

**CAN HRM BE AFFIRMED AS A SYSTEM?  
APPLYING GENERAL SYSTEMS THEORY (GST) ON HUMAN RESOURCE  
MANAGEMENT**

**Aamir Abbas Chaudhry\***

**Khadijah Saeed Khan\*\***

**Dr. Atif Hassan\*\*\***

**Abstract**

*General System Theory (GST) has presented some key concepts that Strategic HRM researchers use to link different HR Systems with organizational strategic goals and performance. In order to apply General System Theory's underpinnings in Strategic HR literature and to establish the point that GST's key concepts can be used to explore HR systems, it is necessary to first prove that HR as a distinct function of any organization and can be declared as a system. It is possible, if researchers can prove that all or most of the key concepts presented by GST are present in organization's HR function and thus Systems Theory/Thinking principles can be applied to design and manage HR function. This conceptual paper takes a look at literature and analyzes all related assumptions of general systems theory in the context of HRM and concluded that HRM can be declared as a system.*

**Key Words:** Strategic goals, Strategic HRM, Systems theory, HR systems

**JEL Classification:** M10, M12, M19

---

\* MS Management Scholar, School of Business and Economics, University of Management and Technology (UMT), Lahore, Pakistan

Email: [aamirch78@yahoo.co.uk](mailto:aamirch78@yahoo.co.uk)

\*\* Research Associate, Department of Management, School of Business and Economics, University of Management and Technology (UMT), Lahore, Pakistan

Email: [k.saeed@hotmail.co.uk](mailto:k.saeed@hotmail.co.uk)

\*\*\* Chairman, Department of Management (Associate Professor), School of Business and Economics, University of Management and Technology (UMT), Lahore, Pakistan

Email: [atif.hassan@umt.edu.pk](mailto:atif.hassan@umt.edu.pk) ; [aatiff@gmail.com](mailto:aatiff@gmail.com)

## **1. Introduction**

Human Resource Management (HRM) is gaining impetus in contemporary era of management sciences domain. The researchers and field experts are of the view that HR is a complete system and HR systems are becoming buzz word in strategic HRM literature. The body of knowledge is getting contributions in the shape of new knowledge and the same is true for HR systems. The HR Systems can help as a source of far-reaching impact on helping behavior within organizations (Mossholder, Richardson & Settoon, 2011). The meaning of helping behavior is to support the organization in achieving its goals and objectives and that is the rationale of developing HR systems in the organizations. The helping behavior intended to ensure with the help of HR systems is considered as a vigorous predictor of performance at group and organizational level (Podsakoff et al, 2000). In order to understand the logic behind the HR systems concept, it is appropriate to understand the dissimilarities between HR practices, policies and systems (Schuler, 1992; Becker & Gerhart, 1996).

HR practices are needed at operational level and reflect certain organizational activities undertaken to achieve certain objectives/outcomes. HR policies are above the HR practices, which are usually employee-focused programs (Lepak et al, 2006) that shape the selection of appropriate HR practices. HR systems operate at the higher level i.e. above HR practices and HR policies and include package of manifold HR policies that are adopted to be internally reliable, coherent, and underlining to accomplish some predominant outcomes. The primary logic/motivation of HR systems is to ensure synergistic effect where HR practices, HR policies should complement each other and operate as bundles of HR practices (Delery & Doty, 1996), not in isolation. The roots of HR systems concept are taken from systems theory of management/system thinking. It is worth noting that systems theory represents contemporary management but ideas and concept of HR systems are also consistent with Taylor (1914). Scientific management movement where task was most important and people were observed through time and motion study.

Gilbreth (1914) focused on goal-setting whereas Fayol (1949) advocated administrative management principles through the elevation of management from shop floor to the entire

organization. It is important to include the element of human behavior and emotions while designing HR systems because classical management alone cannot solve all issues related to HR systems. Besides the importance of HR systems for any organization, it is difficult to understand the variations among different studies related to HR systems in literature, which makes it difficult to recognize the conceptualizations. The variations are due to choice of different HR practices and varying objectives of different HR systems (Lepak et al, 2006). In a nutshell, HR systems are needed for fostering efforts of high performance, commitment, and involvement within organizations. The importance and relationship of employee relations and performance exists usually at all levels of organization (Gerhart, 2005) and this is also one of the logics behind developing HR systems. The researchers are also agreed that there are multiple ways to achieve the desired outcomes with the help of different HR systems.

