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The Strategic Impact of Balancing Capabilities

Abhijit Mandal

University of Warwick

Warwick Business School

Coventry, CV4 7AL

Phone: 024 7652 4504

Abhijit.Mandal@wbs.ac.uk

ABSTRACT:

In strategic management, changes in strategic positioning and dynamic capabilities have been recognized as rational and deliberate responses by the top management team to a felt need for attaining improved organizational performance. However, there may be a delay in responding to the real-world challenges in this manner. We propose the notion that middle level managers use their executive skills to balance different responsibilities (which we call “dynamic balancing capabilities”, DBC) to respond to challenges from the environment in a relatively shorter time-frame. Through system dynamics modeling we show that variations in DBC can differentially shape the overall context and thereby influence the flow and accumulation of resources, leading to differential performance over time potentially resulting in explicit changes of strategic positioning without the involvement of top management. Also, concepts like “key success factors”, “best practice” and “critical resources” are usually employed in a static sense. However, our modeling results reveal that so-called critical resources derive their potency from the particular dynamics of the existing situation. At different times the same resources will play different roles and will therefore not always be of critical importance.

THE STRATEGIC IMPACT OF BALANCING CAPABILITIES

Conventional wisdom in strategic management suggests that the strategic position of a firm (Porter, 1996) is decided by the decisions taken by senior managers as part of its top management team. From this it follows that the firm's dynamic capabilities (Teece et al, 1997) would be decided to a significant extent by the firm's desired strategic position¹. Taken together, the firm's strategic position and its dynamic capabilities determine the pattern of allocation of scarce resources which has then to be executed by middle management / functional heads of the firm at the operational level. An implication of this arrangement is that while senior management will take its time to deliberate over whether a firm should change its strategic position or not due to a change in circumstances. In contrast, middle management has to take environmental change in its stride and is required to minimize disruptions to the essential operations of the firm and to its intended strategic position.

In light of these typical middle management responsibilities, we ask whether it is possible for them to bring about a shift in the intended strategic position of the firm. The objective of this paper is to explore the mechanism of such a change. Of particular importance is to determine the key for middle management which enables them either to maintain the same strategic position as desired by the top management or deviate from it. For this we need to examine a situation where two firms have initially the same strategic positioning and dynamic capabilities while being very closely matched to each other in other respects; yet show a divergence in performance with the passage of time.

Middle management implements strategies through operations. From the resource-based approach (Wernerfelt, 1984; Barney, 1986, 1991; Peteraf, 1993) it can be stated that they execute various processes that transform resources in a cyclic manner (from cash to inputs to output to cash). Thus, in order to model the resource-transformation processes we draw upon a well-accepted scheme of conceptualizing resources (Dierickx & Cool, 1989). Adopting this scheme implies that resources whether they are intangible or tangible are seen as stocks. If the collection of resource-stocks that exist within a firm differs from another in name or stock level, then we can say that the resources display heterogeneity. Further, a difference in the

¹ Porter identifies the generic strategic positions related cost, focus and differentiation. Conceptually, the strategic position of a firm expresses the distinguishing features of products/services the firm wants to sell and

levels of critical resource-stocks indicates a difference in performance. Further, the manner in which the resource-stocks link to each other at any given point in time is designated as the resource structure while the reciprocal influence that a resources has on another resource directly or indirectly with the passage of time is known as resource interactions. The transformation of various resources as seen over time results from the policies followed by the management of the firm.

This paper models the evolution a situation where two very similar units of a firm commence with identical performance but later diverge. In the next section we present empirical evidence of the phenomenon. The third section presents details about how the firms were modeled while the fourth section presents the simulation experiments and its analysis. The fifth section concludes.

EMPIRICAL CONTEXT AND EVIDENCE

Industry Events

In the early '90s, the life-insurance industry in the United Kingdom witnessed a number of financial scandals resulting from customer and client complaints. The common theme in these complaints were that the insurance firm was either overcharging premium for policies or selling the customer / client policies that were not suited to their requirements. The government responded in the mid-'90s by imposing new regulations on all life-insurance that was being sold in the United Kingdom through the industry regulator that is currently known as the Financial Services Authority. These new regulations imposed greater disclosure of the various charges that were present in the policies. This increased transparency had two direct consequences: first, it meant more paper work for the agents and managers and second, it increased compliance costs for the life-insurance selling organizations to remain on the right side of the law. These direct consequences implied that they had to allocate time exclusively for this purpose, which detracted from the time they could allocate to their traditional responsibilities.

In addition to the direct consequences, there were indirect consequences too. Greater transparency imposed through regulations led to increased transparency in the cost structure.

how it organizes its activities within the firm to make a value proposition to its customers. Dynamic capabilities

The unforeseen (and undesired from the insurance provider's point of view) consequence was that the increased information led to an intensification of competition on costs that put profit margins at every step of the process under pressure. Although this development required a decision by the senior-most levels of management, in most firms this level remained inactive. The whittling away of margins hit the middle segments of the market the hardest; the lower segment (which became increasingly mechanized) and the upper segments (which already involved customization through specialists) were relatively less affected. Given the relatively lower returns from agents in the middle segment of the market, almost all the top players eventually abandoned this segment of the market and effectively disbanded their sales forces that catered to this section of the market.

The sales forces that survived did so by moving up-market – in terms of selling more customized products through better trained salespersons. An ideal example is Life Assurance Holding Corporation (managed by its major shareholder, St. James's Place Capital). Here is an extract from an interview with Sir Mark Weinberg, Executive Director of St. James's Place Capital plc and Chairman of Life Assurance Holding Corporation Limited:

"The way to look at our Edinburgh office is as a home to 36 people who are running their practice we choose to use the word partner to give everyone the feeling they are working with each other. They all have specialties that they can help each other with to form a long-term relationship with clients. We are different to the likes of Standard Life and the Prudential, because they are manufacturers of products, they don't give advice. We are first and foremost an advisory organization. St James's Place Capital is in the business of increasing the size of the partnership by 5% to 10% per annum," he says.

But, at a time when life companies are slashing their sales forces, he warns that SJPC is not about to take on just any old refugees. "A traditional sales force is in the business of expanding for expansion's sake. We do it the other way round; yes, we'd like to attract more people but they must not depreciate the quality or the standards of the branch. About 80% of another company's sales force wouldn't be good enough to work for us. Recruiting for us is a one-by-one process."

refer to the meta-capabilities of the firm used to build new capabilities and modify existing capabilities.

An important result from these events is the trend in the insurance industry towards commoditization and specialization of service required by policyholders. Many large insurance firms now sell certain types of insurance (e.g. travel insurance, basic life insurance) as a commodity directly to prospective policyholders. This is executed in a manner equivalent to direct marketing through mail-order, remote terminals, the Internet, at supermarkets, at travel agencies, etc. – thereby avoiding the use of the traditional agent. On the other side, agents now seek to develop customized insurance packages to meet the special needs of sophisticated customers – requiring agents to have a well-developed problem solving ability in the context of their clients’ business. On the whole there is a trend towards commission-less agents or at least a significant reduction in the commission component of an agent's emoluments.

