of chapter 8 of the Revised Treaty of Chaguaramas under which the CARICOM Single Market and Economy (CSME) has been established, member states are required to establish and maintain a national competition authority. Jamaica established a Fair Trading Commission in 1993, while Barbados has incorporated fair competition and consumer protection regulation within the umbrella of the Fair Trading Commission established in 2001.

Developments in technology have undermined the existence of several 'natural' monopolies. In the past, technology only allowed for the existence of one producer in the market for electricity, telecommunications, water and sewage. Technological developments have however resulted in the unbundling of the production functions of these suppliers thus leading to greater competitiveness in various sub-markets.

The changes in the regulatory landscape have resulted in the establishment of new regulatory institutions. In the past, the regulatory process occurred through government departments and ad hoc regulatory bodies. In some

cases, these bodies were industry specific (for example, an Electricity Commission), while in other cases, they covered sectors (for example, Public Utilities Commissions). These traditional regulatory arrangements have proven to be grossly inadequate to meet the needs of the new economic environment. New regulatory institutions were clearly needed to meet the new demands.

In Barbados, for example, the Fair Trading Commission (FTC) replaced the Public Utilities Board which was in existence since 1955. The FTC is a multi-functional agency covering utilities regulation, consumer protection and fair competition. In Jamaica, public utilities regulation is undertaken by the Office of Utility Regulation (OUR) established in 1995, while competition and consumer protection matters are dealt with by the Fair Trading Commission. Trinidad and Tobago has replaced the Public Utilities Commission, established in 1966, with a Regulated Industries Commission (RIC) in 2001, in order to regulate the provision of the water and sewerage, electricity and domestic telephone services. In the Organisation of Eastern Caribbean States (OECS), an Eastern Caribbean Telecommunications Authority (ECTEL) was formed in 2000 to regulate telecommunications services in St. Lucia, Dominica, Grenada, St. Vincent and the Grenadines and St. Kitts and Nevis. Several other countries in the region are also restructuring their public utilities commissions.

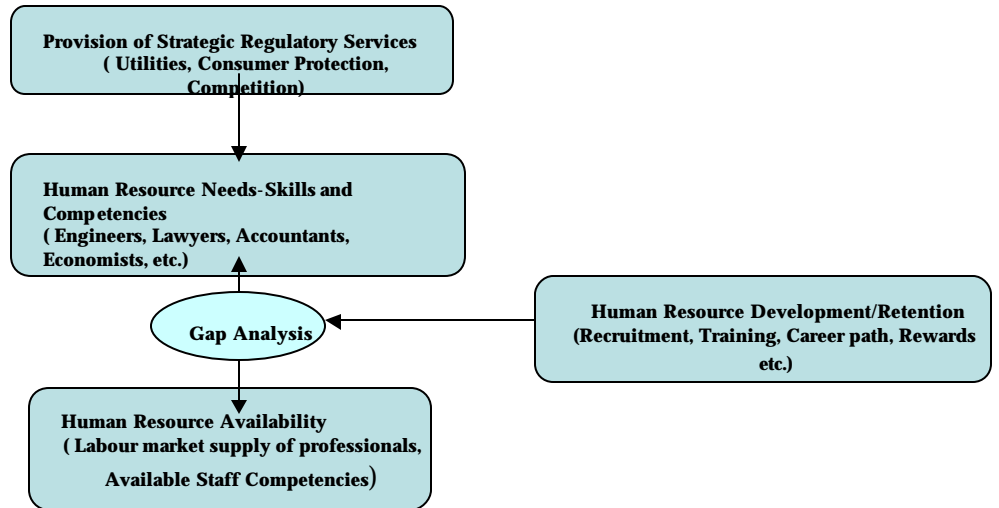
An important aspect of the operations of these new regulatory agencies is their ability to adequately and effectively discharge the tasks for which they were established. The quantity and quality of the human resource base of these new regulatory institutions are critical to their success. As Stern (2000), Makaya (2001) and Domah, Pollitt and Stern (2002) note, the effectiveness of these new regulatory agencies requires a substantial number of professional persons “with particular scarce specialist skills” which are not readily forthcoming in small developing countries. Regulatory agencies are usually staffed by economists, lawyers, accountants, financial analysts and engineers who not only require basic technical skills and knowledge but also special investigative skills in regulatory matters. Given the general scarcity of skilled persons in small developing countries, the development and retention of the human resource base of regulatory agencies is a pressing issue regulatory effectiveness is to be assured and regulatory capture avoided.

