

Restructuring Organization: Transition from functional to matrix organizational structure

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Abstract

With the turbulent changes in business environment and the entry of knowledge workers, the pace of changes in psychological contract has increased tremendously. Thus to maintain the job satisfaction and job productivity has brought new challenges for today's Manager Human Resources. One of the areas most confronted by people dealing in Organization Change and Development is the suitability of organization structure in accordance with the contemporary demands of market competition and changed expectations of employees. This article attempts to help HR professionals in such issues of structural changes, specifically from traditional functional structure to more contemporary matrix structure with a special reference for manufacturing industries. The article suggests the advantages and disadvantages of the matrix structure and points at the hint which HR Managers can use wisely to take the decision for the change. Further the attempt is being made to provide the requirements to be taken care of while implementing the structural changes- procedural requirement, policy requirements, skill requirements and cultural requirements. The article gets concluded with defining broad steps for the change process, so as the desired success can be attained through the proposed structural change.

Work of a Manager Human Resources and specifically of that of Organization Change and Development, brings an opportunity to build or rebuild the organization structure to compliance better with contemporary demands of market competition, changed psychological contract, and hence to maintain job productivity and job satisfaction. After participated in the development of organization structure for a service MNC and restructuring the same for a large manufacturing MNC, when I witnessed another manufacturing Mega national's structural change being ineffective, I felt the need to touch the basics of organization restructuring again.

Matrix structures:

The article written by Kenneth Knight in 1976, 'Matrix Organization: A review' was among the first one for we HR professionals to accept organization restructuring as the need of the near future and to acknowledge the existence of matrix structures. Since then to use matrix is quite common for organizations and the science of organization structures has come to leaps and bounds under the head of 'organization theory'. Often in literature the terms matrix management, project management, matrix organization and project organization are

frequently interchanged. One of the most common characteristics associated with the use of term matrix and project is the mixed or overlay organizational form in which traditional vertical hierarchy is overlaid by some form of lateral authority, influence or communication (Larson & Gobeli, 1987). The second common characteristic of matrix structure is dual lines of authority, responsibility and accountability that violate the traditional 'one- boss' principle of management (Kerzner 1984, Cleland & King, 1983). Thus rightly concluded by Wall in 1984, 'the matrix is a coordinative structural device which constructively blends the program orientation of project staffs with the specialty orientation of functional personnel in a new and synergistic relationship'.

A functional structure along with other benefits enables individuals to remain aware of new technical developments in their respective areas of expertise. One of the main demerits of functional structure is the difficulty in coordinating distinct functional disciplines, task orientations and organizational localities. The product structure on the other hand reduces these difficulties by concentrating everyone's attention on the requirements of the product, but at the same time brings technological obsolescence. The Matrix structure is seen as the solution to provide the benefits of both functional structure and product structure by providing proper coordination while maintaining a continuing linkage with a functional expertise (Kartz Allen 1985, Larson & Gobeli, 1987).

Stages in evolution of Matrix organizational Structure:

Stage first- the organization begins as a traditional or functional type's hierarchy. When this structure becomes inadequate, to deal with increased complex and dynamic condition, the organization moves into the next phase of 'project organization' or 'temporary overlay'. In this *second stage* the traditional functional hierarchy remains the corner stone of the organization and project management is added as a secondary temporary overlay to deal with the new complexities. Some organizations will make this move as permanent which will prompt the move into the third stage of 'permanent overlay.' In this stage, project management assumes a permanent form in the organization, although the functional hierarchy is still considered the primary organization form. The *fourth stage* is the 'matured matrix' stage. In this stage, a balance of authority exists between the functional hierarchy and the project organization. The *fifth stage* is 'beyond the matrix' stage. This is the stage where organization may tend to have a unique structure which is beyond the matrix characteristics. An organization may stop evolving at any point in this process if the appropriate precipitating factors are not present.

(Kolodny, 1979, Peters, 1979)

Types of matrix organization structure:

There are distinct types of matrix systems designed to balance the ability struggle between the managers conflicting needs. The principle types being weak matrix, strong matrix and balanced matrix.