The conceptual background/logic behind HR systems concept can also be viewed as objectives of HR systems. The systems are designed and developed based on the objectives such as organizational performance (Lepak et al, 2006), employee involvement (Boxall & Macky, 2009; Lepak et al, 2006), collaborating work assemblies (Frenkel& Sanders, 2007), flexibility of human resources (Beltrán-Martín et al, 2008), employee commitment, occupational safety, customer service, human capital enhancement etc. (Lepak et al, 2006).The objectives of the organization and employee related HR philosophy and policies will determine different types of HR systems in organization. It can be observed from existing literature that much emphasis has been placed on the different classifications, needs and justifications of HR systems. The gap is prevailing in the literature with respect to understanding the function of HRM in the light of basic assumptions presented by General Systems Theory (GST).

This paper is an attempt to address the prevailing gap and to contribute in the body of knowledge by bringing conceptual clarity in declaring HRM function within any organization as system or otherwise. This paper is also intended to help the organizational scientists and HR practitioners in better indulgent thinking and overcoming weaker aspects of their HRM function because GST assumption-wise analysis of this paper is objectively helpful to identify the roadblocks and overcome them.

## ***1.1 Applying General Systems Theory (GST) On HRM***

In 1928, Ludwig von Bertalanffy who was biologist by profession had presented the concept of general systems thinking. Von Bertalanffy (1928) had challenged the assumptions of René Descartes (French philosopher, mathematician and scientist) where Descartes (contributed in 17<sup>th</sup> century, extracted from philosophical writings reprinted in 1955) proposed that within any system, the components of that system can be ghettoized and investigated as self-governing equity, and these components could also act as auxiliary support in linear style to pronounce the entirety of the scheme and system. It was further argued by Von Bertalanffy, that a system is considered by the connections and collaborations of its components and the non-linearity of these connections and collaborations. Von Bertalanffy prolonged system theory by including perspectives and theoretical foundations of biological systems in 1951. If we are able to know about one component of the system then it will pave the way to understand the logic and working of other part(s) of the system and this element is predominantly common in all systems (Kuhn, 1974). The systems can be understood as controlled or un-controlled systems. The controlled systems are like cybernetics (science of control and communication in animals, mankind and machineries).

Kuhn (1974) approach to define systems is classified into detector, selector and effectors functions of the system and is presented in Table-1 here under:

**Table-1: Systems classified as detector, selector and effector**

Concept	Function / Role in System(s)
Detector	Related with communication of information and flow among systems.
Selector	Rubrics of the system that would be used by the system to arrive at some decisions within the systems.
Effector	Resources / Means of completing the connections and trades among systems.

It is pertinent to note that all organizational and social interactions are dependent upon communication and transactions. Transactions refer to exchange of matter and energy while communication is related to the exchange of information, hence, it makes communication and transaction intersystem (Kuhn, 1974). In order to prove that HR function works as a system, the assumptions of general system theory (GST) need to be understood. If HR function works as a system, then there is a strong probability that it will lead to sustained competitive advantage

because success of HR function will ensure enhanced organizational performance. HR system, if it is really a system, can comprise of different functions depending upon the nature of business and size of the organization. The major concepts/assumptions from **General System Theory (GST)** are mentioned hereunder and they will help to correlate HR function in order to prove using logical and rational arguments that HR functions are HR systems.

Kast & Rosenzweig (1972) highlighted major assumptions of GST as (1) systems are made of sub-systems, (2) systems should have default ability to serve as gestalt, organicism, synergism and holism, (3) systems could be viewed as open systems, (4) the presence of generic transformation model by taking inputs from the environment and producing outputs for the stakeholders, (5) system's ability to define the boundaries of the system and limiting the scope, (6) the feature of negative entropy in systems, (7) homeostasis, steady state and element of dynamic equilibrium, (8) feedback mechanism in systems, (9) hierarchy maintenance within systems, (10) the internal elaboration feature of systems, (11) the ability of any system to seek multiple goals at a time, (12) ability of systems to achieve desired state by using different and alternate means i.e. equifinality within open systems. The assumptions of GST are now being analyzed in the context of function of human resources by using the related facts and existing literature.

