Organizational Constraints on Innovation and Intrapreneurship: Insights from Public Sector

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Research on organizations has shown that the survival and growth of enterprises in dynamic business environments would depend largely on their ability to promote innovations within their organizations. The innovation process with its various stages of idea conception, development, implementation, and integration to the existing business portfolio is naturally an organizational process which inevitably requires intrapreneurial orientation among the employees. Above all, the entire process calls for an enabling culture and appropriate systems so that employees are motivated to take up intrapreneurial ventures. The aggressive efforts by companies from developed countries for capturing global markets, encouraged by the liberalized economic policies of the Indian government, have drastically changed the business scenario in India and probably the worst affected by such changes are the public sector companies in India. Whether in the private or public sector, companies are faced with only two options: innovate or perish! It is in this context that the present study was undertaken in large public sector corporations in India.

The major objective of this study was to identify the organizational constraints against innovations. The best way to understand such issues is to interact with the innovators themselves because it is they who have experienced these constraints. The first step in the methodology, therefore, was to identify a few highly innovative projects from public sector organizations which was done by rating the innovativeness of 162 projects submitted for an innovation award in the petroleum sector. Thirty-one highly innovative cases were thus selected for a detailed study.

A qualitative analysis of the cases brought out the following organizational constraints against innovation:

- Absence of failure-analysis systems (100%)
- Lack of patenting initiatives (97%)
- Lack of recognition for innovations in non-core areas (94%)
- Poor handling of change management (90%)
- Informal team formation (81%)
- Low emphasis on dissemination and commercialization (77%)
- Inadequacy of rewards and recognition (65%)
- Procedural delays (58%)
- Poor documentation and maintenance of records (58%)
- Easy access to foreign technologies (55%)
- Unclear norms on linking innovations with career growth (48%)
- Lack of recognition for contributions by support functions (45%)
- Ambivalent support from the immediate supervisor (39%)
- Inadequate systems for the promotion and management of ideas (35%)
- Lack of facility for pilot testing (29%).

The study clearly shows that Indian organizations are yet to institute many systems and procedures required for supporting innovations. Although many of these organizations have formal R&D departments/divisions, it appears that R&D without the necessary organizational support is merely a ritual rather than the part of a proactive innovation strategy. R&D facilities and organizational support for innovation are not to be treated as independent arrangements but have to emerge from an overall innovation strategy as complementary systems supporting each other. Absence of such an integrative perspective and strategy seems to be the overarching constraint against innovations in Indian public sector organizations.
New ventures in an economy can be compared to new sprouts in an eco-system. They are the signs of vitality and growth in the system. The role of innovation and intrapreneurship in organizations is very similar. They keep the organizations active and growing. In fact, the survival and growth of enterprises would depend largely on the temporary monopolies created by them through innovation (Schumpeter, 1934). Research on the impact of innovation has generally confirmed its benefits to organizations in terms of wealth creation, productivity, profitability, and growth (Antoncic and Hisrich, 2003, 2004; Kemelgor, 2002; Batten, 2002; Goosen, et al., 2002; Thomson and McNamara, 2001; Kuratko, et al., 2001; Zahra and Garvis, 2000; Barrett, et al., 2000).

While the importance and usefulness of innovations for large and established organizations have been recognized by researchers and practitioners alike, it is paradoxical that such organizations have inherent disabilities for innovation on account of the very fact of their being large and established. Several such inherent disabilities have been pointed out by researchers which have blocked innovation and intrapreneurship within such large organizations and eventually led to their collapse. This is indeed an unrelenting force that does not spare even the strongest among the large ones as demonstrated by the fact that more than 300 of the first list (1955) of Fortune 500 companies have been wiped out within about three decades of their listing (Shanklin, 1986). The strategic priorities of established organizations having on-going activities are found to be biased in favour of the operating strategies with R&D and innovation strategies placed at the bottom of their priority list (Sharma, 2003). In the tussle between the requirements of ‘administrative management’ (designed for efficiently managing the existing activities and holding things in place to ensure continuation of already developed activities) and ‘entrepreneurial management’ (designed to create change by developing something new), it is natural that priority is accorded to the former (Kanter, 1985). In general, there is a tendency even for the newly established organizations to stay with their early stage successful strategies despite the changes taking place in their business environments (Romanelli, 1987). Naturally, this tendency would be far stronger for the more established, rather entrenched, organizations.