Weak Matrix Structure:

In weak matrix organizational structure, project managers have less authority and decision making power as compared to functional managers. In practice project managers get effectively reduced to being project facilitators only. They draw plans and supervise the execution but they have no genuine control over the personnel and are nearly completely reliant upon the functional managers to offer resources.

The workers have less allegiance to the project managers as it is the functional managers who determine the progress of the workers. And the workers progress is normally measured solely on the work that is done for their functional manager, not on their project work. Thus working on a project may be seen by the worker as not desirable as they will have less time in doing their functional work, and thus project manager will find them most of the time as unmotivated.

As the project manager has no genuine control over the project members, they frequently have to report the problems of workers not doing their duties to the functional managers. This lead to a clear-cut dispute of stake between the project manager and the functional manage. Also a dispute will be there between the workers to work with functional manager only.

Strong Matrix Structure:

The strong matrix organizational structure is the total opposite of weak organization structure. In strong matrix structure full autonomy is being given to project managers. The intent is that it is the project managers who are responsible for the workers rather than the line managers. This gives project manager the power to handle the workers directly and therefore adequate handling of the entire project becomes more feasible. Note in strong matrix structure as well project managers are not involved in HR administration.

When the manager for a project starts a new project they discuss their staffing demand with the functional managers and the functional managers seek to have the resources accessible. Functional manager may be required to educate and train the staff according the new need. The functional manager will sketch out plans and Gantt charts of how their people will be included inside the projects and they might move personnel between the projects and project managers as required.

Balanced Matrix Structure

In each of the above structure there is a battle for control and hence for power. This creates the problem of one group ruling the other group to the disadvantage of project and finally to detriment of the whole organization all together. Like a really dominant project manager in a strong matrix structure might bully functional managers into always giving the best team members for their projects. Thus there needs to be some mechanism to bring each into equilibrium.

One way to reduce these difficulties is to have rules within the organization that varies on who can handle a worker, depending upon sure circumstances. There are many potential rules that could be made to equalize the power between the project managers and the functional managers. This is the essence of balanced organization structure. A balanced structure will

have policies governing the authority distribution between functional managers and line managers, so as make a win-win situation for both. Like if a worker has to work on a project for less than a week the functional manager has lone command over the worker. The same worker cannot work for the same project manager on two back to back projects.

Advantages of Matrix organization structures

A primary advantage of matrix structure is that it solves an information processing problem (Devis & Lawrence, 1977). It creates lateral communication channels not available in the classical bureaucratic form of organization. Also at the same time the matrix structure reduces the need for vertical communication by creating self-contained task focused on a specific, finite project. It improves communication among different departments and projects by forcing managers to maintain close contact with all organizational groups upon whose support they must rely for project success.

According to the experiment done by Joyce in 1986 on an engineering division of an aircraft manufacturer, matrix improves information processing by formalizing lateral communication channels and legitimizing informal communication. The amount and frequency of formal communication should increase, informal communication should decrease and the participative and directive quality of formal communication should increase. The study supported the first two hypotheses, but instead of the predicted increase in quality of formal communication, a decrease resulted. According to Joyce this was because of lack of supporting culture in the study group.

A related communication benefit of the matrix is its ability to handle increased information loads over the more traditional structures. The increased contact among the departments allows information to permeate the organization, improving decision making and response time, which translate into an organization that can quickly and flexibly adapt to a dynamic situations (Davis Lawrence, 1977, Larson & Gobeli, 1987). Improved information flow and flexibility of responses by team members in a matrix can allow resources to be quickly and easily disengaged from unproductive uses and applied to new opportunities as they are discovered (Larsen & Gobeli 1987, Kur, 1982).

Matrix structure should positively influence motivation, job satisfaction, commitment, and personal development (Denis, 1986). In a matrix structure individuals have an opportunity to work in variety of projects with a variety of individuals from across the organization. In sharing ideas, knowledge and perspectives, a matrix enlarges an individual's experience and outlook, increase responsibility and involvement in decision making, and offers greater opportunity to display capabilities and skills (Randolph & Posner, 1992).