## **1.2 Sub-Systems or Components**

Kast & Rosenzweig (1972) argued that systems are composed of their interrelated components. This feature is true for all types of systems whether they are social, biological, technical, human and mechanical etc. All elements of a system must be interrelated and interconnected with each other. Chadwick (2010) presented generalized and widely accepted theoretical justification and reasoning for how the parts of HR systems operate. This purports the notion that likewise general systems, HR systems are also composed of sub-systems/components. These sub-systems/components should work in synergistic way to achieve the desired outcomes because HR systems and sub-systems, if work in isolation then the organizational performance as a whole will decline. If the purpose of developing HR system is to develop high commitment in employees, then this system will require policies and initiatives of selective and scientific staffing, performance management and also initiatives of training and development etc.

The above facts suggest that HR systems are the collection and composition of manifold HR policies that should be aligned internally, consistent with each other and also the policies and practices of HR function serve as the sub-systems/components of HR systems (Lepak, Liao, Chung & Harden, 2006). Another example of proving HR function as system is that one of the functions in HR is performance management, which is also known as talent management. This performance management policy within HR system has a direct impact on benefits and compensation administration. Furthermore, talent management is also related with recruitment process, which demands certain selection methodology. This method will be known as “structure/system of recruitment within talent management.” The policies and procedures implemented by HR can be referred to as system’s behavior. This implies that human resource can be declared as a system, which is based on sub-systems that are interrelated to each other.

**Figure-1: Components of HR function**



In the above figure, General System Theory (GST) describes systems as a combination of **Subsystems or functions**, which are consistent and related to each other and these sub-systems have their own specific behavior, boundaries, and structure (Mingers & White, 2010).

### **1.3 *Holism, Synergism, Organicism, and Gestalt***

Klett (2010) contends that subsystems are the constituents on which a system is designed and systems are interrelated to each other as per General System Theory (GST). There is a need to study the whole system for clarity. Any system assigned specific role to its subcomponents or subsystem is quite possible but the system cannot be defined completely by just describing a component. To understand the functionality, it is important to have an overview of the whole system. Kast & Rosenzweig (1972) argued to view system as the sum of its all elements. It's not just the elements that will make a system; the system must be viewed holistically. For instance, training and development is intended to develop and improve the skills of employees. It is a subsystem that has an objective to improve the skills. If training and development is taken and observed as an independent system, then the logical question arises that why an organization would invest in the human resources?

The training function is primarily based on the notion to attract, develop and retain talent. It helps in developing and retaining the talent. If the organization is investing on human capital, it will return in the shape of skillful work force. This whole narrative represents the satisfaction of captioned assumption of GST. A system should be viewed, observed and analyzed as a whole and is not just the sum of subsystem. The maximum output can't be achieved if these are studied individually. The whole function can be understood on totality as a whole and not in parts only.

### **1.4 *Open Systems View***

Kast & Rosenzweig (1972) stated that systems could be classified into open or closed systems. The interaction with the environment is the hallmark and feature of open systems, where they also interchange information and closed systems are designed deliberately not to take any energy, information from their external environment and work in isolation. Tsui & Schriesheim (1980) explains that a system, which takes inputs from its environment, is known as open system. Inputs can be in the form of raw material, financial resources or human resources. Human resource within an organization is a function, which acquires human resources from its environment. The social systems are mostly recognized as open system but this doesn't refer to an entirely open system. A term open-closed system, which means a system, can be partially open or closed. For instance, during recruitment, educational and age criteria makes the HR

system as a partially closed system and the term “equal opportunity employer” or “employment for all” makes HR of any organization as open system. HR systems also take inputs such as information, manpower from the external environment and these facts make HR systems as open system.

### **1.5      *System Boundaries***

The General Systems Theory (GST) narrates that both closed and open system possesses some boundaries, which separate them from their environment. As HR is an open system (as discussed above), its boundaries are absorbent and allow the organization to interact with the external environment in order to have market knowledge, to compete with the environment and to sustain competitive advantage. Colbert (2004) argued that the complex resource based view of human resource management encourages expansion across departmental and organizational boundaries. As far as recruitment is concerned, the HR is dependent upon the external sources to hire people (Armstrong, 2009). This function is also sometimes outsourced, which makes it absorbent and flexible to interact with the environment outside the organization. Hence it proves that this system is a social system having its own boundaries.