This paper examines the human resources development dimension of new regulatory institutions in the Caribbean. The focus of the paper is on the attraction, development and retention of human capital working in these agencies from a strategic perspective. Given the complexity of the regulatory issues, the multi-purpose nature of several regulatory agencies and the scarcity of skilled professionals in the region, regulatory agencies must adopt a strategic human resource planning (SHRP) approach in their operations. The next section of the paper discusses the human resources needs of regulatory agencies in the Caribbean region. This section is followed by an examination of the human resource situation in the region: skill availability; reward structure; training systems; constraints on the human resources system inter alia. The final section suggests various human resources development strategies and policies for overcoming the constraints facing the region.

2. Human Resource Needs of the Regulatory Institution:

The importance of human capital¹ to regulatory agencies is inextricably linked to an understanding of what makes regulation possible. A human resource planning model demonstrates the relationship between the ability of the regulatory institution to fulfill its mandate and the resource capacity that enables the successful attainment of regulatory objectives [see Figure 1].

Figure 1: A Human Resource Planning Model for a Regulatory Institution



In this model, human resource development and retention are shown to be key factors in ensuring the availability of these resources over time. It is also significant that the human resources needed by the regulatory institutions are drawn from a common pool of available workers, referred to here as the labour market supply of professionals. The question then arises as to what are the implications for the regulatory agency?

It is proposed that the gap which exists in the availability of skilled and knowledgeable persons to meet the needs of the regulator will have to be met through Human Resource Development interventions and the development of systems targeted to respond to the identified needs.

An examination of the literature suggests that the regulatory agency must have, on the one hand legislation which gives the regulator its mandate and powers to act, and on the other, regulatory expertise to carry out its mandate. The availability of adequate resources in this area gives the regulator the capacity to design tariffs and other measures, assess and monitor the performance of the service providers and to enforce regulations.

¹ Defined as the collective sum of the knowledge, skill, inventiveness, energy, attributes, life experience, and enthusiasm that people choose to invest in their work.

The recruitment and retention of expertise must therefore be seen as a central issue in the development of the required regulatory capability. The persons recruited must be trainable and they must have access to opportunities to use their skills in a supportive working environment. We note, for example, that when reporting on human resource constraints in developing countries, Domah, Pollitt and Stern (2002) indicate that when compared with the developed world, the case of developing countries is different in many respects. “on the one hand, utility regulatory institutions are relatively new, small and cover several sectors, and on the other, there is a common belief that they are understaffed with respect to professional human capability.”(p.2)

Domah et al (2002) also refer to the role of human resources development in achieving regulatory effectiveness. They make the point that “regulatory institutions should be characterized by *clarity* of roles and objectives, *autonomy* from political intervention, wide *participation* by relevant stakeholders, *accountability* to outside agencies, *transparency* of decision making process and *predictability* of decisions. In practice, the attainment of the six criteria listed above hinges on the availability and use of an adequate supply of trained staff involved in regulation... It is not just the total numbers of staff but a sufficient pool of professionally qualified ones (lawyers, technicians, economists and accountants, among others) that will provide the critical institutional continuity of regulation.” (p.2,3) Makaya (2001) is also of the view that “the effectiveness of a regulatory agency can also be ‘measured’ by its efficiency, its ability to arbitrate and its ability to retain human capital” (p.9)

It is certain then that the regulatory institution will be assessed on the basis of its effectiveness, and that is contingent upon the quality of the staff providing the technical and professional input since its decisions must be based on competent research and expert technical advice. There is no doubt that the ability to attract, develop and retain such a pool of persons is essential for effective regulation in the small developing countries of the Caribbean.