According to Knight (1976), 'Matrix structures are said to facilitate high quality and innovative solutions to the complex technical problems.' A matrix assists in the development of knowledgeable, technically competent individuals who eventually become matrix-

competent and comfortable. These advantages facilitate technical excellence (Kolodny, 1980).

Disadvantages of Matrix Organizational Structure

The matrix structure invariably violates two deeply ingrained classical principles of organization: 1) Authority should equal responsibility and 2) Every subordinate should be assigned to a single boss (Barker & Andrews, 1988). In a matrix the boundaries of authority and responsibility are split or shared between functional and project managers. This characteristic creates ambiguity and conflict over areas such as resources (Larson & Gobeli, 1987), technical issues (Kartz & Allen, 1985), salaries and promotions (Kartz & Allen, 1985) and personnel assignments (Greiner Schein, 1981). This ambiguity results in power struggles as each side attempts to clarify and define its responsibility and accountability (Posner, 1986).

The most common conflict is of authority between functional and project managers over project priorities, administrative procedures, technical perfection versus performance tradeoffs, personnel resources, cost estimates, scheduling and personalities. The Barker et al (1988) focussed on the intensity of these conflicts over the project life cycle. They found that three most intense areas of conflict (Schedules, priorities and personnel resources) result from the split authority problem between projects managers and functional departments.

The conflict also exist at individual level due to the interaction of people with different work orientations (Dill Pearson, 1984), different professional affiliations (Posner, 1986), different time horizons- long term vs short term (Katz & Allen, 1985) and different values (Joyce, 1986). In matrix individuals find themselves working across various projects under different managers. This situation creates multiple reporting relationships (role conflict), conflicting and confusing expectations (role ambiguity) and excessive demands (role overload). A final issue in individual conflict can arise when functional managers experience insecurity and an erosion of autonomy (Wall, 1984). According to Davis and Lawrence (1978) functional managers often view matrix organization as a loss of status, authority and control over their traditional domain. This view results in resistance and hostility to the matrix.

Matrix management can be costly for both organizations and the individuals in these organizations. For the organization, the existence of dual authority creates additional management overhead (Larson & Gobeli, 1987) and additional staff requirement, mainly administrative (Kerzner, 1984) the matrix also leads to costs associated with organizational heaviness including excessive meetings and/or gossiping, which can lead to delayed decision making (Denis, 1986) and increased information processing costs (Jerkowsky, 1983). The cost of unused and underused resources, both physical and human, are also likely to increase (Mantel, 1989), as well as the costs of extra training of project/matrix managers (Goodson, 1989), and the costs associated with monitoring, controlling and coordinating the people and project within the matrix (Larson & Gobeli, 1987).

One disadvantage recently noted is the inability of the matrix structure to responds quickly enough to the rapidly changing demands of the multinational environment (Guterl, 1989).

Matrix becomes too bureaucratic and top heavy to bring together efficiently the diverse elements of a multinational organization. An empirical study by Pitts & Daniels, 1984, of multinational organization found that the matrix form was not widely used in favour of various forms of unitary organization.

Indicators for Restructuring and its success:

According to Davis and Lawrence, 1977, '*Matrix is an exceedingly complex form that is not for everybody. To put in more bluntly, if you do not really need it, leave it alone*'

To know whether there's a real need of restructuring or a matrix structure HR Managers along with the commitment from top management have to analyse and reevaluate the characteristics of their organization in accordance with the following broad heads:

- 1) Organizational environment
- 2) Organizational characteristics
- 3) Characteristic of the projects
- 4) Characteristic of the leaders

Organizational environment:

Environment for any organization consist of four basic elements, a) Social/cultural elements, b) Economic elements, c) Physical elements and d) Technological elements. For an organization the combination of these elements decides the four basic, and vital, properties to be considered for the decision of restructuring;

- 1) Complexity- *that is number of elements*
- 2) Diversity- *that is variety of elements*
- 3) Rate of change- *that is stable or dynamic*
- 4) Uncertainty- *that is predictability of changes.*

A simple organization environment is characterised by a small number of similar and unchanging elements and low uncertainty. On the other hand complex environment is characterised by a large number of diverse, dynamic elements and high uncertainty (Ford, 1988).