The implication of this trend is important for management of insurance firms and agents. More resources are now diverted towards creating a new type of sales-force – one that is quick at learning how to tackle issues specific to their clients rather than that goes all out for increasing the volume of sales. It is agency management that continues to play the critical role in delivering a competitive advantage to the insurance firm.

Just as there was a bifurcation in the industry, the specific phenomenon that we are going to investigate in the firm of interest is also about divergence. Before we present the relevant details about this firm, we present some general characteristics of the insurance industry and its constituent firms.

General Characteristics of the Industry and Firms

The insurance industry is an international social institution which has accelerated the overall growth of business by bringing security, credit and efficiency benefits to individuals, organizations (including firms) and communities. The function of insurance is to combine a large number of risks and thus reduce the degree of uncertainty. Insurance may be defined as a combination of individuals who agree to make small contributions in order to reimburse those who suffer losses from events that may be foreseen and estimated but whose occurrence may not be accurately predicted. Thus, the scope of the industry is to enable persons avoid the *financial consequences* of risks or uncertain events (Riegel and Miller, 1966). The industry goes about its task by selling “policies” to those who want to insure themselves. Policyholders pay relatively small “premiums” (in most cases annually) and make claims

with the insurance company if and when they suffer losses covered by their policies. In the meantime, the insurance firm is supposed to invest and grow the funds that accrue to them with a view to keeping them secure to meet pay-out needs and return funds to mature policyholders as and when necessary.

Given this scope, major players in the insurance industry have a broad set of tasks, which are common to them. Figure 1 gives an overview of the typical insurance firm. Their tasks consist of selling insurance, selecting risks, fixing premiums, writing policies, investing money, keeping accounts, collecting, researching and analyzing statistics, processing claims and dealing with legal issues and cases. To execute these tasks they need either to build these required skills as individual firms, or share them from a common pool – depending upon the quantum of required investment and the scope for differentiation. Selecting risks and fixing premiums are not totally within the control of the individual firm, as they have to adhere to industry standards and regulations. Together with writing policies, this is the responsibility of the underwriting department, a cost center. Given that new types of policies can easily be copied, it is really difficult to establish a sustained differentiation with respect to competitors. Keeping accounts confidential is of course important to each firm; it is obviously not a shared activity and is charged to the accounting cost center. However, collecting, researching and analyzing statistics is an activity that gains value with increase of scale; it is therefore a pooled activity. The claims department (a cost center) is responsible for processing claims and the legal issues involved therein. The scope to differentiate here is limited, as no firm would want to either establish a reputation for compromising on payments or take a hit on its profitability by relaxing payment standards. In contrast, the investment department (a profit center), which invests the incoming premiums, performs an activity that is hardly unique to the insurance industry – this activity being similar to that of mutual funds and other intermediary players in the financial market. In some countries, the financial performance of the investment department is legally kept apart from the rest of the organization. This brings us to the remaining activity – the selling of insurance policies.

As in other sales organizations that sell to the masses, there is scope for generating demand through push (sales) and pull (marketing). The scope for differentiation through marketing is limited, as it is difficult if not outright impossible to compete on prices and very difficult to sell differentiated products (policies) on a sustained basis. This is reflected in the relatively small amount of funds put aside for marketing campaigns when compared to the funds put

aside for the agency department, which handles the sales agents. There exist different kinds of agency systems in the insurance industry – e.g. the general agency system and the branch office system in life insurance, the independent agency system and the exclusive agency system in property and casualty insurance. Common to these is the practice of selling policies through agents who receive a commission for the sale of these policies. The difference in these systems lies in the degree of control that the management of the firm exercises over its agents and the structure of their compensation. It is also the responsibility of the agents to minimize “lapses” in the policies they sell. A “lapse” occurs when the client discontinues payment of premiums towards an insurance contract before the contract permits.

It is the agency department that affords the greatest flexibility to firm management when it seeks to establish a competitive advantage through differentiation and productivity². Management decides what kind of agents to hire, how much training they should get, how to train them, where to spread its agents and how to identify and retain / promote its star performers. The agency department is responsible for the flow of new money streams to the organization as well as for maintaining the “going concern” status. It is also the largest cost item that can actively be managed in the business plan of the insurance company. It is the quality of agents and their performance that is the most influential in determining a firm’s profitability in the insurance industry.

Details of the Phenomenon

Our story is about one of the largest insurance providers in the United Kingdom. This particular insurance provider, like others of similar sizes, consisted of a head-office with numerous branch offices spread across the country. This structure made it necessary that a strategic review of the firm examine the performance of the branches at the branch-level as a preliminary step. This examination of the different branches yielded detailed data about performance of the branches in getting new business including characteristics about the sales personnel, with the data about the sales personnel aggregated to the branch level. Analysis revealed that there were many branches whose performance was significantly below the average of all the branches while there were a few that were excellent and above average .

² Another way in which firms in the industry differentiate itself is through the pattern of ownership of the equity structure of the firm. However, this makes an impact only during exceptional events in the history of the firm rather than in the day-to-day activities and competitive advantage or competitive dynamics of the firm.

We prepared a histogram of the annual average sales productivity performance of each branch. From this distribution, we aggregated the branch level data into ten deciles. We found it useful to focus our attention on three of these groups that covered the entire range of branches. These groups represent the top 20%, the middle 20% and the bottom 20% of the frequency distribution, based on the annual average sales productivity performance of the various branches. This information is portrayed in Figure 2. All three groups showed an increase in productivity with respect to time, but the productivity of the group representing the top 20% of the branches seems to have increased significantly more than the productivity of the group representing the bottom 20%. To get a more accurate perspective, we decided to filter out the background growth by subtracting the growth rate of the average performers. This led us to normalize the above graph, and the resultant graph is shown below.

From our knowledge of the industry we know that management would have had a lot of freedom in the selection, training and retention of agents (sales persons) in order to generate new revenue. However, the reality was that these agency departments, belonging to the same insurance firm, were subject to the policies of the general managers at the headquarters which were the same for all branches. This leads to a paradox: though managers had very limited freedom to pursue policies different from those specified by the headquarters, yet there was dispersion in the performance of the different branches around the average performance level. With the objective of explaining this paradox, we will take a closer look at the agency department of firms in the insurance industry. We next describe the structure and activities of an agency department in a typical major firm in the insurance industry. This will give us a more comprehensive idea about the nature of resources that are employed by the agency departments of firms in the insurance industry, and how these resources are typically deployed and managed. Subsequently, we will represent the structure and the activities in a model of a stylized firm. Figure 4 points out which portions of the insurance firm would be the subjects of our study. The model of the insurance firm will include only the portions that fall within the marked boundary. By simulating the behavior of this stylized firm, we will attempt to explain why a dispersion occurs in the performance across the various branches, and how did this dispersion develop.