Colbert (2004) also delivered indication that intensifying the boundaries result in maximized worth of the firm from a strategic perspective. Similarly, compensation domain of human resource function cannot work in isolation. Its interaction is crucial with the other functions of human resource as well as other departmental functions of the same organization. It requires employee information from the human resource and the feedback results collected via the other managers of different departments within the same organization. This proves that each function and sub-function is working according to the system boundaries within and outside the organization.

### **1.6      *Feedback***

Funderburg & Levy (1997) are of the view that feedback of the system reflects the performance/efficiency of the system. It is an important aspect, which gives the pulse of the system regarding its efficient working or otherwise. Feedback is either negative or positive; it may be internal or external. Implementing feedback on HR systems, performance management, following of disciplinary procedures are the internal feedback either positive or negative. An

employee feedback on training and development could be used for the effectiveness of HR skill development procedures. These feedbacks reflect the internal process of an organization. Feedback can be taken from the external environment as well to gauge the performance of the employees. Even the negative feedback will provide an opportunity to revisit the system and take corrective action (s) for betterment.

### **1.7        *Negative Entropy***

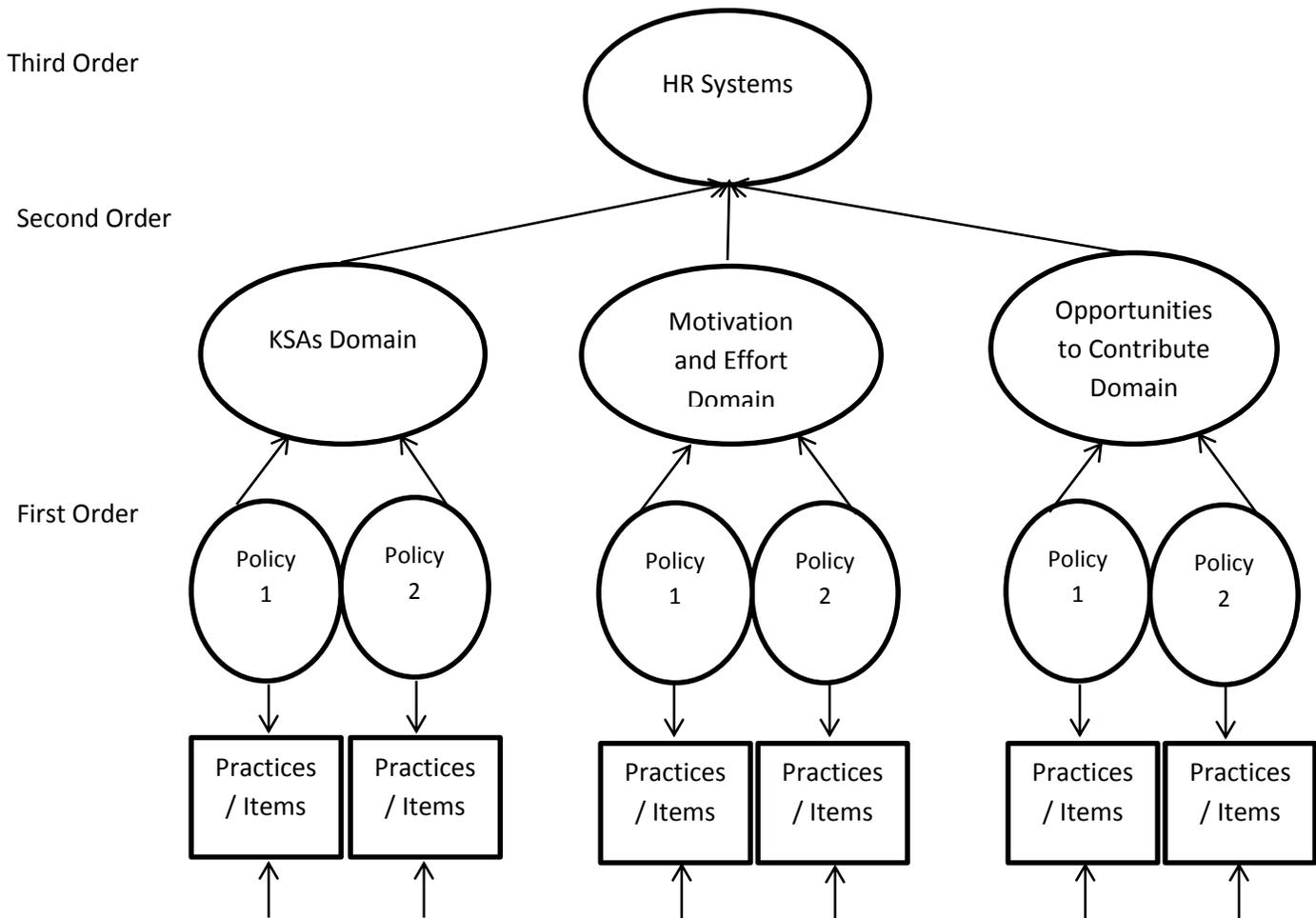
In a system, the entropy guides towards disorder in transformation of resources and information. In a closed system, the entropy is positive and vice versa in the open system. Human resource function of an organization acts as an open system as it interacts with the external environment, so entropy would be negative. The HR function has the ability to transform resources into desired outputs for the organization. As the resources are imported from the environment, the need of transformation is enhanced to modify or adopt the diversified skill and knowledge. In an open system, there lies a proper order in the functioning, which is interdependent. The human resources go for either make or buy decisions for the acquisition of resources. If the recruitment decisions are made, the firm develops resources within the organization and if the recruitment decision is bought, the firm interacts with the external environment and imports people from the environment via a complete recruitment process, which starts from advertisement for the job till the interviews, selection and orientation of the resources.