Organizational inertia at the strategic level would naturally lead to a focus on maintaining the existing systems broadly designated as the concerns of administrative management (Kanter, 1985). Such systems become stronger and more pervasive as organizations grow larger which is a consistent finding of research on the link between organizational size and bureaucratization. This is probably the most critical barrier in large organizations in their attempts to promote innovation. Researchers have found intrapreneurship to be more difficult in large firms (Carrier, 1994; Dougherty, 1994; Neilsen, et al., 1985) because such organizations would not have the flexibility in their systems to provide the rewards of personal autonomy and wealth that entrepreneurial individuals look for (Morse, 1986). Besides, radical innovations often require human processes that defy systematization (O’Connor and McDermott, 2004), which unfortunately is the basis of organizing large systems. Naturally, it becomes extremely difficult to get support for radical innovations in large organizations where the internal culture and organizational systems favour the low-risk, instantly rewarding incremental projects (McDermott and O’Connor, 2002). In fact, the short-term financial target orientation, which is characteristic of established organizations, has a negative impact on R&D and innovation (Hoskisson, et al., 1993). Such an orientation to refine one’s own existing technologies to the total neglect of new technologies emerging in the field is often described as the ‘incumbent’s curse,’ whereby the radical new technologies push the incumbent organizations out of business (Henderson, 1993; Mezias and Glynn, 1993) although this can be avoided by redesigning the organization as well as by providing appropriate incentives to innovative individuals (Macher, 2004; Seshadri and Tripathy, 2003; Chandy and Tellis, 2000).

The general consensus among researchers, therefore, is that innovation and intrapreneurship are particularly difficult for large established firms. The scenario is even worse for developing/transition economies (Antonic and Hisrich, 2000) and for public sector organizations (Sadler, 2000). The Indian public sector organizations, therefore, are vulnerable on three counts (size, sector, and economy) vis-à-vis their ability to promote innovation and intrapreneurship. No wonder, Indian companies are found to be lacking in innovative orientation (Rajpal and Sagar, 2003).

Studies on the innovation-sponsoring capability of organizations have linked it to individual as well as organizational factors (Hostager, et al., 1998; Hornsby...
and Naffziger, 1992; Hornsby, et al., 1993; McGinnis and Verney, 1987). Though it is difficult to assess the relative importance of these two factors in promoting innovation, there are studies which have shown that the internal organizational factors do play a more prominent role (Goosen, et al., 2002). Besides, individuals can be trained to be intrapreneurial provided the organizational environment is conducive (Thornberry, 2003; Wunderer, 2001). It is in this context that researchers have been focusing more on the organizational facilitation of innovations than the individual characteristics supporting innovation (Antoncic, 2001; Russell, 1999; Drazin and Schoonhoven, 1996; Schellhardt, 1996; Adams, 1995; Stopford and Baden-Fuller, 1994; Kuratko, et al., 1990; Duncan, et al., 1988; Kets de Vries, 1996; Chittipeddi and Wallett, 1991; McKinny and McKinny, 1989; Norburn and Birley, 1986; Chaudhuri, 1986; Kerbs, 1985; Harris and Harris, 1985; Kanter, 1985; Burgelman, 1985; Galbraith, 1982). In spite of such widespread interest in the management of innovation in established firms in the West, as indicated by the voluminous literature on the subject, there are very few studies done in India on such vital issues affecting the long-term survival and growth of organizations. The present research attempts to fill this gap as it investigates the organizational constraints on innovation and intrapreneurship in large Indian public sector organizations.

OBJECTIVE
The objective of the present research is to assess the organizational climate for innovation in the public sector organizations in India with a view to suggesting improvements in their strategy, structures, systems, and procedures so as to enhance their innovation-sponsoring capability. The investigation, therefore, is focused on the organizational constraints as perceived by the innovators. As the constraints get highlighted, the design imperatives and options would also get clarified.