MODELLING THE FIRM

The role of the Agency

As mentioned above, we focus on the agency department of large firms in the insurance industry. Unless specifically mentioned otherwise, from now on firms will refer to the agency department of insurance industry firms. Firms sell policies to those who want to buy insurance. These policies (also called products) are of varying duration and provide the firm with premiums for the length of the life of the product, if they do not "lapse". The larger the product base (i.e. the inventory of live policies sold by the firm), the larger the cash flow and revenue to the insurance firm. The primary driver of the performance of an agent is the skill that he or she possesses. Sales are in a cycle of 3 stages. First, agents are recruited from the market as employees, to be part of the agent body that sells policies to prospective customers in the market. Firms always seek to hire more experienced agents from the market and to retain the better-performing agents (as they are economically more attractive for the firm). Second, accumulated policy sales of policies in force form the basis of the future revenue stream (as premiums). Policy sales and lapses are a function of the agents' skill level. Third, agents are compensated based on the sales made and lapses occurred in that particular year.

By joining a firm, agents increase the headcount of sales employees and add their sales skills to the skill pool of the firm. From time to time, some agents quit the firm and some are promoted. These decrease the headcount of sales employees and the aggregate skill pool of the firm. If agents quitting the firm have lower than average skill level, those promoted will have a higher than average skill level. It is thus a challenge to management to maintain and improve the skill level of their agent base. Agent compensation is very important. If agents perform above the performance level expected by the market (i.e. the average skill level prevalent in the market, which is assumed to be 3 years in the simulations), the resulting compensation is above market expectations. Lower than market standards performance means inferior compensation. In turn, compensation affects the quit rate of agents (which influences the lapse rate of new policies sold) as well as the attractiveness of the firm to new agents who are considering whether to join the firm.

Managers supervise these sales agents. These managers are responsible for recruiting and training the agents, besides monitoring their performance. Usually these managers are themselves former agents who have been promoted into this role. Promotion from within is an established industry practice. Managers at the branch level have to allocate their time amongst their various responsibilities to see that none of the necessary aspects are being

ignored. Simultaneously, they have to implement the growth targets that are set by the senior management in the headquarters – e.g. the headquarters may announce a rate of growth for the agencies that has to be met at by the manager of the different branches.

Model Development

The model was developed in three stages: data collection, formulation and validation. The field work during data collection was done with the help of a management consulting firm. In this stage, more than 60 interviews were undertaken by four mid-level consultants, involving around 40 managers as well as some ex-managers of the various branches and the corporate office of the insurance firm in question; many of the senior managers were interviewed more than once. These hour-long interviews were carried out in a semi-structured manner where they were asked about the execution of their responsibilities. The aim of the interviewers was to develop an understanding of the various policies, processes, process adjustments and informal targets that were active. Wherever possible, written data and internal studies were used to support and verify claims. Statistics about salesmen and their performance was a key part of this; the numerical data about salesmen was analyzed to reveal longitudinal trends. Interview content was probed to see which aspects of management were common to all and which were distinct. The quotes were very useful in clustering the branches according to differences in management practice and performance.

In the second stage, we developed a theory to explain the evolution of different branches, with the help of causal loop diagrams³. The variables and causal links from this analysis include the feedback processes that generate the dynamics of interest. Separate diagrams were created for each cluster of branches. These were merged to a unified framework so that a single set of feedback processes could generate the main trajectories of interest.

Subsequently, each causal link was converted to equations or graphs to form the model where the variables vary with time. Literatures in various relevant disciplines were consulted to justify the causal relationships. The model was further calibrated with the help of the available numerical data. In the last stage, three independent industry experts validated the behavior of the model by conducting their own experiments. Since these results conformed to their expectations, we assume that the link between the structure of the model and its field setting is valid. Further experiments were conducted by two industry experts who were on the

³ See Repenning & Sterman (2002) for precedents and Sterman (2000) for a description of the procedure.

research team. This model excludes the attempted turn-around efforts by managers when they became aware of their worsening position, as it is not the focal objective of this paper. A description of the core of the model follows whose overview is sketched in Figure 5.

The core of the firm consists of four sectors that address headcount, skill, productivity and compensation. The *headcount sector* is the collection of processes directly concerned with managing agent headcount, consisting of hiring, firing and promotions to grow the firm. Managers recruit agents from the market to be part of the agent body that sells policies to prospective customers. Firms seek to hire more experienced agents and retain the better-performing agents as they deliver more value. A fraction of the agents are always moving out through resignations and firings. Promotions are decided in-house and the rate depends on managerial vacancies, as the ratio of managers to agents is legally regulated. The number of agents and the overall rates of agents moving into or leaving the firm have an important impact on the dynamics of the skill pool of the agents.

The *skill sector* is about the management of agents' sales skills. For simplification, multiple dimensions of sales skill have been collapsed into one dimension, which is based on the years of sales experience possessed by an agent. Even though the measure of this skill is fairly intangible, it is one of the most important drivers of performance in the industry. The movement of agents into and out of the firm has a corresponding impact on the firm's skill pool. The higher the skill level of those quitting the firm, the greater is the depletion of the skill pool. It is thus a most important challenge to management to maintain and improve the skill level of their agent pool. The *productivity sector* highlights the productivity and turnover of the sales agents which adds to the product portfolio. The sales function provides the firm with premiums for the life of the product's length, if they do not lapse. Policy sales and lapses are a function of the agents' skill level. The larger the product base which is defined as the inventory of live policies sold by the firm, the larger the cash flow and revenue to the insurance firm. We use skill level per agent in the firm as the key productivity and profitability indicator.

The *compensation sector* models the mechanics of fixed and variable compensation, or commission, for agents and managers. Agents are compensated based on the sales made and the lapses that occurred in a particular year. It specifies how the level of skills, the lapse rate and the quit rate of the agents affect compensation and, in turn, how the compensation level

affects the same three variables. If agents perform above the performance level expected by the market, the resulting compensation is above market expectations. A performance lower than market standards of performance, brings inferior compensation. Thus, the compensation affects the quit rate of agents, which influences the lapse rate of new policies sold, as well as the attractiveness of the firm to new agents who are considering whether to join the firm. Sectors addressing the comparison of performance and managers' reaction to the comparison are outside the direct scope of the model; nevertheless these issues have been addressed after the next section.

SIMULATION: EXPERIMENT DESIGN, RESULTS AND ANALYSES

There will be two experiments. Each of the experiments will show the trajectory of the time-path of two firms (Alpha and Beta) having identical resource structure and policies regarding strategic positioning but differing slightly in one of the policies that represent the operational role of middle management. Thus, any differential performance of the firms in an experiment will be the result of a difference in such a policy. The simulations progressively add partial models to the basic core structure detailed above. Its advantage is that the link between structure and behavior is easier to grasp when the structure is developed in stages, with access to intermediate results (Morecroft, 1984, 1985; Sterman, 2000). The addition of structure through partial model creates new contexts, but otherwise the initial heterogeneity among the two firms would be maintained. Comparing the results of one experiment with another will show how this specific difference in policy and consequent resource interactions changes the magnitude of resource heterogeneity and differential performance over time, resulting in strategic consequences.

