DOI: 10.1111/j.1475-6773.2009.00970.x
DEBATE/COMMENTARY

Commentary: Slack Resources in Health Care Organizations—Fat to Be Trimmed or Muscle to Be Exercised?

Jacqueline Zinn and Ann Barry Flood

In this issue, Hussey et al. (2009) at RAND summarize their results of a systematic review of ways to identify and evaluate health care efficiency. Their approach was deliberately broadly inclusive in that they did not require that the studies reviewed simultaneously measure quality as well as costs or resources consumed when assessing "efficiency."

Hussey and colleagues argue that there are important reasons to take a broad perspective of the measures of efficiency in health care at this juncture. First, they want to portray the wide variation in the methods that policy makers and researchers are currently using to draw implications about efficiency. Second, they argued that it is often reasonable to assume that products or outcomes are similar across the organizational units being compared and, when true, variation in quality does not need to be measured. The third set of reasons is based on the practical reality of where we are today: there is little consensus about how to measure efficiency in health care (especially between practitioners and researchers). Very few studies include "quality" when they address concerns about efficiency and so much relevant work of necessity would be overlooked. Yet the political need to act to control costs while maintaining or improving quality in our health care system has never been more urgent or complex.

Hussey and colleagues' article raises many important issues regarding efficiency. While focusing on the methods employed to measure efficiency, their conclusions illustrate that the more fundamental problem is the lack of consensus on underlying theory and models—let alone methods—that provide the context for understanding efficiency and the existence of slack resources in organization.

In this commentary, we highlight the widely divergent views about slack resources in health care organizations. These views range from perceiving

slack resources as incontrovertible evidence that our health care system has too much "fat," that is, using resources inappropriately or wastefully, to under some circumstances as an indicator that health care organizations have the "muscle" needed to improve our health care system by promoting innovation, allowing needed flexibility, and devising ways to improve "value" in health care services. The latter view suggests that slack resources should be "trimmed" judiciously rather than always assumed to be "inefficient."

Definition of Organizational Slack

Slack is a pool of organizational resources in excess of the minimum necessary to produce a given level of organizational output. Slack resources can provide a cushion that allows organizations to adjust successfully to internal pressures as well as to initiate strategy with respect to the external environment (Oviatt 1988). These excess resources may take the form of redundant employees, excess capacity, or excess labor or capital (Nohria and Gulati 1996). For example, employers may hire individuals with seemingly underutilized skills as a form of organizational slack in order to expedite upgrades or respond to demand surges when circumstances warrant. Payment to members of the internal competing coalition in excess of what is required to maintain the organization is also a form of slack (March and Simon 1958). Slack resources can be immediately available for use (e.g., underutilized employees), recoverable (e.g., overhead expenses), or potential (e.g., the ability to borrow funds for development).

The relationship between slack resources and performance has been much debated but not well studied, especially in health care. There are basically two divergent views of their value. One approach sees slack resources as a sign of inefficiency, that is, either too much money is spent to produce the output or the output exceeds what is needed or desirable. The other view focuses on the potential of slack resources to permit managers to act strategically to exploit opportunities, such as to expand hospital services or to increase demand by partnering with insurers. Some actions can be intended to enhance standing or satisfy employees rather than increase profit, for example, by seeking prestigious affiliations, offering better workplace conditions, or expanding community outreach. Other actions can be defensive, for instance, countering competitor's threats or buffering against unexpected environmental changes such as a mandated loss of revenue from third-party reimbursement payment rates.

Neoclassical Economic Perspective on Organizational Slack

In the neoclassical microeconomic tradition, the objective of the firm is to maximize profits and managers, acting as agents for the owners, strive to achieve this goal. Consistent with this objective, firms minimize costs and operate at optimal efficiency. Thus, at equilibrium, in conventional economic theory, slack is nonexistent. Slack indicates that the firm is not in equilibrium and it should be minimized to achieve an optimally efficient steady state. Followers of this tradition do not recognize the value of slack as a permanent fixture within organizations because its existence implies nonrational behavior on the part of the firm in that if the opportunity existed to create profits from using slack resources, the firm would already have exploited this opportunity. In this view, slack is synonymous with "wasteful" and any other connotation is at best a "messy" concept that departs from the neoclassical economic assumptions.

The Institute of Medicine (IOM)'s famous book *Crossing the Quality Chasm* presents an example of this perspective in health care. In discussing efficiency as one of the six specific aims for improvement in health care, they assert, "The opposite of efficiency is waste, the use of resources without benefit to the patients a system is intended to help. There are at least two ways to improve efficiency: (1) reduce quality waste and (2) reduce administrative or production costs" (IOM 2001, p. 52).