The complete recruitment process works in an order. Lepak & Snell (2002) also argued in the favor that there are bundles of human resource practices that work in combination with the other human resource practices. There are certain levels in human resource management functions, which enable the flow of information and completion of work in a proper order. Jiang et.al. (2012) provided evidence in the favor that there are certain levels for the smooth functioning of HRM; highest is the level of HR principles, secondly HR policies and the lower is the level of HR practices. A good HR system is the one where all the processes within human resource management work in a tidy manner. First the principles are formed with respect to the vision; secondly, to achieve the organizational goals and policies are made in order to meet the organizational goals.

In the lower level, these policies are implemented via different human resource practices. In this way, in each level, the information about the objective of human resource activities (the organizational goal) is spread in the organization in a proper order from top to bottom in the hierarchy and the negative entropy is exploited.

**Figure-2: HR Systems Model based on KMO (Knowledge, Motivation & Opportunities to perform)**

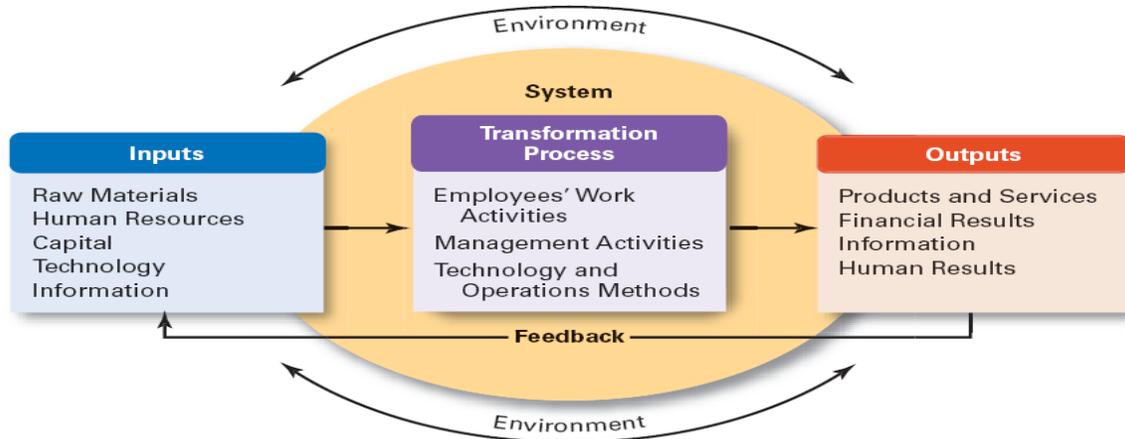
**Measurement Model of HR systems**



**Source: Jiang et al, (2012).**

## 1.8 *Input-Transformation-Output Model*

Figure-3: Input-Transformation-output Model Example



Source: Robbins & Coulter (2005)

In order to achieve the desired results, inputs are drawn from the environment and are transformed into outputs. Wright & Snell (1991) delivered indication that basic KSAs are obtained from the environment as inputs and are transformed to attain the outputs of employee satisfaction and performance through employees' behaviors. Human Resource function is required to gather knowledge, skills and abilities from the environment in the form of hired personnel. Once the certain competences are acquired in the shape of human resources, the organizations utilize them by transforming them to meet their organizational goals and try to retain the knowledge, skill and abilities in the form of resources. Once the resources are imported from the environment, the organizations transform these resources into outputs and this assumption of General System Theory (GST) proves that HR function is the system.