So far, the core model assumes that managers have infinite time. In reality, managers have to allocate their time amongst different responsibilities such as recruiting, coaching and administration. In accordance with the actual events of the industry, allocation to administration commences only some time after the simulation has started. In this case, managers must allocate 20% of their time to that activity while the time needed for the other two activities depend on the physical constraints implied by the chosen strategic position: i.e. to make up for those who leave, to meet growth targets set by the top management team, and to improve average firm productivity. However, the amount of time actually spent to train agents depends on the managers' *subjective beliefs about its efficacy*. It implies a situation where they are free to adjust their allocation of time in different circumstances. This intangible,

idiosyncratic but subtle adjustment is an example of the balancing activity that middle management is expected to perform. Since the precise allocation in this act of balance is likely to vary, it introduces heterogeneity in the policies followed. The activities of recruiting and coaching are detailed in the next section while the manner in which time is allocated between the two is explained after that.

Recruiting and Coaching

In a typical market for agents, one finds salespeople with different levels of experience ranging from greenhorns to stars. Usually, senior management decide s the profile of salespersons to be recruited for their firm, depending on the firm' strategic intent. The effort involved in recruiting a profile of experienced salespersons is , in a quantitative sense, similar to that involved in recruiting a profile of salespersons with little experience. In effecting the former profile, the recruiter would seek to determine if the experienced salesperson would be compatible with the organization from the point of view of organizational culture and work habits while in the latter, the recruiter would seek to determine the potential ability of the salesperson and whether that potential can be developed further. These attributes are intangibles and hence recruiting is not a responsibility that can be executed mechanically.

Even then, firms usually choose a profile dominated either by experienced salespersons or by inexperienced salespersons , avoiding a mixture. This is because of contrasting beliefs of management about the abilities of agents in general and the disadvantages in managing both kinds of profiles. We will delve further into the relevant beliefs and economics when we take up the implications of 'coaching'. Managers, who are in charge of overseeing agents, are typically in charge of recruiting. In keeping with the profile of recruits preferred, managers interview applicants, determine which applicants are best suited to their firm and to what extent they would cohere with their firm's culture. Then, they make offers to the suitable applicants, and if necessary, negotiate with them in order to persuade them to join the firm.

Quite a few managers in the industry are convinced that recruiting is the only way to add skills to their agent base. For them, sales skill is something innate; thus agents are incapable of systematically improving their sales skills. These managers believe that agents with inadequate skills will separate themselves from those with adequate skills in the course of time. Therefore, there is really no need to track the development of an agent's skills. In addition, the immediate return from hiring inexperienced agents is also greater. Others

believe that recruits with little experience can be coached to improve their sales performance over time. The strategy of recruiting inexperienced agents makes economic sense if they ultimately acquire skills that are superior to average market expectations. Such managers spend about 40% their time coaching agents. The structure denoting how agents gain experience and the impact of overall skills is shown in Figure 6. The Agent Skills Sector accounts for agent learning representing it by a flow of skill into the stock *Agent Sales' Skill*. Labeled as *Agent Coaching*, it is an aggregate indicator of the total skill being added to the skill pool of the entire sales force. *Agent Coaching* is the product of two quantities: the number of agents (*Agents*) and the *Agent Coaching Rate*. *Agent Coaching Rate* is the rate at which agents 'learn'.

For those who believe that agents can learn, the rate of coaching varies from pool to pool, implying differences in the rate at which different agents enhance their skills. Some factors that influence this value are the attitude of management, the age and experience profile of the agents, the quality of coaching, the coaching infrastructure and the expectation of the agents themselves. Different experiences and personal learning abilities give rise to differences in coaching rates. However, we simplify the model by assuming a uniform rate of coaching at approximately 1 equivalent year of experience per agent per year; implying that an agent gains this amount of experience for every year passed in the firm. The simple mechanism of agent coaching as presented here provides no additional levers for managers. If agents learn, then they gain a certain but fixed amount of experience with the passage of time – the rate of skill improvement can't be altered in the structure shown in Figure 6 when the amount of managerial attention is fixed

Time Allocation by Managers

This section specifies how managers specify their time allocation to meet responsibilities. There are three steps involved: time *needed* for managerial responsibilities, time *supplied* by managers (or available time) and the actual allocation procedure. Although managers' time is a tangible resource, the allocation of that time to various tasks and the process driving the allocations can be quite intangible. The bottom third of Figure 7, below the shaded box, depicts the structure of managerial responsibilities. Recruiting and coaching take up most managerial time. *Total Time Needed* is a sum of the components of *Time Required for Each Activity*, which is a matrix type variable. The two components of the matrix are *Time Required for Each Activity (Recruiting)* and *Time Required for Each Activity (Coaching)* and

are derived from the time required for each activity which is calculated in *Indicated Recruiting Time* and *Indicated Coaching Time*.

Indicated Recruiting Time is a product of the number of recruits targeted (*Target Number of Recruits*) and the amount of time needed to recruit one average agent (*Days Needed per Recruit*). Apart from the time spent in interviewing candidates who finally accept the offer of employment made by the firm to join, this parameter also takes into account the time spent in interviewing to weed out unsuitable and undesirable candidates and the eventual time lost by managers in making persuasive offers to attractive prospective agents who decline. *Indicated Coaching Time* is a product of the number of agents to be coached (*Agents*) and the amount of time ideally required for coaching the average agent (*Target Days of Coaching per Agent*). It accounts for the time required for classroom coaching that is particularly vital for fresh recruits and the amount of 'face-time' that every agent needs to spend with his manager to cover monitoring of the quality of sales, short-term performance and long-term progress. Some time is spent in motivating agents to aspire for higher sales.

The top third of Figure 7 above the shaded box denotes the structure of the time available for managers in the firm. Total managerial time available (*Managerial Time Available*), just above the shaded box, is a product of three factors: the number of *Managers*, the *Relative Efficiency of Managers* and the number of days that a manager works in a year (*Working Days per Year per Manager*). The number of *Managers* is supplied by the Manager Manpower Sector while *Working Days per Year per Manager* is both an indication of the capacity of managers' work time and a converter of time from years to days (because it has the units of days per year). *Relative Efficiency of Managers* is a function of the *Effect of Relative Manager Skill on Efficiency* that indicates how the relative efficiency of a manager changes with varying values of relative managerial skills.

The independent variable in *Effect of Relative Manager Skill on Efficiency* is constituted from the ratio of two factors: *Skill per Manager* and *Standard Manager Skill*. The latter, from the Manager Manpower Sector, indicates the skill level of managers in the firm. The former, analogous to *Standard Agent Skill*, is the expected average skill of managers, in tune with industry standards. It is measured in years of equivalent experience. The lower the value of *Skill per Manager* below the industry standard of *Standard Manager Skill*, more dramatic is the drop in *Relative Efficiency of Managers*. However, the increase from higher skills

happens to be negligible. This reflects the handicap of inexperienced managers while the nature of the managers' tasks is such that experienced managers cannot economize significantly on their considerable experience.