METHODOLOGY
For investigating the organizational constraints on innovation, it was considered most appropriate to collect data from the innovators themselves. The reasons for this choice are as follows:

- Collecting data from employees in general would generate more of hypothetical statements as most of them may not have attempted to innovate, whereas the innovators would base their views on their own experience of having attempted to innovate.
- In view of the prior research findings that innovation depends on both individual as well as organizational factors, there is a need to control for the influence of the individual factors on the responses. The ‘non-intrapreneurial’ employees may exaggerate the organizational issues to shield their own individual disabilities. Since the innovators have already demonstrated their individual capabilities in this regard, their views on the organizational issues are likely to be more realistic and unbiased.

It is with the above perspectives in mind that we selected 31 cases of innovation from a list of 164 cases submitted for an external award. All these cases were submitted to the National Petroleum Management Programme (NPMP), an apex body created under the Ministry of Petroleum & Natural Gas, Government of India, to deal with the management issues specific to the petroleum sector. The award criteria for choosing the cases helped in establishing the authenticity of the innovations and the final selection of 31 cases was based on technological, financial, and organizational impact of the innovations described in the cases. The selected 31 cases had a fairly representative profile even though there was a heavy bias towards technological innovations. There were 28 of them dealing with technology issues (5 with products and 23 with processes). The cases on management innovations were very few, numbering only three. The sources of these cases were more or less evenly distributed among the R&D centres (14) and the operating units (17); the latter include both manufacturing and marketing. By broad geographical distribution, 16 cases were from the North, nine from the West, four from the South, and two from the East. Most of these innovation projects (24) were led by teams while a few (7) were led by individuals. Thus, the cases selected for the study had a good mix of different types of organizational situations to allow for some degree of generalization about the organizational constraints affecting innovations. In order to obtain a deeper understanding of such constraints, we developed detailed case studies of the 31 selected projects. The method of collecting data was in-depth interviews with the personnel associated with the implementation of these innovations. The respondents included not only the people directly involved with the work but also those who provided the support services as well as resources and guidance. Thus, we conducted more than 400 interviews for collecting data.
DISCUSSION OF FINDINGS

The findings of the study are presented under 15 sub-headings each representing an area of perceived constraint on innovation and intrapreneurship.

Unclear Norms on Linking Innovations with Career Growth

It is felt that innovation-related achievements are not adequately linked to performance evaluation and that there is a lack of objectivity in assessing innovations for career growth in the few cases where they are linked. While the intrapreneurial initiatives and achievements of the individuals do get noticed within the organization, the way they get reflected in their periodic appraisals is very subjective. This is largely because of the absence of any clearly stated policies/norms for giving weightage to the intrapreneurial achievements of employees in their formal appraisals. This issue found a very vocal mention at the R&D centres of all companies. This is partly because the evaluation system based on time-bound target-achievement designed for the operating departments is routinely applied to R&D as well. The existing system of performance evaluation, which is done solely by the immediate supervisor based on target achievement and not on innovations, reinforces the cult of the routine work to the complete neglect of innovations. It is, therefore, a cause of dissatisfaction for the innovators in the operating departments too. Innovators feel that their special achievements should help them with career advancement. The common refrain is: “How are innovations going to help my career?” Local recognition and good word-of-mouth publicity have a short life, and the innovators and their innovations are forgotten in due course. The respondents strongly felt that there should be a system of assigning points for the innovative endeavours of the employees while appraising them. Currently, there are no norms on this, thus giving the appraiser a large scope for subjectivity on this matter. Innovators from the operating departments fare slightly better in evaluation as there is a chance of their innovations being mentioned as special achievements. The plight of the R&D innovators is far worse because they are put through the evaluation framework designed for the operating departments. Besides, even when they have some innovation to report, it is not treated as any special achievement on the plea that innovation, in any case, is a regular work for them.