However, it has long been recognized that organizations maintain a stock of unused or underused resources, implying that, for whatever reason, organizations do not operate at maximum efficiency (Penrose 1959). Indeed, not only does "slack" seem to exist, its existence and level are surprisingly consistent across industries, countries, and time periods. Illustrating this phenomenon in health care, Hollingsworth (2008) in his recent review of published research based on frontier analysis found that the mean level of efficiency in U.S. hospitals was 0.85. Moreover, there was a remarkably narrow range of mean efficiency levels across types of hospitals (i.e., the highest was 0.855 for defense/VA hospitals, whereas the lowest was 0.825 for not-for-profit hospitals). While there is some variation in the mean efficiency level across health care in different countries, the more remarkable finding he reports is their relative consistency.

Thus, the disconnect between actual organizational behavior and the stringency of theoretical assumptions caused some scholars to question the value of neoclassical assumptions about efficiency and profit maximization

that provide definitive implications for firm behavior but may have little empirical relevance (Meyer 1982).

Three Departures from the Neoclassical View of Efficiency

Industrial organization (IO) economics became an early departure from neoclassical stringency by recognizing the existence of organizational slack. The structure/conduct/performance model, one of the fundamental concepts of IO economics, was developed to explain why firms do not maximize efficiency. In effect, market structure determines firm conduct, such as the maintenance of slack in the form of excess capacity. Porter (1980) applied the basic tenets of IO theory to great effect in his work on the market structure implications for competitive strategy by merging concepts from the fields of economics and business policy.

While IO economists challenged the neoclassical assumption of cost minimization, theorists from the managerial tradition substituted different behavioral assumptions for profit maximization, such as strategic growth or planning for sales maximization. This view differs from IO economics in arguing that managers operate under incentives that favor actions that grow sales or assets at the expense of efficiency and profit maximization.

Within this manager-oriented tradition, Leibenstein's (1966) work on X-inefficiency is perhaps the most radical break with IO economics. He argues that except in highly competitive markets, firms are not forced to be maximally efficient and, as a result, produce at higher prices and costs. In effect, the X-inefficiency theory not only acknowledges the existence of organizational slack but also assumes that it is a behavioral norm. The central premise of X-inefficiency is that not all firms seek to minimize costs by introducing technical changes when available and profitable.

A third stream, transaction cost economics (TCE), provides a different rationale for why organizations exist and, in turn, why slack resources develop (Williamson 1975). In this theory of the firm, activities that could be undertaken through marketplace exchange are brought into hierarchies (organizations) to correct for market failure.

Organizations are more efficient than "true" markets that operate in the presence of opportunism, uncertainty, small-numbers bargaining, and information asymmetry. However, rather than being optimally efficient, information asymmetry between the owners of the firm and the managers who run it on a day-to-day basis may promote the formation of slack. For example,

managers may exploit information asymmetry in order to pursue "pet projects" that may not be in the best financial interests of the owners. While some pet projects may result in wasted effort that does not serve the owners, others may develop successful lines of new services or products.

Williamson (1964) discussed absorption of slack as excess costs in the form of staff and salaries. In this respect, the TCE concept of absorbed slack is markedly similar to how X-inefficiency was conceptualized.

However, while acknowledging the existence of slack in organizations, organizational economists do not regard these departures from efficiency and profit maximization favorably. As noted above, slack in an organization promotes the pursuit of pet projects by agents who show little regard for the principals they serve (Jensen 1993). Leibenstein (1966) equated slack with X-inefficiency, the latter defined as the degree to which actual output is less than maximum output for a given level of inputs. Slack leads to bad decision making and lax discipline around resource allocation. As a result, failure to minimize costs is common and can yield substantial welfare losses.

Leibenstein proposed three reasons that X-inefficiency arises: (1) incomplete labor contracts, (2) production function is unknown or incompletely specified, and (3) not all inputs are available to buyers on equal terms. Thus, Leibenstein appears to use efficiency as a normative concept to describe an ideal solution. Deviations from that ideal are then defined as inefficient without regard to real-world alternatives.

Organizational Sociologists' Perspectives on Slack and Why It Exists

Theories from the field of organizational sociology also acknowledge the existence of organizational slack. However, in contrast to the perspectives derived from organizational economics described above, slack is not regarded as always wasteful or counterproductive, but rather can be the result of intentional behavior designed to provide benefit.