Smith and Wellenius (1999) note further that where institutional features are not in place, regulatory effectiveness, and therefore sector development can be seriously undermined.

Mustafa (2002, p.4) has also articulated and it is worthy of note at this juncture that regulation comes down to people. It cannot be stressed enough, that attracting and retaining a competent staff that is able to make sound objective judgments on complex and often politically sensitive issues is necessary. It has also been suggested that a regulatory agency needs to ensure job security and that subjecting staff recruitment and remuneration to civil service rules is counter productive and makes it difficult to attract and retain highly skilled regulatory staff.

In addition, while there is obviously some value in the use of consultants by the regulator, the sustainability of these agencies requires a deliberate strategy for the transfer of knowledge to staff as part of the capacity building process.

It is assumed that regulatory agencies in developing countries want to engage in best practices and that there is the willingness by the governments who have established these agencies to learn from the experiences of others.

However, we note the experience of the Office of Utility Regulation (OUR) in Jamaica, and the Ghana's Public Utility Regulatory Commission (PURC) cited by Phillip Osei (2003) that "the OUR and the PURC have had to operate within very stringent financial policies thus, severely limiting their capacity to marshal resources for research and keep up with accessing and utilizing best practices from the international system. Yet these capacity building requirements are needed in order to ensure that the two regulatory bodies are not subjected to capture by the, at times, well endowed multinational companies that dominate the utilities sector in developing countries."(p.7)

Studies of regulatory agencies generally come to the conclusion that in order to be successful, there needs to be an analytic infrastructure capable of in depth investigation and reporting on all the variables that must be taken into account to arrive at fair and balanced decisions.

The challenge to the regulatory agency is to attract and retain human capital that equips it with the intellectual capital to deliver those results.

Utility regulation requires a pool of expertise² that is able to:

1. Determine performance indicators for industry and utilize data to track trends and developments of service providers.
2. Analyse raw data and prepare statistical and technical reports for the Commission.
3. Work with team members on complex research projects.
4. Value assets and determine operational efficiency of equipment etc.
5. Analyse the financial performance of the sector.
6. Establish industry standards and monitor adherence to quality and service standards.
7. Conduct research, and prepare technical reports.
8. Carry out quantitative analyses using modeling and statistical.
9. Advise on economic efficiency of proposed rates and tariffs of service providers.
10. Carry out a variety of tasks requiring legal competence, including the ability to conduct legal research, write legal opinions and litigate.
11. Perform functions in administration, communication and accounting.

Generally, retention is thought to be linked to certain key drivers. In considering the circumstances of the regulator, a public sector agency, one notes that salaries for the professional are lower than those paid by private sector, (including those that are regulated) and even some quasi-governmental agencies that draw resources from the same job pool.

Evidence on worker motivation suggests that pay is important, although it is not the only contributor to worker motivation. The regulator should therefore be able to offer both a competitive salary and non-salary benefits.

² Skills list based on selected functions and job skills utilized by FTC Barbados.

Gregory Smith (2001) notes that “money remains an important issue for working people – and a major, although not the most important, influence in a person’s decision to stay in or leave the job. In general, however, money gets employees in the door, but it doesn’t keep them there. Once employees financial needs have been met, money, motivational influence diminishes, eclipsed by factors like recognition and advancement.” (p.11)

A questionnaire with nine possible motivators was distributed to 24 members of the staff of the FTC in Barbados who were asked to rank them order of their importance (with ‘1 being the ‘most important’ and ‘9’ being the ‘least important’). Nineteen samples were returned, and seventeen supplied usable data. The results are given in Table 1.

Table 1: Ranking of Factors Motivating Staff at the FTC in Barbados (2003)

Item	Ranking
Career growth, learning and development	2
Fair pay & benefits	3
Relationships	8
Supportive relationships	6
Pride in organization	4
Work environment	7
Recognition & respect	4
Meaningful work	1
Autonomy	9

These results indicate that the top three factors influencing motivation (hence retention) in this organization are meaningful work, career growth and fair pay and benefits. The implication is that the ability of the regulatory agency to attract and retain staff is linked to its ability to offer an environment where at least some of these requirements exist.