The central portion of Figure 7 (the shaded box) illustrates the structure allocating available time for the necessary managerial responsibilities. It is achieved in three steps. In the first step, the *Shortfall* (if any) between *Total Time Needed* and *Managerial Time Available* is calculated. The minimum value, 0, indicates no shortfall; otherwise it indicates the absolute amount of shortage (in days per year) that needs to be compromised through a re-allocation of the suggested time for the principal activities. In the second step, the absolute amount of shortfall is separated into two parts (*Shortfall of Each Activity*). It is a 2-component matrix variable. Each part corresponds to the absolute amount of time that must be taken away from the ideal amount of time desired for each activity (*Time Required of Each Activity*). This calculation is a function of four variables and a parameter. We have already met three: *Shortfall of Each Activity*, *Shortfall* and *Managerial Time Available*. The fourth variable, *Ratio*, is the ratio between *Indicated Recruiting Time* and *Indicated Coaching Time*. The parameter, *Weight to Recruiting*, is very important because it is the essence of how managers' time is allocated. It is the only choice realistically available to the manager in determining how he spends his time between the various responsibilities.

In a proportional allocation policy, one may allocate x% of the time for recruiting and the remaining (100-x) % for coaching. This kind of a-priori assignment is reasonable at the planning stage, but it was seen from our interviews that managers don't stick to this kind of allocation. It is more accurate to describe the time allocation policy as a policy of 'priorities'. We cite three extreme cases of different priorities to illustrate its meaning. The first – "equal priority" – assigns a value of 0.5 for *Weight to Recruiting*. This does not mean that both tasks will get equal share of the time but that each will get its fair share. If recruiting requires 20% of managerial time, that share of time (and not 50%) will be put aside for recruiting. Equal priority comes into play when compromises have to be made regarding the allocation of time. If available time falls short by 10%, both recruiting time and coaching time are cut by 10% to 18% and 72% of the original time spent on these two activities.

The second example is full priority to recruiting: *Weight to Recruiting* has a value of 1. Here the time allotted for coaching is a residual from the total time available. If the total time

available is just sufficient for the recruiting workload or even insufficient, then there is no time left for coaching. The third example is symmetrical – full priority to coaching: *Weight to Recruiting* has a value of 0. Here the allocation is just the reverse. These extreme priorities capture different orientations about management which are tangible, credible postures that can be adhered to and communicated about. Equal priority approach suggests equal importance to both the tasks; management goes in for ‘across the board’ cuts when faced with a shortage of relevant resources. By contrast, the other two approaches are clearly biased towards one of the two kinds of activity. It shows the orientation of the balancing capability when faced with a shortage of relevant resources. The different priorities are not different policies but are different ways of implementing a balance in the broad time allocation policy. However, these differences may be responsible for generating differential performance across firms, under certain patterns of resource interactions.

In the third step, the absolute amount of time to be compromised from *Time Required of Each Activity* is used to calculate the fraction of the full amount of time that can actually be dedicated to the activity, given the time required, the time available and the priority to the different tasks. The relative amount of time that must be compromised is in the matrix *Share of Time Allowed for Each Activity*. We refer to the elements of this matrix as *Share of Time Allowed for Recruiting* and *Share of Time Allowed for Coaching*. This fraction is conveyed to the Headcount Sector and the Skill Sector, where the amount of recruiting and coaching are scaled down as per the availability and allocation of time, in a multiplicative fashion. When there is no shortage of time, both the elements of this matrix take the value of one.

Simulation 1: The Dynamics of Preferential Time Allocation

The objective of this simulation is to bring out the consequences of the differences in time allocation. Initially, when the administrative requirement is absent, there is enough time for the responsibilities of recruiting and coaching. As mentioned before, the two firms – Alpha and Beta – both have 100 agents each at the start of the simulation and 300 equivalent years of experience in sales skills (*Agent Sales Skills*) implying an initial average value of *Skill per Agent* of 3 equivalent years of experience per agent. *Standard Agent Skill at Hire*, *Relative Skill of Quits* and *Relative Skill of Promotions* are all set to 3 equivalent years of experience, which is the average level of the skills in the market. (*Standard*) *Agent Quit Rate* is set at 0.20 per year while *Agents Promoted* is set at 0.025 per year. *Standard Manager Skill* is set at 4 years of equivalent managerial experience per manager, which is the same as the initial value

of the stock *Manager Skills*. Managers are assumed to be working 250 days a year; it is the value assigned to *Working Days per Year per Manager*. The recruiting workload (*Days Needed per Recruit*) is set at 4 days per recruit while the coaching workload (*Target Days of Coaching per Agent*) is set at 21 working days per agent. These assumed values are within the range prevalent in the studied firms.

These conditions render the issue of priority irrelevant. Performance of both firms adheres to equilibrium expectations. In Figure 8, the flat line the chart for *Skill per Agent* indicate adherence to steady state. This idyllic situation shows no impact of the heterogeneity that exists due to a difference in priorities, towards generating differential performance. 5 years after the simulation commences, we propose a reduction of 20% in the time available to managers to account for the extra time required to meet regulatory standards. The consequence of this change is that there is now inadequate time for managers to execute the entire extent of their other responsibilities, as the time required to verify the regulatory standards is legally binding. Managers now have to decide to what extent they will compromise. In this context, the relevant initial heterogeneity gets revealed Whereas managers in Alpha prioritize recruiting (*Weight to Recruiting* is 1), managers in Beta prioritize coaching (*Weight to Recruiting* is 0). This is the only initial difference between the two firms in this simulation.

We stress that this heterogeneity is a difference at the operational level, not at the strategic level. Such heterogeneity between the two firms exists due to a difference in priorities, which in turn results from differences in motivation and its implication for balance. This is congruent with self-determination theory (Deci & Ryan, 2000) which takes into account three main aspects in the tasks of recruiting and training: ability development vs. demonstration (Nicholls, 1984; Dweck, 1986), intangible vs. tangible rewards (Herzberg, 1982; Riedel et al, 1988) and extrinsic vs. intrinsic motivation (Thomas, 2000; Brief & Aldag, 1977). The nature of the heterogeneity proposed for this experiment has not had any impact on the initial status of the firms. In fact, senior management may expect that such differences are not capable of sustaining differential performance, absent any initial competitive advantage. We surmise that prioritizing coaching over recruiting indicates that one of the firms is going for quality of manpower while the other is going for quantity, and thus differences may well crop up, whether sustainable or not. The simulation should inform us about that sustainability.

In such circumstances, we need to account for both quantity and quality aspects of performance. Quantity is indicated by the products contributing to the revenue stream (*Net Product in Force*) and quality through *Skill per Agent*. *Net Product in Force* is a stock whose inflow is the product of three metrics: the number of agents engaged in selling policies (*Agents*), the productivity of those agents (*Sales Productivity*) and the lapse rate (*Lapse Rate*). Figure 8 has the trajectory of these two measures for a period of 20 years, which includes 15 years after the reduction in time and 5 years prior to it. Note the very similar profiles for the trajectories of the two firms in the left hand side. Though Beta initially takes the lead in sales, by the end of the period under study, Alpha reverses this difference and is set to increase it further. The maximum difference of about 5.3% occurs just before 10 years are completed in the changed environment. These trajectories indicate that perhaps the differences in this experiment can not create a large impact but this is not so if we examine a few more relevant variables.