## 1.9 *Dynamic Equilibrium*

According to General System Theory (GST), an open system cannot attain equilibrium but the dynamic equilibrium. HR enables the organization to be in the state of dynamic equilibrium as it allows the smooth flow of information as well as empowers to attain a certain level of equilibrium due to presence of entropy at some levels. The presence of negative entropy in human resource function makes the organization to change the state with the passage of time, as even the dynamic equilibrium cannot be achieved for a long time. Snell & Youndt (1995)

contended that the academia and practitioners come to an understanding that HR is a complex and dynamic phenomenon and people are the basis of competitive advantage with the hastening of competition in the external market. The ability to get information, interpretation of information and use of that information is the key to success for any business in the 21<sup>st</sup> century.

The term dynamic with reference to the context/environment is representing that the pace of change is fast. Dynamic equilibrium represents the state of an organization when it is in continuous interaction with the external environment and the information flows smoothly and transformation occurs progressively as well as the organization gets an equilibrium state. Practically speaking, the state of equilibrium is difficult to achieve and sustain. The state of dynamic equilibrium is attained only when a certain pattern is followed. The interaction of HR with external environment helps the function of internal and external flow of information.

### **1.10 Internal Elaboration**

The organizations need to be internally developed in an open system according to General System Theory (GST). The ability of firm to organize will enable it to attain sustainability. The organized firms look for differentiation to attain sustainable competitive advantage. HR functions are well organized in its each area. It has its sub-systems, certain components and different levels, which make it more persuaded towards goal orientation. Lepak& Snell (2002) are of the opinion that the internal elaboration is ensured in the human resources by the managers along with every individual working under the domain of human resources in order to ensure the other functions work efficiently. Von Glinow et al. (1983) provide suggestion that the career oriented HR systems are organized and the flow of information is equal at all levels. The human resource is kept aware of all the organizational and operational goals because they play a crucial role in running the organization.

If the internal flow is not smooth and people are not aware of the goals they are working for, it will affect the whole human resource areas and the attainability of desired goals would not be possible. For example, if there lies astounded information flow and the recruitment department is not conscious of the organizational goals to be achieved, it would fail to recruit the right people for the right job. Similarly, if the training department were not being informed about the goals, it would not be able to train employees in a good way. Every area and domain of

human resource function works with collaboration and hence ensures the presence of components of a system within human resource function. This reality and fundamental purpose of HR function within the organization proves internal elaboration assumption of General System Theory as valid and authentic and also providing support to the notion that HR is also a system.

### **1.11 Hierarchy**

Szymanski & Parker (2003) argues that hierarchy is a logical sequence/order intentionally created between department and at different managerial levels to define their scope of work, power distribution within the organization and boundaries. It is always in ascending order. As hierarchy pyramid goes down the power will be decreasing. Strategic planning will be increased at the higher management levels. Apart from this, there is an internal hierarchy as well, which is implemented within a subsystem to maintain the power distribution within the resource. Hierarchy is also one of the important assumptions of General Systems Theory (GST), which is aimed to ensure rational, systematic and organized approach in order to do the tasks in organizational settings. The presence of organizational structures in organizations represent that there is some authority, responsibility structure within the system and HR department is the custodian of devising plans for authority and responsibility, hence it proves HR as a system, which is fulfilling this assumption. The following figure is representing the order of power and decision-making in a contemporary organization.

**Figure-4: Hierarchy in Organizations (Example)**



**Source: Robbins & Coulter (2005)**

### **1.12      *Equifinality in Open Systems***

According to General System Theory (GST), Equifinality is the belief that in open systems a given end state can be reached by many potential means. Teece, Pisano, & Shuen (1997) pronounce the need for corporate entities in the prevalence of complex and dynamic environments to reconfigure and re-align the firm's structures and work methods for accomplishing the necessary internal and external transformations. Reconfigurations are different ways and there are different models to achieve a single output and to adjust the change human resource experts designs different configurations and practices to go at ultimate destination. All configurations will end up at single goal or state, which was originally desired. There are different levels in HR systems (Jiang et al., 2012; Delery, 1998; Huselid, 1995), which are interlinked with the primary policy domains. The domains of HR system have different policies and practice beside these all is means to achieve system objective and all are correlated with one another.