As indicated elsewhere, research shows that one of the challenges to the effectiveness of regulatory agencies in developing economies is adequate staffing. Smith and Wellenius (1999) make the point that “telecommunications regulatory agencies generally need thirty or more professional engineering, accounting, pricing, legal, and administrative professional staff.” (p.4)

Domah, Politt and Stern (2002) made a comparison between developing and developed countries and concluded that a typical developing country regulator needs between 30 and 34 staff members to regulate the electricity sector alone.

Data collected for four Caribbean regulatory institutions, with respect to staffing for utility regulation, is summarized in Table 2. It is important to note that some instances, where the regulator is involved in more than one sector or function, the duties of the staff member may not be limited to utility regulation. For example, the

economist may have to cover utility regulation, competition and consumer protection issues in the multi-sectoral and multi-functional FTC in Barbados.

This situation presented puts the importance of being able to attract and retain staff, high on the agenda of Caribbean regulators, since it suggests that they are generally understaffed. It must be noted, certainly in the case of the Fair Trading Commission in Barbados that the development of regulatory capability has required significant expenditure for training. This fact only supports the importance of retention since the FTC needs to achieve a high return on its human capital investment. It is reasonable to conclude that if effective regulatory practice is to be sustained in the region overtime, the development of strategies for attracting, training and retaining staff must be seen as an imperative.

Table 2: Professional Staff in Selected Caribbean Regulatory Agencies

Territory	Regulator	Sectors regulated	No. by profession
Barbados	Fair Trading Commission	Telecommunications Electricity Competition Consumer protection	Economist (1) Financial Analyst (1) Lawyers (2) Accountants (2) Research Officer(1) Research Assistant(1) Director of Utility Regulation(1) Electricity Analyst(1) Telecom Analyst(1)
Belize	Public Utilities Commission	Telecommunications water / waste electricity	Specialists Senior Managers (3) Generalist - Monitoring and Compliance(1) Outsource - legal and economics consultants
Jamaica	Office of Utility Regulation	electricity telecommunication public passenger transport by road, rail and ferry water sewerage services	Director Analysis & Research(1) Legal (3) Financial Comptroller(1) Economist (2) Numbering Administrator(1)
Trinidad and Tobago	Regulated Industries Commission	Water and Sewerage Authority Electricity Telecommunications Power Generation InnCogen Limited (electrical)	Assistant Executive Director – Economics and Res earch (1) Tariff Analysts (2) Legal/Corporate Secretary (1) Chief Financial Officer (1) Utility Accountants (1) Accounts Officer (1)

The authors' knowledge of the Barbados Fair Trading Commission has allowed for a more indepth analysis of this institution. This organisation was therefore used as a reference point for the development of the recommended strategies. Particular attention was paid to the quality and quantity of the work to be done to deliver results, the importance of having the specialised skills required available, the difficulties experienced previously with recruiting for key positions and expressed concerns about the low level of compensation and the already high but necessary investment in training and development.

3. The Human Resource Availability in the Caribbean:

The supply of skilled professional to meet the demands of the new regulatory institutions has been an acute problem in the Caribbean (Lee, 2003; Lodge and Stirton, 2002). Although the University of the West Indies (UWI) and other tertiary level institutions have produced persons with qualifications in economics, accounting, law, engineering and other related areas, the availability of professionals with the requisite knowledge and skills in regulatory matters has been a problem. This situation may reflect the fact that these agencies are new and there has been little interest or inclination to study regulatory matters outside of financial regulation. For example, within the UWI, there are very few courses covering material on the regulation of utilities, consumer protection or fair competition. These issues tend to be modules in traditional courses such as industrial organisations, and business law. The UWI has however recently introduced a Masters degree in Telecommunications Policy to be delivered via the distance mode. Central Banks which engage in financial regulation do not seem to have a major problem with recruitment. This is probably a consequence of a longer history that would have allowed for the fashioning of specialized courses that satisfy their requirements.