This preciously means that if the organization has people from same or not so diverse cultural background, if the organization does not suffer/depend much on the external agencies/market, if the organization has one or few physical units and if the organization is working with same technology for more then 5-7 years – the environment for that organization is simple environment.

On the other hand if the organization has people from varied cultural background, if the organization depends heavily on the changing external agencies/market, if the organization

has multiple physical units as different places/countries and is the organization is working with the technology which change rapidly say in every 1-3 years- the environment for that organization is complex environment.

For the simple organizations operating in simple environment the simple functional structure is the best. If this organization gets influenced to restructure them in matrix organization, it might turn as a blunder. For example for a stable salt mine company matrix structure is of less use.

Matrix structure is best with organization having complex environment. The organizations that produce more than one product or service or that must respond to changing environmental, technological, or other changes by modifying their product or service frequently. Further the decision between the weak, strong or balanced matrix structures depends upon the complexity of the environment along with other factors to be discussed.

Traditional functional structures are most efficient when technology is relatively simple. However as the technology becomes complex, the functional structure may be unable to provide the degree of flexibility and innovation across disciplines that matrix can provide (Alexander & Randolph, 1985).

Often, it is found that many organizations take the example of their successful competitor having the same machinery and working with matrix structure to initiate the restructuring. But one must not narrow down the meaning of technology. Technology includes physical (machinery, tools etc), knowledge (information, know-how) and exist in various levels of individual, department, organizational, industrial and beyond. According to Ford, 1988, 'an organization technology is, its set of techniques (both material and mental) used to transform the system's inputs into its outputs'. Thus a decision of depicting on the basis of narrow vision of technology is a hurried one and will invite troubles.

It must also be noted that information to be processed can also be one of the good indicator in addition for the restructuring needs. As when the information-processing capacity in the vertical hierarchy become over loaded and organization must respond to this problem with some type of organizational change, matrix can be one of the possible solutions (Kerzner, 1984).

Characteristic of Organization

The second vital indicator for restructuring and also for the success of restructuring of organization is its culture. Organization culture is important because it unites individuals with a purpose under a 'set of principles and standard to live and work by. It exists at all levels of the organization and is shaped by its various sub-cultures (Cleland, 1988) as well as by the society in which it exists (Davis & Lawrence, 1977).

Organizational cultures characterized by a rigid bureaucracy, minimal interdepartmental interaction, strong vertical reporting lines, and little tradition of change are not conducive for matrix structures. For these organizations the success of matrix structure requires to change the culture first, otherwise resistance or open hostility to matrix may occur. Organizations

with a tradition of "openness" and change are more suited for matrix structures. The move to a matrix is often "easier" for these organizations (Davis Lawrence, 1977).

Organizational culture will have the answer for the basic question of division of authority between the project manager and the functional. The researches in this area have mixed results to talk about and are inadequate as the variables studied are too few. There still is the need for an empirical study with variables like size of the organization, size of the project, private versus public, and also the multidimensional relationships among these.

The most important aspect of organizational culture is the values it practices. Eight values may be examined to develop the profile of an organizational culture that is called OCTAPACE is Openness, Confrontation, Trust, Authenticity, Proactive, Autonomy, Collaboration and Experimenting. The high score in OCTAPACE survey or Organizational Health/Culture/Environment Survey result will have positive correlation with the success of matrix structure. On the other hand the negative or low sigma score of the survey demands the organization to initiate the change in culture if restructuring is necessary, or else to reconsider the need for matrix structure. Organization with high survey result will have less issues of authority, autonomy and responsibility distribution as compared to with low scores.