There are different policies in human resource but the goal is always single, which is usually the organizational performance enhancement in case of HR function and systems. The configurations can be changed for any single desired output.

### **1.13      *Multiple Goal Seeking***

Every organization can be declared as a social system because organizations are collection and group of people with different mindsets and multiple goals. Their goals may match with a group of people but may differ from another group of people (Joseph, 2014). It is the established fact that people work for organizational goals as well as the individual goals within organizations. The employee performance would be better, if the individual goals and organizational goals are aligned and synchronized. The HRM as a function of any organization is responsible for multiple goals to achieve. It is true especially in case of strategic HRM regime. As HR is a kind of connecting hub between the senior executives and the line managers, it has many goals to achieve and many dimensions to take care of. The human resource knows what the organizational goal is and how much worthy it is for the organization to achieve, so it has the responsibility to communicate and coordinate with the other managers and share the ideas in order to make employees achieve the goal.

A good HR function collaborates with the line managers and managers of other departments to create a smooth flow of information for the feasibility in attainment of desired organizational goals. As far as the responsibility of sustaining competitive advantage, the human resource also needs to enhance organization's knowledge skills and abilities via recruiting skilled labor, focusing on their training and development and making strategies to retain the hired labor (Jiang et al, 2012). For this goal to achieve, the human resource should pay attention to the appraisals of employees and their compensation packages. It also needs to realize the long-term edge and competitive advantage to keep the value of the firm high up in the market. It is established that HR as a function and system fulfills this assumption of General System Theory (GST).

## **2. Discussion And Concluding Remarks**

It can be construed from the whole discussions supported from literature that HR function can be declared as a system with full conviction because it fulfills all necessary concepts and assumptions of General System Theory (GST). The claim of organizational scientists hence proved, but now with more conviction because it is supported with assumption-wise analysis of GST, which was previously missing. The HRM function is historically and factually different for different types of organizations according to the opinion of industry experts, practitioners and researchers. HR function may differ depending on, *inter-alia*, whether the organization (i) is government owned or privately owned, (ii) within privately owned organizations whether it is family owned or it is a public limited enterprise listed on stock exchanges, and (iii) what sort of products are produced (e.g. goods or services offered etc.). This paper is presenting assumption-wise analysis of GST on HRM keeping in view the most common grounds and justifications of HRM to prevail; hence it presents the limitation of this paper with respect to its applicability on specific businesses.

Another limitation of this paper is that it is not offering any specific solutions to HR practitioners if their HRM function is not operating well, as per the assumptions of GST. The future research studies may address this limitation either qualitatively or empirically. Although assumption-wise analysis is not itself the specific framework for practitioners and researchers in finding out the solutions of organizational pressing problems but it presents base-line knowledge in the light of most pertinent theory of management applicable on HRM to identify gaps and

improve the shortcomings of HR system. The same is true for the first limitation of this study that applicable aspects and tips endorsed by earlier studies would be helpful to HR practitioners in some manner until more elaborative and pragmatic solutions are readily available to them. This study also opens the research opportunity for organizational scientists to further probe the critical aspects where HRM finds difficulty to fully operationalized components of GST.

This paper is helpful to those who are willing to develop grass-root knowledge about HRM and it's working as a system in organizations. The paper is exploratory and descriptive at the same time because argumentative approach has presented certain managerial implications despite of above-mentioned limitations of the paper. It has also clarified some field-specific jargons with the intention of providing clarity to the readers and motivation to HRM custodians to improve HR systems within their organizations.