The right hand side shows the trajectory of *Skill per Agent*. Whereas *Skill per Agent* decreases from 3 years to 2.35 for Alpha, it increases from 3 years to 5.39 for Beta. Basically, these trajectories show a sustained divergence in the performance of these two firms. It is in complete contrast to the left hand side which shows hardly any degree of difference between the trajectories. Figure 9 shows the corresponding trajectories of *Achieved Growth Rate* and *Agents* in the same 20-year period. There is a sharp drop in *Achieved Growth Rate* only for Beta. Just past the sixth year, it collapses to less than 4.2% but thereafter it recovers slowly to exceed 6.5% by the end of the twentieth year. The trajectories of *Agents* show a divergence, due to the impact of different growth rates achieved for the firms, compounded over time. Alpha accumulates to 1636 agents while Beta expands to 475 agents only. After the 5th year, when the reduction in managerial time takes place, the number of agents added on for Alpha is about 5.2 times that of Beta. The difference in the trajectories in the figures illustrates the impact of the different priorities chosen by each firm, under the given conditions of scarcity.

Alpha, where recruiting was the priority, achieved the planned growth target, but at the expense of their coaching responsibilities. Due to this negligence, the level of their agents' skill pool dropped. Beta's priority to coaching saw the fulfillment of its coaching tasks at the expense of recruiting. It was able to increase the level of their agents' skill pool. Let us take a closer look at the dynamic balance around the stocks called *Agents* and *Agents' Sales Skills* to investigate the precise reasons for the demonstrated divergence. In both cases, growth occurs in a dynamic equilibrium for the first five years. Even though there are different priorities,

there is no impact in that period because of the lack of pressure on the allocation of the scarce resource, managerial time. When the sharp reduction in time takes place, it has an immediate impact as it brings into play the difference in the weights between the two firms, in the parameter *Weight to Recruiting* which is the important constituent of the policy of time allocation for management and has a key role in deciding the values of *Share of Time Allowed for Recruiting* and *Share of Time Allowed for Coaching*.

Alpha responds to the shortfall in time by curbing coaching, which decreases the *Share of Time Allowed for Coaching* to a value less than 1. The stock *Agents' Sales Skill* has as one of its sources of skill, the amount of learning put in by agents (*Agent Coaching*), a product of *Agents* and *Agent Coaching Rate*. However, *Agent Coaching* is also a product of *Share of Time Allowed for Coaching*. When *Share of Time Allowed for Coaching* drops below 1, the amount of skill entering *Agents' Sales Skill* drops and its immediate impact is to decrease *Skill per Agent* below the value that perpetuates a stable situation. This decrease has three consequences. The first increases *Agent Quit Rate* and *Agents Promoted*, which sum to the number of agents leaving the sales force. So, more agents have to be hired to keep up with the planned growth rate. This in turn implies an increase in the recruitment load, and given the priority to recruiting, it aggravates the *Share of Time Allowed for Coaching*. The second consequence is to decrease *Agent Skill at Hire* due to a drop in compensation, which reduces *Added Skill at Hire* and further decreases the inflow of skills into the stock *Agents' Sales Skill* and thus *Skill per Agent*. The third effect, as a result of increased hiring, is to increase the coaching load – but due to the priority to hiring, this just results in an even lower value of *Share of Time Allowed for Coaching*. Thus, the three consequences reinforce each other to keep on lowering the values of *Share of Time Allowed for Coaching* and *Skill per Agent*.

Beta responds to the shortfall by curbing recruiting at the expense of coaching. This increases the recruiting component in *Shortfall of Each Activity* and therefore decreases the share of recruiting in *Share of Time Allowed for Each Activity*. The result is a decline in the number of replacements hired and a relative increase in the amount of skills flowing into *Agents' Sales Skill*. The immediate impact is that it increases *Skill per Agent* above the value that enables a stable situation. This has three consequences. The first is to decrease the *Agent Quit Rate* and *Agents Promoted*, which decrease the number of agents leaving the stock. Consequently the number of agents required to be hired to maintain the planned growth rate decreases. This implies a decrease in the recruitment load. Given Beta's coaching priority, it counteracts the

decline in the *Share of Time Allowed for Recruiting*. The second effect is to increase *Agent Skill at Hire*, which increases *Added Skill at Hire* and further increases the inflow of skills into *Agents' Sales Skill* and consequently *Skill per Agent*. The third consequence, as a result of decreased hiring is to decrease the coaching load – but due to the coaching priority and higher *Skill per Agent*, this just results in a further increase in *Skill per Agent*. Despite the counter consequence of the first effect, the overall impact is increased *Skill per Agent*.

In both firms growth continues to take place – but not in equilibrium, since the dynamic balance has been upset in different ways. The compounded impact results in different profiles of *Achieved Growth Rate* and *Agents*. We have succeeded in achieving the objective outlined at the commencement of this experiment – which was to show that a difference in balancing time allocations can generate differential performance, even dramatically so.

Simulation 2: Managerial Attitude to Growth

So far, in the model above, we have assumed that managers strive to plan for growth at an unambiguous, universal target rate. Interviews with industry experts confirm that such targets are set by senior management in the corporate office. However, given the results above, this is unlikely, since performance feedback influences goal setting (Latham & Locke, 1991). After a few years of regularly failing to meet target, only a few managers were likely to remain determined to reach target next year. These managers were unaffected by past performance, due to reasons such as conscientiousness (Barrick et al, 1993) and belief in self-efficacy (Wofford et al, 1992; Locke & Latham, 1990). Perhaps inadvertently, others adapted their aspiration levels (Wright et al, 1995), for reasons such as the attribution of their failure to factors beyond their control. They would see the target as unrealistic, which does not take into account the specific context that they have created at the branch level.

Once set, middle management (with direct responsibility for functions like recruiting and coaching) is evaluated against its ability to achieve the target. Grappling with local issues and imbalances, managers at this level bring into play an element of compromise / balance – they implement growth in their own way by varying the actual value of the growth target they pursue. This change is likely to be intangible, ambiguous or even opaque to senior management because, when presented with a *fait accompli*, it would be difficult for them to determine whether failure to achieve the requisite growth rate was due to external circumstances beyond one's control or purely due to timid planning. Thus, differences arising

from such balancing may persist, even while broad claims may be made that no such differences exist.