Inadequacy of Rewards and Recognition

Though there are practices of giving awards and certificates of recognition to innovators, they are not adequate or timely enough to motivate the employees to take up innovative projects. The common view among the staff is that it is not worthwhile to get involved in innovations. The existing award and recognition system is localized, that is, limited to the unit level. Innovators are generally aggrieved about the absence of corporate level recognition. While they admit that innovations do get recognition at the local area (where they have taken place), they feel that recognition at the corporate level would be much more motivating. There are also some issues about the procedures for getting recognition. The present system requires the innovator to project himself for award or recognition by applying for it and justifying one’s case. Naturally, there are some people who shy away from doing this. There is no system at the organizational level to spot the talent and achievement for recognition. It is also felt that awards are not commensurate with the efforts and achievements of the respective individuals/teams. Moreover, there is some dissatisfaction about the contents of the awards. It was suggested that these should be different for different levels of the organization. For example, scientists tend to appreciate the opportunities for learning and growth whereas workers from the operating departments prefer to get cash. Besides, the long and complicated procedures to get an award and the inordinate delays in conferring awards make them ineffective when they come. In one case, the initiator of a project left the company due to lack of recognition for his work. The rewards and recognition policy needs to be clearly articulated as it is currently quite whimsical and, therefore, a source of discontentment. It was suggested by some respondents that gain-sharing schemes should be introduced in the organization in order to promote innovations. Apparently, some organizations have experimented with such schemes but eventually gave them up for fear of complaints from ‘non-innovators.’ The ‘democratic’ ideology is apparently a misfit with a culture of innovation!
Ambivalent Support from the Immediate Supervisor

For an innovative idea to be successfully implemented, the support of the immediate supervisor is critical, particularly in the operating departments. However, the involvement of the immediate superiors was not always in the best interest of the innovative projects. Supervisors are in charge of routine targets and have to give priority to achieving targets in their regular work. Innovations, therefore, are perceived as deviations from one’s normal tasks. Enterprising subordinates are often perceived as a thorn in the flesh by their respective supervisors as the former would upset the regular routines. Another issue for the supervisors is the unwillingness of the subordinates to include the names of their supervisors in the project team which makes them unhappy and non-cooperative. An unhappy boss could play havoc on the project and most innovators often agree to carry several levels of supervisor-overheads on their projects knowing fully well that their contribution to the projects would be negligible. This is not to suggest that the immediate bosses cannot or do not constructively contribute to the endeavours of their subordinates. In some cases they do. But, here too, there is perceptible ambivalence. There are instances where innovations received good support from supervisors at the departmental level while the support for the innovators in getting the deserving recognition from the corporate level was totally lacking. The interest of the supervisors in this case seems to be to show a good performance for the department without projecting any individuals other than themselves!

Informal Team Formation

Among the cases studied, the number of instances where a single individual did all the work from conception to implementation of the innovative idea was very few. Teams inevitably came into the picture and their functioning was very informal. No specific guidelines were given to the members on the constitution and functioning of teams. This unstructured approach towards innovations resulted in inordinate delays in the completion of projects as the work took place only at the mutual convenience of the members. In the absence of a policy of deciding on the team size and names of members at the start of the project, team membership issues become contentious in case of successful projects that are considered for awards or patents. Typically, there is pressure from the top for inclusion of their own names. On most occasions, they succeed in doing so while the more deserving personnel from the lower levels are left out. Obviously this leads to frustration among the lower levels and reduces their involvement in future projects. Sometimes, inclusion of superiors’ names, though without any relevant role for them, is a pre-condition for ensuring support from the top for the project at various stages. However, the informal team structure has its advantages too as it ensures adequate freedom to the members to work at their own pace and provides flexibility to include other relevant members as and when required. Such flexibility is considered to be helpful as the course of an innovative project cannot always be predetermined. A formal team structure runs the risk of rigidity and it becomes difficult for the team to get the cooperation of other functions in the organizations that are not originally represented in the team.

Procedural Delays

Administrative procedures are often a source of discomfort for innovators. Procedural delays during procurement are perennially irritating to innovators. The procurement procedures in the public sector are notoriously elaborate. While such procedures can somehow be accommodated for the well-planned large procurements for routine works, they block the small, unplanned but critical requirements of the innovative projects. Most of our respondents felt that they were required to furnish unnecessary details on their small requirements and obtain approvals from several levels. There have been instances where some bright officers have left these organizations and joined the private sector companies that provide them with opportunities to test and experiment with their ideas without having to answer a plethora of questions and giving justification for the minutest of activities. While commenting on this issue, the respondents sounded very dejected but accepted it as a condition one has to live with. However, it is essential on the part of the organizations to redesign the procedures so as to avoid such delays in the implementation of innovative projects by empowering the innovators with adequate resources.