For example, theorists in the Carnegie school tradition argued that extant theory was too preoccupied with ferreting out and eliminating slack through efficiency-seeking optimization principles (Simon 1957; Cyert and March 1963). From their perspective, organizations engage in satisfiying rather than optimizing behavior and the existence of slack allows suboptimal behavior to occur. As Simon (1957) proposed, "The allocation of organizational resources to the satisfaction of subunits in excess of the minimum

required for the maintenance of the system gives rise to organizational slack. Slack arises when there is a failure to reach desired (acceptable) goals." Furthermore, slack in one portion of the organization can be shifted to another to meet the performance goals of a faltering subunit (Cyert and March 1963).

In addition to the Carnegie School, other theoretical perspectives derived from organizational sociology argue for the benefits of slack and the conditions promoting its development for these purposes.

Benefits of Slack Resources

Slack as a Mechanism for Conflict Resolution. Cyert and March (1963) described the key players in the organization as the dominant coalition that have separate and often conflicting operational goals. Slack exists because it plays a crucial role in resolving latent goal conflict between political coalitions that could threaten organizational integrity. Slack allows sequential attention to goals and, hence, conflict resolution. For example, in order to maintain the coalition of key members that allows the organization to function well in the face of competing interests, organizations may deploy resources (including pay) in excess of what is needed.

Slack as a Buffer against Environmental Discontinuities. Organizations that have substantial accumulated stocks of resources (financial, organizational, and social capital) may be buffered from environmental threats. Thus, slack serves as an absorption mechanism to allow adaptation to environmental shifts and discontinuities (Cyert and March 1963; Bourgeois 1981). Cushions of slack resources insulate organizations from environmental shocks and fuel adaptive responses to them (Thompson 1967). Thus, slack is created in tranquil times to be deployed during disruptive times.

In his study of the hospital industry, Meyer (1982) found that slack served as an organizational shock absorber, cushioning the impact of regulatory change. Also, slack is a buffering mechanism to protect the firm from internal fluctuations. From an evolutionary perspective, firms with slack resources face a less narrow and idiosyncratic set of path-dependent options, allowing them to be more adaptive (Nelson and Winter 1982).

Slack as a Facilitator of Organizational Performance

Reliability. Reliability refers to the organization's ability to repeatedly produce goods and services of a given quality. According to the ecological perspective, "The modern world favors collective actions that demonstrate or

at least reasonably claim a capacity for reliable performance and can account rationally for their actions" (Hannan and Freeman 1984). This perspective challenges the view—exemplified by the TCE theory—that the reason why organizations exist is because they are more efficient, that is, hierarchies have a technical efficiency advantage over markets. Rather than efficiency, the distinctive competence of organization is the ability to generate repeated collective action with relatively small variation in quality. Furthermore, natural selection within a population of organizations, for example, hospitals, tends to eliminate those with low quality regardless of efficiency.

In the evolutionary perspective on organizations, routines are the mechanisms that deliver products and services reliably (Nelson and Winter 1982). Slack is needed to maintain routines in situations when they must be used, for example, military drills during peacetime or disasters that require unusual surges in the need for health care (Hannan and Freeman 1984). Thus, slack resources that improve reliability (and by implication quality and safety in the hospital context) are necessary for survival.

Legitimacy. The Institutional Theory argues that organizations imitate successful competitors in order to gain legitimacy and that it is the availability of slack resources that enables them to do so. From this perspective, organizational structures can exist to serve largely ceremonial purposes designed to convince others of the organization's legitimacy, trustworthiness, and rationality rather than to increase operational efficiency (Baron and Hannan 1994).

Attracting and Retaining Staff. Maintaining a healthy workplace environment can be a balancing act between challenging staff to be highly productive and to find work rewarding, and between finding the right match of tasks and expertise and fitting into the legal and organizational culture that may dictate who can do what tasks. High rates of turnover, absenteeism, and even presenteeism (i.e., being present on the job but not productive or even being counterproductive such as by passing illnesses to patients or other employees) can impair organizational performance. Resources to alleviate these problems such as investment in facilities, less stressful work conditions, more ways to support employees experiencing temporary overload conditions, and more flexible benefits designed to maintain health and reduce stress may appear as inefficiencies, and "prevented problems" are hard to quantify.

Innovation. Nohria and Gulati (1996) argued that slack provides organizations with the ability to be proactive as well as defensive in adopting new technologies

or designing new lines of services. However, in testing this hypothesis, they found a curvilinear relationship between slack and performance, that is, innovation was hurt under conditions of low and high slack but helped when slack was in the intermediate range. One explanation for such a phenomenon is that too much slack may inhibit organizational strategic adaptation because it lessens responsiveness to environmental change. For example, Levinthal (1990) found that elite universities with very large endowments could continue to engage in inefficient practices without any significant threat to survival (at least during good economic times).