Also, along with OCTAPACE study HR Managers must look into the demographic contents of their organization and take the help of classic study done by Hofstede (1980). Hofstede cross-cultural model is specifically important for multinational companies having their operations in different countries and also for those companies having diverse workforce from many countries working with them. According to Hofstede the four dimensions of national culture (namely- Power Distance, Uncertainty Avoidance, Individualism and Collectivism, Masculinity and Femininity) represent the basic elements of common structure in the cultural systems of the countries. Thus, they provide an important framework not only for analyzing national culture, but also for considering the effects of cultural difference on management and organization. This framework is especially useful for understanding people's conceptions of an organization, the mechanisms that are considered appropriate in controlling and coordinating the activities within it, and the roles and relations of its members (Hoecklin, 1996).

Researches further to Hofstede model in pure organizational contexts have given few vital facts for HR Managers to think on and use in the time of restructuring. The consequences of high Power Distance index is greater centralization, tall organization pyramids, large proportion of supervisory personnel, large wage differential, low qualification of lower strata, and white-collar jobs valued will be valued more than the blue collar jobs, as against those with low power distance index. Consequences of high uncertainty avoidance index is managers more involved in strategy, managers more interpersonal oriented and flexible in their style, managers more willing to make individual and risky decisions, high labor turnover, more ambitious employees, lower satisfaction scores and less power through control of uncertainty, as against those with low uncertainty avoidance index. (Ogbor J, 1990, Ngowi AB, 1997, Low SP, 1997)

The consequences of low Individualism index is involvement of individual with organizations primarily calculative, organizations are not expected to look after employees from cradle to the grave, organizations has moderate influence on member's well-being, employees are expected to defend their own interests, policies and practices should allow individual initiative, promotions from inside and outside, promotion on market value,

managers try to be up-to-date and endorse modern management ideas and policies & practices apply to all, as against those having high individualism index. Consequences of low masculinity index is organizations should not interfere with people's private lives, lower job stress, appeal of job restructuring permitting group integration, as against those with high masculinity index. (Baba K, 1996, Chan EHW, 19197, He Z, 1995, Low SP, 1995)

Characteristic of the Project

The next indicator in line for Managers HR to take the decision of restructuring in the form of matrix structure is to determine the nature of organization's task. Determining the nature of an organization's tasks rests on the combination of four properties: task complexity (number of tasks), task diversity (variety of tasks), rate of task change (slow or rapid), and task size (defined by cost or time needed to complete the task) (Ford et al., 1988). Simple tasks are small in number, limited in diversity, relatively unchanging, and relatively small in cost or time. Complex tasks are large in number (Davis & Lawrence, 1977), highly diverse (Davis & Lawrence, 1977; Galbraith, 1971); rapidly changing (Galbraith, 1971; Posner, 1986), and large in cost or time (Denis, 1986a; Kerzner, 1984). Functional structures, although well suited for simple tasks, experience difficulty integrating multiple, complex tasks. Matrix structures provide an alternative for handling the coordination of complex tasks (Galbraith, 1971, Kerzner, 1984).

It is again vital to look at the characteristic of the proposed/all ready present project team as well. One characteristic of successful matrix structure is the participative nature of members that allows for the free and equal access to communication. Its worth to note that the longer the project groups are together the more they tend to rely on each other and the less they seek to communicate outside the group. They become increasingly isolated from outside sources of information and influence (Katz, 1984). So, group longevity is related to the project team performance, performance of long-tenured project groups tends to be significantly lower.

Characteristic of the Leaders:

One of the main hindrances in the implementation and success of matrix structure is the conflicts that will arise due to (a) the dual authority problem, (b) the need to balance the desire of professionals to achieve perfection with the organization's need for cost efficiencies, and (c) the need to handle the political conflicts caused by the need to secure scarce organizational resources from functional managers who are reluctant to give them up.

This accounts for knowing the leadership and conflict resolution styles of the present set of managers we have and also to be sure of the leadership style of the managers we may be hiring to be termed as project or functional managers because of the new structural requirements. Both the characteristic of the leaders and the followers is going to affect the decision of restructuring, its implementation and success. With the help of available psychological test, along with the performance appraisal and grievance handling/domestic enquiry records, we can analyze the leadership style of the present managers. Customize psychological test, result of behavioral interview and/or assessment center records for the new recruits can help to know their leadership style as well. In an study done by Yukl, 1989, the administering of Situational Assessment Questionnaire to project and functional managers and their subordinates it was found that project managers indicated they rely on participative leadership strategies whereas subordinates wanted them to be more task oriented.