Poor Documentation and Maintenance of Records

Documentation is stated to be grossly inadequate in all the participating companies except some R&D centres. The existing system is unorganized and haphazard. Neither is there any uniformity across different depart-
ments in their documentation system. Since there is no centralized agency for documentation, in many cases, the relevant data disappear with the persons on their transfer, resignation or retirement. The helplessness of the employees in this regard is expressed by a senior manager as follows: “We make all efforts to document the details about the innovation but, without the help of proper organizational systems, we are not able to preserve them for the future. Surely, it is a crime against the future generation and to innovative projects in general.” The absence of a centralized agency for documentation would also make the data inaccessible to other departments for reference. The lack of systems has also created problems for on-going projects. There were occasions when projects were held up due to the lack of relevant data especially when employees involved had to leave the location in the middle of the project. Absence of proper records has also adversely affected company-wide dissemination of successful ideas as well as continuity in developmental activities.

**Lack of Facility for Pilot Testing**

Among the innovations studied, there were some innovations that were either concerning the development of a new product or the use of a new technology in an existing process. In such cases, there was reluctance on the part of the potential users in trying out the new product/process. In any case, the potential users would invariably ask for corroborative data before offering their facilities for experimenting with a completely untested product or process. The respondents stated that, in such cases, they felt incapacitated due to the lack of facility for pilot testing to develop such data for convincing the potential users and subsequently marketing their products. However, in one of the companies, pilot testing facilities were underutilized because of the high cost of running pilot plants. In other words, financial constraints prevented the company from doing large scale pilot testing. A possible solution to this problem, according to one respondent, is to undertake projects in collaboration with prospective clients and use the latter’s facilities for pilot testing.

**Lack of Recognition for Contributions by Support Functions**

The issue of ignoring the contributions of support services is more poignant in the R&D centres of the companies than in the operating departments. Though the contributions made by the support functions are critical for the success of R&D innovations, their efforts seldom get any recognition. Such marginalization of the support functions leads to inter-departmental conflicts. The gross neglect of this area was repeatedly mentioned during the interviews. All the departments within the organization are not endowed with opportunities for innovation. This is because some departments have to be in the periphery of the main activities of the organization and are designed to provide support to the core activities. Their service to innovative projects is treated only as service not innovation; and when they innovate in their own areas, it is considered irrelevant for the main activities of the organization. Naturally, people in these departments feel that they are discriminated against in terms of recognition. Such feelings were prevalent (though not as intensively as in R&D) among the services departments (like maintenance, electrical, laboratory, etc.) of non R&D divisions as well. They too felt that they were marginalized or completely ignored for credit-sharing in the event of achievements related to innovation. The personnel working in the service departments are often referred to as *screw driver wala mistri* (a petty repair shop worker moving around with a screw driver in his hand, always at the beck and call of everybody). Such derogatory remarks are indicative of the low regard for the contributions of the fellow employees working for the same organization. This attitude is not only a perennial source of conflict among the departments but also a major hindrance to implementing innovative ideas.

**Inadequate Systems for Promotion and Management of Ideas**

Innovators from the operating departments have a general complaint that there is no transparency in evaluating innovative ideas and communicating the results to the originator of these ideas. If an idea is cleared by the evaluation process, it gets implemented often without much further consultation with the originator. But, in case it is rejected, the reasons are not communicated to the originator. Many respondents expressed a feeling of dejection at the non-responsiveness of the evaluating committee on their ideas. Most of the operating departments do have a suggestion scheme of one kind or the other but the employees seem to have little faith in them. It is felt that once an idea is shared in an open forum, it becomes the property of the company. In the process of shaping an idea into a workable project, the originator...
of the idea may not be given adequate credit; sometimes, he is even completely left out. There are cases where the idea as well as the credit has been appropriated by the seniors. Moreover, with the senior management unwilling to accept both failure and success as part of the innovation process and refusing to share the responsibility in the event of a failure, it is natural that the employees become risk-averse and reduce initiatives for championing and executing new ideas. Therefore, the procedure for idea evaluation should be designed as a developmental process rather than as a tool for creating fear of rejection and failure among employees. Moreover, the process should be systematic and transparent.