The region, as a whole, has a problem with the supply of skilled professionals to meet the needs of national development. Available data indicate that the percentage of the population in post-secondary educational institutions in the Caribbean varies from 1.3 percent (St. Lucia and St. Vincent) to 13.5 percent (the Bahamas). These figures are low by international standards.

The UWI has been the main producer of graduates in the areas which are needed by these new regulatory agencies. The percentage of persons graduating from the Faculty of Engineering has declined over the years; while the percentage of law graduates has remained relatively constant (see Table 3). The percentage of Social Sciences graduates (accounting, management studies, economics, sociology, political science, public management; psychology and social work) has shown a steady increase over the years. The number of Social Sciences graduates increased significantly between 1993/4 and 1999/2000. Data are not available for the different disciplines, hence the relative proportions of economics and accounting graduates is not known. While these data are aggregates, they provide an indication of the size of the pool of persons from which regulatory agencies can draw on annually.

Table 3: First Degrees Awarded by UWI by Selected Faculties

Year	Engineering		Law		Social Sciences		Total Graduates
	No.	(%)	No.	(%)	No.	(%)	No.
1952-1993	3,217	(8.2)	2,196	(5.6)	8,742	(22.3)	39,220
1993/4	201	(7.4)	124	(4.6)	890	(32.7)	2,724
1994/5	na		na		na		na
1995/6	241	(7.0)	143	(4.2)	1,228	(35.8)	3,427
1996/7	201	(6.7)	142	(4.7)	1,078	(35.7)	3,017
1997/8	192	(6.1)	159	(5.1)	1,237	(39.6)	3,122
1998/9	194	(5.4)	144	(4.0)	1,322	(36.6)	3,617
1999/2000	225	(6.0)	133	(3.5)	1,435	(38.0)	3,778

Note: na = not available

Source: UWI: [Office Statistics](#) (various issues), Office of Planning and Institutional Research, Mona Campus

In addition to graduates from the UWI, the pool also includes graduates from institutions outside of the region and professional bodies. This database is unavailable. These sources however provide the pool from which entry and mid-level professionals can be drawn. In many cases, the lack of regulatory expertise is compensated through on-the-job and institutional training. The key issue is the trainability of new recruits.

The experience of regulatory agencies in the region indicates that the idiosyncratic training in regulatory matters can be obtained through development assistance. For example, the OUR in Jamaica was able to obtain assistance to employ a regulatory economist from the UK on a short term consultancy basis. This economist provided the needed technical expertise during his attachment (see Lodge and Stirton, 2002). It can be argued that the technical expertise provided by mid-level professionals is one of the weak areas in regulatory agencies in the region. Given the financial resources of the regulated companies, they can usually hire the best expertise from across the world. This means that the technical and investigative expertise of the staff of regulatory institutions must always be at the cutting edge of the subject matter. There is also the fear that regulatory personnel will be poached by the regulated companies once the agencies train these persons. In the Caribbean, the down-sizing of some regulated companies, for example, Cable & Wireless, has meant that staff are available to the regulatory agency.

One of the main problems associated with the availability of professionals to the new regulatory agencies is the compensation package. Regulatory institutions are public agencies which are funded partially or fully by public funds and/or through a levy on the regulated companies. The compensation packages are generally tied to central government arrangements which are usually less attractive than private sector compensation. For example, a financial analyst can be paid much more in the private sector than in a regulatory institution. While the financial analyst may have the basic technical and investigative skills to work in a regulatory institution, he/she may forego such an opportunity on compensation grounds.

The idiosyncratic nature of the work undertaken by regulatory professionals can involve the payment of a 'special premium'. For example, in the UK, the salary range for a lecturer in economics (usually with a PhD) in a top university varies from £22,191 - £35,845 (depending on age). The starting salary for an assistant economist at OFGEM is £24,150 or £26,650 (with a relevant Masters degree). In the Caribbean the situation is generally the reverse and therefore skilled professionals are not readily attracted to regulatory agencies such as the FTC (Barbados) OUR (Jamaica), and RIC (Trinidad and Tobago). In some cases, the staff turnover has been high thus affecting institutional memory and truncating the returns on investment made to train the professionals.