Figure 10 represents the structure of the growth-rate implementation process. One key to it is *Achieved Growth Rate*, a tangible measure of the instantaneous growth rate just achieved. It is simply the net increase in agents divided by the existing agents. This instantaneous rate is likely to fluctuate in the short-term. So, the perception of the growth rate is likely to be anchored in the existing value of *Perceived Growth Rate* but would also be influenced by the recently achieved growth (*Achieved Growth Rate*) in a continuous manner. Thus *Perceived Growth Rate* is an accumulation updated regularly through *Change in Perceived Growth Rate*. The magnitude of *Change in Perceived Growth Rate* is proportional to the difference between the current perception and the just-achieved growth rate (*Achieved Growth Rate*). The speed at which this difference adjusts the stock is determined by a time constant (*Time Constant 1*), related to how much time it takes for management to effectively absorb the change coming through. The initial value of *Perceived Growth Rate* is set to the *Sales Growth Target* chosen by senior management.

For a variety of reasons, managers may not be able to reach the set target for growth in a particular year. In fact, they may consistently under-achieve this target that is set for them. For example, in our last set of experiments, management tried to achieve the set growth target but those who prioritize coaching were not able to. In many cases, senior management will accept the reasons given for non-achievement and not punish significantly for missing the set target. However, it is the reaction of the managers unable to meet the target that interests us. Managers who are not idealistic about achieving high standards would change their target away, though slowly, from the originally value. The actual target rate in use is represented by *De-facto Growth Target*. This is the other key to the intangible adjustment process as these managers allow *Perceived Growth Rate* to influence *De-facto Growth Target*.

Initially, they expect to achieve the set target, but after just a few years, their effective target is dictated by their past feats rather than their supposed ideal target – e.g. if managers achieve, say historically 10% growth instead of the planned 15%, they scale down their expectations to grow at, say, 12% for the forthcoming year. The process of adjusting the tension between *Perceived Growth Rate* and *De-facto Growth Target* is done through an adjustment factor that depends on the ratio of the two it is depicted by *Adjustment Factor for*

Change in Target. The manner in which *De-facto Growth Target* is influenced by this adjustment factor is similar to the process where *Achieved Growth Rate* smoothes *Perceived Growth Rate*. Following an analogous structure, *De-facto Growth Target* is updated regularly through *Change in Target*. The magnitude of the flow is proportional to the adjustment factor and a *Time Constant 2* that is directly related to how much time it takes for management to effectively adapt their expectations. Idealistic managers may also underachieve year after year but, in contrast, still plan for the year ahead based on the desired growth rate, ignoring their own historic performance. This context means that *De-facto Growth Target* is initialized with the value of *Sales Growth Target*, set by senior management and remains unchanged, irrespective of recent performance. There is effectively no link between *Perceived Growth Rate* and *De-facto Growth Target*.

Similar to the last experiment, there are two firms whose priorities contrast in recruiting and coaching. Here, however, the managers of both firms have a realistic attitude to the growth target. The parameter *Weight to Sales Growth Target* serves as a switch between the heterogeneous attitudes towards the implementation of the growth target. It is the difference between the last simulation and this one – highlighting another aspect in the implementation of balancing capabilities. Alpha-x and Beta-x have a value of 0 for this parameter which represents the case with adaptive expectations (realistic attitude) while Alpha and Beta from the previous simulation had a structure equivalent to the value of 1 – the case with adaptive expectations (realistic attitude). *Time Constant 1* is set to 0.2 year while *Time Constant 2* is set to 4 years. Both *Perceived Growth Rate* and *De-facto Growth Target* are initialized to *Sales Growth Target*, which is set at 15% per annum. As in the last test, the heterogeneity between Alpha-x and Beta-x does not have any impact on the initial status of the firms. Senior management may be unaware of the difference in context that is proposed in this simulation. Even if they were aware, they may expect that such differences are not capable of sustaining differential performance. As before, we surmise that prioritizing coaching over recruiting indicates that one of the firms is going for quality of manpower while the other is going for quantity, and thus differences may well crop up, whether sustainable or not.

Figure 11 presents the trajectory of *Net Products in Force* and *Skill per Agent* for a period of 20 years, under conditions similar to the previous experiment. The maximum difference for *Net Product Sales in Force* is quite small but Alpha-x is ahead towards the end of the time frame. The proximity of the two trajectories indicates the subtle nature of the differences

between the firms in this experiment, in attitudes and in performance – particularly when examined from an aggregate level typical of the top management team. The right hand figure shows that, *Skill per Agent* falls from 3 years to 2.26 years for Alpha-x while Beta-x shows an increase in *Skill per Agent* from 3 to 9.75 years. Like the previous experiment there is a sustained divergence in this aspect of firm performance.

Figure 12 displays the trajectories of *Achieved Growth Rate* and *Agents*. It is similar to the divergence we saw in Figure 9. Alpha-x grows from 100 to 1744 agents while Beta-x grows to only 244 agents. Corresponding to the dramatically slower growth for Beta, Beta-x shows a similar arrest after the fifth year when the reduction in managerial time is introduced. Its overall growth rate over 20 years is only 4.56% compared to the general rate of 15.37% for Alpha-x. In fact, in the last 12 years Beta-x grows at 0.017% - it is virtually stagnant. The similarity in the trajectories of Alpha to Alpha-x (and Beta to Beta-x) indicates that the analysis and explanation for the divergence observed between Alpha-x and Beta-x is similar. Managers in Alpha-x prioritize recruiting when there is a reduction in available managerial time. The fact that they achieve their growth target (in terms of agents) leads them to aim for somewhat larger targets. This accounts for the observed growth rate going beyond the official 15%; done at the expense of coaching, there is a drop in *Skill per Agent*. Conversely, Beta-x prioritizes coaching to raise *Skill per Agent*, but at a huge concession to recruiting targets.

DISCUSSION & CONCLUSION

Two broad implications from the above experiments are obvious. First, the non-divergence in the first five years of Figures 8, 9, 11 and 12 shows that a difference in priorities does not automatically lead to a performance differential. Rather, it is just a contributor to the divergence which comes about when the context is appropriate. There are other resources whose interactions with the implementation of balancing allocations determine the degree of divergence.

Second, the divergence in the above figures originates from the exogenous regulatory change as the Alpha types spend a greater-than-appropriate share of their time recruiting. Though the headcount target is met, neglect of training causes a cumulative weakening of the skill pool. Alpha's trajectories are very similar to Alpha-x because its 'realistic' managers do not have anything to compromise about as Alphas meet their growth target anyway. Type Beta spend more of their time training and accumulate superior productivity with obvious productivity

implications, but the headcount targets are not met; the actual growth rates fall well short of what was intended. Trajectories of Beta-x show a smaller sales-force size and actual rate of growth but larger in productivity compared to Beta as the managers here have room to give in on the growth target. This explains the wider divergence in the second simulation. These outcomes provide evidence that the nature of interactions emerging from the balancing act is a source of differential performance and competitive advantage.

There is negligible separation in Figures 8 and 11 which show an aggregate financial measure combining productivity and absolute size. For the simulation results here, these two are negatively correlated; so the critical information about the divergence gets suppressed. Examining firm performance at such an aggregated level does not help us appreciate the significant differences that arise due to the heterogeneity in the implementation of balancing. This is a very interesting outcome because it shows the deviation, from the compromise made to pursue a personal target, would be ambiguous, if not completely opaque to the top management team. It would be difficult for them to determine whether failure to achieve the requisite growth rate was due to external circumstances beyond one's control or purely due to timid planning, when presented with a *fait accompli*. Thus, differences arising from the heterogeneity in balancing may persist, even while broad claims may be made that no such differences exist. Considering the performance of the real-life firm in question, the masking of the differences here shows how middle management effectively brings about a significant deviation from the intended strategic positioning.