**Lack of Recognition for Innovations in Non-core Areas**

The respondents from the ‘non-core’ areas of the company feel that the management does not recognize the relevance of innovations in the non-core areas. There is a perception that no useful innovation can happen in service departments like electrical, mechanical, metallurgy, etc., which are at the periphery of a process industry. “The staff in the core areas do not have faith in us and are reluctant to adopt our innovations in their operations,” noted one of the innovators in a non-core area. Admittedly, it is natural for organizations to give importance to production enhancement programmes and related innovations. But, organizations do have personnel from diverse backgrounds who provide several support services and justifiably their innovations are in their disciplines of specialization (such as mechanical, civil, electrical, etc.). But, being in the peripheral departments, they get fewer opportunities for innovation and far fewer opportunities to get noticed by the top management. They suffer from this disadvantage (as they term it) by virtue of their work profile. Even after giving a decade or so of their productive lives to these organizations, some of them harbour a feeling that they chose a wrong place to put their skills to use. Organizations, therefore, need to spare a thought for the personnel in the non-core areas and look upon innovations coming from them with the same zeal and appreciation as those from the core areas. They may not only help in improving the performance in core areas but also provide ideas for diversification and growth.

**Low Emphasis on Dissemination and Commercialization**

Dissemination and commercialization of new ideas are not given much importance in the companies under our study. There is no systematic approach or corporate policy to market proven innovations. This problem is felt more acutely by the R&D innovators who depend on the operating departments to disseminate, commercialize, and market their innovations. The operating departments of Indian companies seem to lack confidence in indigenous solutions. While it is relatively easy to prove the utility of a home-grown technology at the laboratory level, it becomes extremely difficult to sell the idea to potential users even within the company especially when foreign solutions are easily accessible. “Innovative ideas need the support of innovative marketing strategies with a high degree of involvement from the top management,” said one of the senior executives who believes that the true reward for an innovator is the adoption of his innovation by the marketplace. The respondents also suggested that the companies should ensure the involvement of the operating departments in the indigenization activities of their R&D centres. The low level of dissemination/commercialization of innovations acts as a disincentive to innovators. There are instances where, in spite of the successful commercial scale demonstration of innovations and their sustained performance to the satisfaction of a few clients, they have not been marketed to other prospective clients. There is a feeling among the respondents that a suitable marketing strategy is not in place for the indigenous technologies developed at the various R&D centres. As most of the innovators belong to the middle management, they are unable to influence the marketing function which is primarily driven by the top management. The perceived management apathy in marketing a demonstrated technology discourages innovations and brings down the morale of the innovators.

**Lack of Patenting Initiatives**

The lack of awareness among the employees regarding patents is all-pervasive across all the organizations. This has cost some companies dear as they were unable to prevent other organizations from copying their innovations and projecting them as their own. They became victims of the unfair practices of competitors mainly due to their ignorance about patenting. These organizations need to look at their patenting policy seriously and take suitable measures not only to protect their innovative work but also to stimulate and motivate their people to take up innovative projects. Granting of a patent in one’s
name is perceived by innovators across all organizations as a prestigious achievement. However, since the procedure is fairly complex and requires a lot of money as well as specialized knowledge, individual innovators are unable to do it on their own. Hence, it is imperative that organizations take the initiative in matters of patenting.

**Poor Handling of Change Management**

Some of the meritorious innovations could not get implemented because of the lack of adequate change management strategies, knowledge, and skills on the part of the innovators. Working for long with public sector companies, the employees have got used to a particular style of doing their jobs. Any change, even if it has the potential of making life easier for them, is vehemently resisted. It has been observed that, under such circumstances, change management skills are essential for innovators. The usual practice in implementing innovations is to enforce them under the directive of an influential person. Such compliance is short-lived as the people adopt the innovation only to give it up after a short while when the influential person leaves the place on account of transfer, retirement, etc. For this reason, the number of innovations with a long-standing impact on a wider segment of the organization has been very few.

**Easy Access to Foreign Technologies**

This is a very sensitive issue and needs to be tackled carefully by the organizations. The cash-rich companies in our study have access to the latest technologies from abroad and can afford to buy them. But, it may not always be a wise decision on the part of the organizations if they are interested in championing the cause of innovation. In a few cases, the respondents were very bitter that their innovations were relegated to the dust-bins in favour of the more sophisticated, but more expensive, technologies available in the market. An alternative view is that, given the extent of competition (mostly because of the liberalization policies of the government), it is unwise for companies to settle for indigenous solutions if they are of lesser quality. The question, therefore, is how to bring the potential innovators in line with the international practices and hone their skills accordingly. If companies do not find a solution to this problem at the earliest, their employees would remain demotivated and even refrain from pursuing innovations. It would be unfair to blame them if they see innovations as a futile activity.