Optimizing the Amount of Organizational Slack

If, as has been argued from a number of organizational perspectives, slack buffers organizations against environmental turbulence, enhances performance, and resolves potentially destructive internal conflict, is it possible to have too little slack? While the literature we have briefly reviewed suggests the answer may be yes, other evidence clearly supports the view that there can be too much slack.

As has been argued, the optimal amount of slack is determined by the rate of change and source of change in the environment, the availability of resources in the environment, and the structure of the market. When slack is present, organizations can absorb small to moderate changes fast, although large changes may require more discretionary slack.

While the debate over the existence of organizational slack has provided an interesting theoretical challenge, maintaining an optimal level of slack is a significant managerial challenge. The purpose of slack is to allow the organization to forego short-term gains for long-term outcomes. Rather than operating on a pure cost-minimization model that eliminates short-term excess costs, in order to maximize performance, organizations must balance the cost of slack and its protective abilities.

Likewise, researchers and policy makers need to bear in mind that their models and methods for evaluating efficiency should be cognizant of this larger literature. Indeed, while there is fat to be trimmed from our health care system, slack resources can also provide muscle that is needed to maintain and improve its quality and safety—so the value proposition needs to wisely seek the balance. Hussey and his colleagues have helped us by reviewing the methods used and by exposing the need for better models and concepts about efficiency as well.

REFERENCES

Baron, J. N., and M. T. Hannan. 1994. "The Impact of Economics on Contemporary Sociology." *Journal of Economic Literature* 32: 1111–46.

Bourgeois, L. J. 1981. "On the Measurement of Organizational Slack." *Academy of Management Review* 6: 29–39.

Cyert, R. M., and J. G. March. 1963. *A Behavioral Theory of the Firm.* Englewood Cliffs, NJ: Prentice-Hall.

Hannan, M. T., and J. Freeman. 1984. "Structural Inertia and Organizational Change." *American Sociological Review* 49: 149–64.

Hollingsworth, B. 2008. "The Measurement of Efficiency and Productivity of Health Care Delivery." *Health Economics* 17 (10): 1107–28.

Hussey, P. S., H. de Vries, J. Romley, M. C. Wang, S. S. Chen, P. G. Shekelle, and E. A. McGlynn. 2009. "A Systematic Review of Health Care Efficiency Measures." *Health Services Research*, doi: 10.1111/j.1475-6773.2008.00942.x

Institute of Medicine (IOM). Committee on Quality of Health Care in America. 2001. *Crossing the Quality Chasm: A New Health System for the 21st Century.* Washington, DC: National Academy Press.

Jensen, M. C. 1993. "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems." *Journal of Finance* 48: 831–80.

Leibenstein, H. 1966. "Allocative Efficiency vs. X-Efficiency." *American Economic Review* 56: 392–415.

Levinthal, D. A. 1990. "Organizational Adaption, Environmental Selection and Random Walks." In *Organizational Evolution: New Directions*, edited by J. Singh, pp. 201–23. Newbury Park, CA: Sage.

March, J. G., and H. A. Simon. 1958. *Organizations.* New York: John Wiley and Sons.

Meyer, A. D. 1982. "Adapting to Environmental Jolts." *Administrative Science Quarterly* 27: 515–37.

Nelson, R. R., and S. G. Winter. 1982. *An Evolutionary Theory of Economic Change.* Cambridge: Belknap.

Nohria, N., and R. A. Gulati. 1996. "Is Slack Good or Bad for Organizations?" *Academy of Management Journal* 39: 1245–64.

Oviatt, B. M. 1988. "Agency and Transaction Cost Perspectives on the Manager–Shareholder Relationship: Incentives for Congruent Interests." *Academy of Management Review* 13: 214–25.

Penrose, E. T. 1959. *The Theory of the Growth of the Firm.* New York: Wiley.

Porter, M. E. 1980. *Competitive Strategy: Techniques for Analyzing Industries and Competitors.* New York: Free Press.

Simon, H. A. 1957. *Administrative Behavior.* New York: Free Press.

Thompson, J. D. 1967. *Organization in Action.* New York: McGraw-Hill.

Williamson, O. E. 1964. *The Economics of Discretionary Behavior: Managerial Objectives in a Theory of the Firm.* Englewood Cliffs, NJ: Prentice-Hall.

———. 1975. *Markets and Hierarchies.* New York: Free Press.