The small size of the regulatory agencies in the Caribbean can put a strain on the staff working in them. Domah, Pollitt and Stern (2002) have provided estimates for 'optional staffing' of regulatory agencies in the electricity sector. They indicate that for small countries with limited electricity systems, "the number of regulatory staff required (to achieve regulatory effectiveness) is around 30 including 15 professional staff" (p.35). These estimates indicate that the multi-functional regulatory agencies in the region are grossly understaffed and financially constrained. Such a situation can make such agencies vulnerable to 'regulatory capture' unless there are strong lobbying public interest groups (Sheehan, 1988) and/or talented staff and commissioners. It should be emphasized that given the nature of regulatory hearings, commissioners should also be adequately trained and remunerated since they have to make the final regulatory decisions.

The existence of this severe human capital problem in the region must therefore be addressed through the provision of greater financial resources and strategic human resource planning.

4. Towards the Development of HRD Strategies and Policies:

The conclusion of research work done in this area is that regulatory agencies in developing countries are not properly funded to enable effective regulation. It is also clear that a gap exists between the needs of the regulatory agency and the availability of persons in the labour market with relevant skills. The gap is perpetuated not only by this lack of human capital but also by the possibility that poor attention may have been given to the design of many of these agencies. This has led to inadequate provision for staffing and the financial resources that would offer these agencies the latitude to design attractive and innovative compensation plans. There seems to have been a conscious effort at embarking on regulation, while incurring minimal or 'bare bones' budgets.

The consequence of this approach is the very real possibility of regulatory capture and poor decision making which can be costly in the long run. Regulatory agencies should in fact be designed so that their technical competence and capacity for knowledge output are cutting edge, a 'step ahead' of the service provider. In order to dictate the standards of operational and technical efficiency, they must themselves be models of efficiency and effectiveness. Agencies that lag behind cannot be effective.

The attention paid to the training and development of the regulator's human capital is critical. It is the demonstrated high quality of information, knowledge and understanding of technical issues that will engender the respect and confidence that are fundamental for effective regulation.

So what are the implications for Human Resource Management and Development and what kinds of strategies can we build in for development and retention? Regulatory institutions need to design human resource systems which incorporate the selective recruitment of trainable and adaptable persons and that stress employee orientation to the institution's values, continuous learning and skill development, performance management which links the quality of the skills and behaviors of the staff to the strategic objectives of the institution and a reward and recognition system. (see Rigsby and Greco, 2003, p.277)

The human resources system for Caribbean regulatory institutions should therefore incorporate the following elements:

1. The development of a learning organisation which promotes the pursuit of knowledge at all levels of the regulatory body. The agency must be cerebral. There must be an emphasis on the acquisition of knowledge and the sharing of knowledge at both the individual and organisational levels. Persons who are ambitious and for whom career growth is an important motivator will be attracted to this kind of environment.
2. One of the great, and often undersold, benefits of working for the regulator is the availability of challenging work that provides the opportunity to develop new and marketable skills that provide motivation through the creation of opportunities for career growth.
3. Attention must be paid to providing a reward system that is adequate, if not competitive. The development of Performance Based Payment Schemes has been shown to be linked to enhanced productivity and often provide an incentive for a continuing association with the employer.
4. Where there are limited opportunities for career development within the organisation, particularly evident in organisations with flat structures, consideration should be given to using the compensation package to counter the impact of this reality.
5. Opportunities for job enrichment should be explored, certainly through assignment to stimulating projects and multidisciplinary teams.
6. Opportunities for participation in relevant and stimulating training programmes must be fully explored and utilised.
7. Forging linkages with training institutions would provide opportunities for professional development, through teaching assignments and guest lectures. This strategy has the advantage of also serving to increase the public profile of the regulator by exposing students to the concepts of regulation.
8. Attention must be paid to capacity building. The practice of assigning new areas to the existing staff is limited in its use and its continuing practice could lead to frustration when the staff members feel that the benefit of learning new skills is overtaken by the burden of additional duties, usually for no additional pay.