**Absence of Failure Analysis Systems**

It is a known fact that several failures take place in the pursuit of implementing a new idea. Organizations are generally unable to deal with failures. In the companies under our study too, there are no systematic methods/approaches to analyse failures and document the lessons from them. “The general tendency is to cover up failures instead of approaching them with an intention to learn,” said one of the middle-level executives. Though failures are often considered to be a part and parcel of any R&D effort, adequate measures are not taken to examine the reasons for failures with a view to preventing their occurrence in the future. The recognition of the inevitability of failures in developing new ideas should translate into a tolerance of bona fide failures and an ability to learn from them. Being harsh on failures may not be in the best interest of the cause of innovation. Instead of concealing or ignoring the failures, one has to scientifically analyse them and derive appropriate lessons. A good failure-analysis process and the documentation of its results could perhaps be the most effective training for innovators. It was alleged that, in some cases, the involvement of influential personnel of the organization as well as the heavy investments already made in the project were the reasons for not recording and analysing failures.

**CONCLUSION**

Taking an overall perspective of the issues raised by the innovators as described above, it may be seen that the underlying problem in the organizations under study is that innovation has not yet become a part of their corporate agenda. Individuals attempt at innovations because of their own initiatives and the specific needs emerging from the exigencies of their work. It would be unfair to suggest that there is no organizational support available for these projects. Apparently, such ‘pockets’ of support come more from individual initiatives and ‘knee-jerk’ organizational reactions than from a deliberate and well-thought-out strategy for innovation. In order to understand the relative importance of the problems mentioned by the innovators, we made a frequency count of the projects reporting each problem (Table 1).

It may be seen from Table 1 that the most frequently
mentioned issues are those that require positive actions from the management which supports our hypothesis that the companies in the study are probably lacking in a deliberate innovation strategy that is closely aligned with their business strategy. It should, however, be pointed out that many of these organizations do have their own R&D set-up which is often interpreted as an indication of some kind of proactive strategy for innovation. Such initiatives seem to be undertaken more as a ritual than as part of a deliberate strategy. This is evident from the fact that some of the support systems necessary for making R&D successful (such as patenting and commercialization initiatives) are conspicuous by their absence. Obviously, there is a clear need for developing innovation strategies and then supporting them by designing the right kind of organizational systems and procedures.

Against the background of our findings and the consequent inferences on the linkages among corporate strategy, innovation strategy, and organizational systems, it would be interesting to take a look at the international practices and research studies in the field of corporate innovation. In one of the most comprehensive analyses of the dilemmas and the practices of innovative organizations, Kanter (1985) pointed out that entrepreneurial management is characterized by visionary leadership, ‘patient money,’ planning flexibility, team stability/continuity, and interfactual cooperation. If large corporations intend to encourage innovation and entrepreneurship, they must provide the vision, remove unnecessary administrative requirements, create mechanisms to integrate departments and functions, change budgeting and accounting procedures, provide internal venture capital and special projects funds, allow discretionary time to employees, and develop new business performance measures separate from the routine measures of performance.

Similar to the distinction between ‘entrepreneurial’ and ‘administrative’ management made by Kanter (1985), there is a distinction made by Kets de Vries (1996) between the ‘charismatic role’ and the ‘architectural role’ of the visionary leader. The charismatic role is characterized by envisioning, empowering, and energizing. In the architectural role, the leader plays the role of the organizational designer creating the structures and systems required for supporting the vision. It is obvious that the latter follows the former. In entrepreneurial organizations, the design would be characterized by customer-focus and employee-centred action-units organized as self-managed teams in a horizontal, non-hierarchical structure. The need for consistency in organizational design inputs has also been emphasized by Galbraith (1982). Isolated initiatives like creating venture groups and venture funds and offering special incentives to innovators alone may not create an innovative organization. What is needed is a consistent set of policies linking the vision, structure, processes, rewards, and people.