Since the mechanisms of the results are very similar in the two simulations, one might conclude that while the strategy for executing the balance in recruiting vs. coaching makes a clear difference to the firms' performance, the strategy for the second kind of balancing (adjusting the de-facto growth target) appears to have no significant impact. The hypothesis is that if heterogeneity in this balancing strategy has a negligible impact, then the performance gap *within* each firm type should be negligible. Comparing the left hand sides of Figures 9 and 12, the hypothesis seems verified by the trajectories of the achieved growth rate for Alpha and Alpha-x. However, contrasting Beta and Beta-x reveals a clearly different story. After the exogenous change, the growth rate of Beta-x continues to decline while that of Beta starts recovering. The eventual impact of this difference shows up if one compares the Beta firms in the first set of figures with the second set, e.g. right hand sides of Figures 9 and 12

The heterogeneity in balancing between the Beta firms does have an eventual differential impact on the final size and quality of agents, while the Alphas are busy recruiting an ever lower quality of agents. The key success factors show no impact until the slack in managerial time is used up. Further, the heterogeneity in the second kind of balancing has a small impact among the Alphas as they are committed to meeting recruiting targets, even in circumstances averse to hiring. The impact on the Betas is larger as they do not prioritize hiring; this permits greater deviations from meeting already set targets when they think the situation is right for compromising on the tangible and quantitative aspects of growth. The fact that the same kind and same degree of heterogeneity has differing impacts with the Alphas and the Betas implies that the efficacy of a key success factor varies with the context, particularly from a static or equilibrium point of view. The increasing performance differential among the pairs shows that it also varies with time. These results suggest the insight that the efficacy of key success factors changes with respect to time and context.

A review of the seeming lack of reaction by the top and middle management teams is justified, as the actual industry events parallel the simulation results. We have used extreme values to emphasize differences, but the important similarity to the empirical events is that managers, on eventually understanding the increasing lag in skills or seeing themselves fall behind in size, did *not* change their practices. Interviews with senior managers and industry experts revealed this was due to strong cognitive orientations. Apart from taking advantage of the delayed emergence and intangible nature of their poor performance, managers in the Alpha firms rationalized away their falling behind through ambiguous interpretations about the influence and state of the environment on their firms, as they believed coaching was useless or were strongly motivated to attain the numbers that could be easily verified or enjoyed recruiting much more than training. In contrast, the managers of the Beta firms, whether or not they understood the eventual impact of training on the industry, believed in the efficacy of training to create a better future for their agents and themselves, or enjoyed training more than recruiting. A similar difference in attitude prevails when one contrasts Alpha-x with Alpha, or Beta-x with Beta, by their ingrained tendency to compromise on future targets when faced with repeated failures in their past endeavors.

The cognitive orientations describe above turn out to be significant barriers to flexibility (Bukszar Jr., 1999), and they lead to strategic consequences (Miller, 2002). Even for the minority of managers who were alert to the changing situation, it would be difficult to change

their behavior dramatically in a short period of time. We account for at least five reasons to explain such behavior.

First, it is well-known that it is hard to drop dispositional attributes like biases, likes and dislikes which have been based on self-justifying assumptions and grow new ones overnight. Second is the potential unfavorable reaction from their colleagues and partners when they would perceive a change in identity or a deviation from accepted norms. Third, even if such managers were to successfully change their habits overnight, it would require significant time to work through the depleted skill pool and build it up back again. This is because of the inertial nature of the pool of agents and their skills; while it is easy to change particular individuals, changing the properties of a group with accumulated skills is a different story. Fourth, shifting the emphasis from recruiting to training would cause a clear drop in the growth rates that were being achieved. It is doubtful whether such a drop would be accepted in a transparent manner by the top management team, except in a crisis. Fifth, the trajectories of measures for product sales or product portfolio size, which are aggregate balance sheet measures of performance, reveal little and late to the top management team about the increasing discrepancy of skills and firm sizes, which are eventually of strategic importance. This prevented them from introducing different kinds of incentives; it is doubtful whether such incentives would have made an impact for the better, considering the resistance they would face about the legitimacy of new kinds of incentives. Apart from their legitimacy, it would take significant time to change behavior or weed out those with undesired attributes.

These factors make it all the more difficult to establish a true balance between actions that create immediate benefits such as recruiting and those that are vital but need prolonged investment before delivering results such as training. This significant management challenge is even steeper when there is considerable uncertainty about the impact of change in the external environment.

Conclusion

Models such as the one presented here are subject to hindsight bias because of retrospective accounts. A simplified model hinders extensive generalization; yet integrating more theories into a model produces results that are ever more difficult to interpret. Nevertheless, the model is open to extension – e.g. one could bring in the impact of the financial performance of the

investing arm of the insurance firm through the price of its policy premiums and examine the consequences on competitive interactions.

The main objective of the paper has been to recognize, introduce and develop the concept of balancing by middle management as a meta-capability⁴. Through the simulation of the model of the insurance firm, we have shown that, in apposite circumstances, the impact of this balancing meta-capability, in interacting with resources, resource constraints and resource linkages, is likely to create and perhaps go beyond, to increase differential performance even amongst firms that limit heterogeneities initially to this meta-capability. We also explained why these heterogeneities are likely to persist and therefore difficult to eradicate.

With respect to the RBV, we have discovered a first-order capability similar to dynamic capabilities, although it does not change existing zero-order capabilities (Winter, 2003) or create new ones. Let us call it dynamic balancing capabilities (DBC). Dynamic capabilities are assumed to provide an indication of the potential of the firm to be dynamic by changing capabilities from the evolutionary point of view, also known as a non-ergodic development feedback effect⁵; DBC complements them by adjusting the firm's capabilities to avoid ecological constraints encountered in the external environment and in the internal resource structure during the firm's time evolution, principally by redirecting productive services. This non-ergodic dynamic feedback effect tries to ensure that the firm continues to grow smoothly, thereby avoiding undesirable dynamic effects.

Of course, DBC could be refined to introduce the existence of another first-order capability – the ability to motivate capacity expansions of the various types of tangible and intangible resources present in the resource structure of the firm, in a timely manner, so that bottlenecks and capacity constraints do not hinder the dynamic of the firm. From the theory point of view, it would be interesting to study the interaction among these three first-order capabilities so as to get a better understanding of the dynamic properties of resources and capabilities.

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⁴ A meta-capability is a capability that dictates the application of other capabilities. Here the meta-capability of balancing dictates the allocation of ordinary capabilities like hiring and coaching to managerial time.

⁵ Non-ergodic development and non-ergodic dynamic feedbacks are discussed in Khalil (1997, 1998-9).

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