8. The use of external attachments to other regulatory agencies and the employment of consultants in key technical areas to boost competence and capacity.
9. Periodic reviews of work via retreats, staff seminars and staff publications which can enhance confidence and image.
10. A supportive management that is able to demonstrate that the professional and technical capability of staff members is valued is critical to the success of the agency.

5. Conclusion

In the final analysis, experiences in developing countries are beginning to show that successful regulation requires a commitment of financial resources such as to allow the principles of effective regulation to drive the development of successful regulatory agencies. Notwithstanding this situation, Caribbean regulators must demonstrate what they can effectively do with the present resources while explaining the quantum leap that would be made with additional resources.

It is possible that more extensive research will point to the need for redesign and that this redesign will address the need to take into consideration the problems, such as lack of opportunities for career growth, that presently obtain in small agencies. What is certain is that the solutions will require commitment on the part of all parties. Regulatory agencies in the region need to build/expand capacity through additional resources and innovative and effective human resources development.

References

- Domah P., Pollitt M. and Stern J (2002): “ **Modelling the Costs of Electricity Regulation: Evidence of Human Resource Constraints in Developing Countries**”, Regulation Initiative Working Paper Series, No. 49, London Business School.
- Gray P (1998): “**Utility Regulators: Supporting Nascent Institutions in the Developing World**” Public Policy for the Private Sector, Note No. 153, September, World Bank Group.
- Kistow B (1999): “**Accounting in a Public Utility Environment: Preparing the Future Professional**” Annals of Research on Regulated Industries (Trinidad & Tobago), Vol. 1, No. 1, January, pp 15-22.
- Lee B. (2003): “**Special Aspects of Competition Policy in Small Economies** ” (OECD Conference, Paris, France, February 8 -13)
- Lodge M. and Stirton L (2002): “**Building Regulatory Autonomy in the Caribbean: Comparative Lessons on the Political Economy of Regulatory Reform**” (Mimeo; Centre for Analysis of Risk and Regulators (CARR), London School of Economics, July).
- Makaya G. (2001): “**The Determinants of Regulatory Effectiveness in Liberalised Markets: Developing Country Experiences**” (Trade and Industrial Policy Strategies, Annual Forum, September 10-12, Misty Hills, Muldersdrift)
- Mustafa M A (2002): “**Benchmarking Regulators**” (Public Policy for the Private Sector, Note Number 247, June, World Bank Group)
- Osei P(2003): “**Regulation in a Flux: The Development of Regulatory Institutions for Public Utilities in Ghana and Jamaica**” (mimeo, SALISES, UWI, Mona)
- Rigsby JA and Greco G (2003): “**Mastering Strategy: Insights from the World’s Greatest Leaders and Thinkers**”, New York, McGraw Hill.
- Sanatan R. (2000): “ **Connecting to the Century: Caribbean Telecommunications**” CARICOM Perspective, June, pp 47-81
- Sheehan M. F. (1988):“ **Institutionalists Before Regulatory Commissions: The Value of Doing, in Thinking, Teaching and Writing**” Journal of Economic Issues, Vol. XXII, No. 4, pp 1169-1178.
- Smith G.(2001) **Here Today, Here Tomorrow Transforming Your Workforce from High Turnover to High Retention** (Dearborn).

- Smith W. (1997): “**Utility Regulators - Decision-making Structures, Resources and Start-up Strategy**”
Public Policy for the Private Sector, Note No. 129, October, World Bank Group.
- Smith P L and Wellenius B.(1999) **Strategies for Successful Telecommunications Regulation in Weak Governance Environments** (World Bank)
- Stern J (2000): **Electricity and Telecommunications Regulation in Small and Developing Countries**’,
Regulations Initiative Working Paper Series, No. 41, London Business School.
- Stirton L. and Lodge M. (2002): “**Embedding Regulatory Autonomy: The Reform of Jamaican Telecommunications Regulation 1988-2001**” (CARR Discussion Paper No. 5, February, London School of Economics).