The lines on which HR Managers have to take decisions are the perspective conflicts and conflict resolution style that can be functional in the success of matrix structure. In his study done by Thamhain and Wilemon, 1975, they identified the seven areas of conflict a project manager must effectively manage. These seven areas of conflict are project priorities, administrative procedures, personnel resources, cost, schedules, technical opinions and tradeoffs, and personalities. Using the different conflict resolution strategies suggested by Deutsch (1973), they found that conflict intensity varied over the project life cycle and that project managers tended to use a confrontational conflict resolution style. In a study by Barker, 1988, he concluded that project managers who handle conflict through cooperative and confirming strategies are more likely to be effective than those who use confrontation or avoidance strategies.

An early article published in Harvard Business Review by Gaddis, 1959, points that along with the technical know how project managers must have basic administrative skills and should have strong interest in teaching, training and developing his people. In a similar study done by Posner 1987, the requirements of six key skills were highlighted for the success of any matrix structure. These being communication skill, organizing skill, team building skill, leadership skill, coping skill and technological knowledge. In one more interesting study by Jerkovsky in 1983 it was concluded that both functional manager and project managers spend equal amount of time for the basic six roles involved in their job, knowledge updates, technical consultant, task manager, technical administrator, employee developer and organization developer.

This can be concluded that while going for restructuring the organization in matrix form HR manager should keep in mind that the main roles for both functional and project managers will be of Knowledge updates, technical consultant, task manager, technical administrator, employee developer and organization developer. So selection should be based for these roles.. The most preferred leadership style should be that of task orientation and most preferred conflict style should be that of confirming and cooperative. Key skills for both are communication skill, organizing skill, team building skill, leadership skill, coping skill and technical knowledge. They both have to act as trainer, teacher and counselor at times.

Broad steps for successful transition:

Assign project managers

Since the functional managers are already their, the first step in implementation after the completed analysis of need, technical and profile assessments is to look for project managers. It must be noted that its not necessary to look for outside candidates only, their may be managers and/or supervisor already present in the organization which can be considered for these newly created vacancy. We must refer to the career and succession planning data in accordance to the mentioned roles and skill requirements.

Re-define roles and responsibility

To reduce the problem of role ambiguity and conflict that may arise, HR Manager should not take the already written and practiced Job Descriptions as the final one. Theirs the requirement to renew and recreate job descriptions before starting to work with them, as the set of roles and responsibilities have changed now. The changes are not only required in the

written set or roles and responsibilities but also in new and/or changed job titles, competency requirement, employee grades, policy charters, work timings, sitting arrangements etc.

Revise resource staffing processes

One must give due respect and consideration to the knowledge of functional managers and so involve them actively in staffing processes. With their help and suggestions create a system of collaborative formal requisition process of internal resources. Don't undermine their comments while looking for candidates from external resources, also the total dependency on the views of functional manager alone can be hazardous.

Revise performance management process

The new structure comes with changed Key Performance Indicators and Competency set. Before implementing make a serious thought and exercises to look into the changes that are required now. These can be the small changes like adding one more page of appraisal by project managers but can also be the major one like changing the Performance Management System in totality like going for 360 degree appraisal with increased emphasis on performance counseling and frequency of appraisal. With the new structure in place their the need for continuous assessment and PMS must take care of that. It might as well require for the development workshops and/or training on the same.

Establish a communication plan

Creation of communication plan in the form of policy helps in success of the implementation by reducing the chances of conflicts. Clearly define who is responsible for what, who reports to whom and when. Make a through communication plan which includes the information needs of both functional and project managers. Often using the technology can help to accomplish this like creation of project websites and any other MIS system. While creating the communication plan give equal importance to internal-external communication and inter-intra departmental communication both.

Obtain senior executive support

Senior or executive management support is must for the success as the change requires taking many tough decisions and their bind to be resistance for it. An alignment audit report should be used to establish the authorities of both functional and project managers.

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