Such prescriptions as mentioned above are supported by several other studies. For example, in a study of 50 intrapreneurs from major Spanish companies (Rodrígues-Pomeda, et al., 2003), it was found that the three ‘Ts’ of intrapreneurship are initiative (proactive vision), intramarkets (changes in the organizational structures and systems to promote internal customer orientation), and innovation (change-orientation). Wunderer (2001) recommends a target-oriented strategy for intrapreneurship supported by internal market control (internal customer orientation) and cooperative social networks. A study of MBA graduates with reference to their subsequent ability to implement intrapreneurial projects in large organizations (Oliver, et al., 1991) has identified several facilitating factors like freedom to act, special funding, time, non-financial resources, etc., to be

Table 1: A Frequency Count of Projects Reporting Different Types of Organizational Constraints on Innovation

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<tr>
<th>Organizational Constraints on Innovation</th>
<th>Number (N=31)</th>
<th>%</th>
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<tbody>
<tr>
<td>Absence of failure-analysis systems</td>
<td>31</td>
<td>100</td>
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<tr>
<td>Lack of recognition for innovations in non-core areas</td>
<td>30</td>
<td>97</td>
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<tr>
<td>Poor handling of change management</td>
<td>29</td>
<td>94</td>
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<tr>
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<tr>
<td>Low emphasis on dissemination and commercialization</td>
<td>25</td>
<td>81</td>
</tr>
<tr>
<td>Inadequacy of rewards and recognition</td>
<td>24</td>
<td>77</td>
</tr>
<tr>
<td>Procedural delays</td>
<td>20</td>
<td>65</td>
</tr>
<tr>
<td>Poor documentation and maintenance of records</td>
<td>18</td>
<td>58</td>
</tr>
<tr>
<td>Easy access to foreign technologies</td>
<td>17</td>
<td>55</td>
</tr>
<tr>
<td>Unclear norms on linking innovations with career growth</td>
<td>15</td>
<td>48</td>
</tr>
<tr>
<td>Lack of recognition for contributions by support functions</td>
<td>14</td>
<td>45</td>
</tr>
<tr>
<td>Ambivalent support from the immediate supervisor</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td>Inadequate systems for the promotion and management of ideas</td>
<td>11</td>
<td>35</td>
</tr>
<tr>
<td>Lack of facility for pilot testing</td>
<td>9</td>
<td>29</td>
</tr>
</tbody>
</table>
supported by top management initiatives, appropriate organization structure, and a project relevant to the corporate strategy. Similar are the findings of an analysis by Norburn and Birley (1988) who specially focus on the strategy-structure-ownership alignment and the permeating boundaries of collaboration within and outside the organization. In terms of the specific characteristics of intrapreneurial organizations, one could distinguish them by their focus on results, team-work orientation, rewards for innovation and risk-taking, tolerance for mistakes and the ability to learn from them, and flexibility (Luchsinger and Bagby, 1987).

The remarkable similarities among the findings and prescriptions of researchers may be attributed to the fact that empirical research attempts to consolidate the experiences of the practising world. Some illustrations of the practices of highly innovative companies (Schellhardt, 1996; Adams, 1995; Fry, 1987) also testify to the validity of the researchers’ prescriptions. The investigations we have carried out in the context of a developing country too have substantiated the basic requirements of intrapreneurship as identified by the Western researchers. In the Indian context, we need to additionally give a little more emphasis on change management skills on the part of the intrapreneur which were also found to be lacking in a few Western cases as well (e.g., Harris and Harris, 1985). In view of the inherent disabilities of large organizations in the public sector operating in developing countries to promote and commercialize innovations, it is essential for such organizations to develop a deliberate strategy for innovation and align it with their corporate strategy. Changes in the structure, system, and HR practices as suggested by the respondents of this study are very much needed but they should be taken up in alignment with the innovation strategy being adopted. Disjointed and haphazard initiatives, however well-intentioned, will be ineffective and short-lived.

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Acknowledgement• This paper is based on a research project carried out at NSRCEL, IIM, Bangalore, with the support of the National Petroleum Management Programme (NPMP), New Delhi. The authors are grateful to NPMP for the financial and organizational support provided by them.

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*The challenge isn’t to keep your eye on big competitors. It’s to pay attention to the innovators.*

*Dave Duffield*