## References

- Armstrong, M (2009). *Handbook of HRM practice*, Kogan Page, London and Philadelphia, 68-77.
- Becker, B. E., & Gerhart, B. (1996). The impact of human resource management on organizational performance: Progress and prospects. *Academy of Management Journal*, 39(1), 779-801.
- Beltrán-Martín, I., Roca-Puig, V., Escrig-Tena, A., & Bou-Llusar, J. C. (2008). Human resource flexibility as a mediating variable between high performance work systems and performance. *Journal of Management*, 34(1), 1009-1044.
- Boxall, P., & Macky, K. (2009). Research and theory on high-performance work systems: Progressing the high-involvement stream. *Human Resource Management Journal*, 19(10), 3-23.
- Chadwick, C. (2010). Theoretic insights on the nature of performance synergies in human resource systems: Toward greater precision. *Human Resource Management Review*, 20, 85–101.
- Colbert, B. A. (2004). The complex resource-based view: Implications for theory and practice in strategic human resource management. *Academy of Management Review*, 29(3), 341-358.
- Delery, J. E. (1998). Issues of fit in strategic human resource management: Implications for research. *Human Resource Management Review*, 8, 289–310.
- Delery, J. E., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions. *Academy of Management Journal*, 39(4), 802-835.
- Descartes, R. (1955). *The philosophical works of Descartes*. [2 vols.].
- Fayol, H. (1949). *General and administrative management*. Pitman, London.
- Funderburg, S. A., & Levy, P. E. (1997). The influence of individual and contextual variables on 360-degree feedback system attitudes. *Group & Organization Management*, 22(2), 210-235.
- Gerhart, B. (2005). Human resources and business performance: Findings, unanswered questions, and an alternative approach. *Management Review*, 174-185.
- Gilbreth, L. M. (1914). The psychology of management. *Industrial Engineering & Engineering Digest* (May, June 1912).

- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38, 635–672.
- Jiang, K., Lepak, D. P., Han, K., Hong, Y., Kim, A., & Winkler, A. L. (2012). Clarifying the construct of human resource systems: Relating human resource management to employee performance. *Human Resource Management Review*, 22(2), 73-85.
- Joseph, R. A. (2014). *Democracy and prebendal politics in Nigeria* (Vol. 56). Cambridge University Press.
- Kast, F. E., & Rosenzweig, J. E. (1972). General systems theory: Applications for organization and management. *Academy of Management Journal*, 15(4), 447-465.
- Klett, F. (2010). The design of a sustainable competency-based human resources management: A holistic approach. *Knowledge Management & E-Learning: An International Journal (KM&EL)*, 2(3), 278-292.
- Kuhn, A. (1974). *The Logic of Social Systems*. San Francisco: Jossey-Bass.
- Lepak, D. P., & Snell, S. A. (2002). Examining the human resource architecture: The relationships among human capital, employment, and human resource configurations. *Journal of management*, 28(4), 517-543.
- Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006). A conceptual review of human resource management systems in strategic human resource management research. *Research in personnel and human resources management*, 25(1), 217-271.
- Mingers, J., & White, L. (2010). A review of the recent contribution of systems thinking to operational research and management science. *European Journal of Operational Research*, 207(3), 1147-1161.
- Mossholder, K. W., Richardson, H. A., & Settoon, R. P. (2011). Human resource systems and helping in organizations: A relational perspective. *Academy of Management Review*, 36(1), 33-52.
- Podsakoff, P. M., Mac Kenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26: 513-563.
- Robbins, S. P., & Coulter, M. (2005). *Management*, 8th.

- Schuler, R. (1992). Strategic human resources management: Linking the people with the strategic needs of the business. *Organizational Dynamics*, 21(Summer), 18–32.
- Snell, S. A., & Youndt, M. A. (1995). Human resource management and firm performance: Testing a contingency model of executive controls. *Journal of Management*, 21(4), 711-737.
- Szymanski, E. M. E., & Parker, R. M. (2003). *Work and disability: Issues and strategies in career development and job placement*. Pro-ed.
- Taylor, F. W. (1911). *The principles of scientific management*. Harper.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Tsui, A. S., & Schriesheim, C. A. (1980). Exploring individual and Organizational Boundaries: A Tavistock Open Systems Approach. *The Academy of Management Review* (pre-1986), 5(000002), 308.
- Von Bertalanffy, L. (1928). *Critical theory of morphogenesis* (No. 27). Gebrüder Borntraeger.
- Von Glinow, M. A., Driver, M. J., Brousseau, K., & Prince, J. B. (1983). The design of a career oriented human resource system. *Academy of Management Review*, 8(1), 23-32.
- Wright, P. M., & Snell, S. A. (1991). Toward an integrative view of strategic HR management. *Human Resource Management Review*, 1(3), 203-225.