

# FRAMEWORKS FOR RESEARCH AND THEORY DEVELOPMENT IN ENTREPRENEURSHIP

G. Page West III, Wake Forest University, Box 7285 Reynolda Station, Winston-Salem, NC 27109-7285

## ABSTRACT

To develop a theory of entrepreneurship, some recommend the need for qualitative research while some recommend a shift to quantitative research. Dichotomizing between macro and micro domains relevant to entrepreneurship and comparing these to qualitative and quantitative research questions, new directions for theory building are revealed.

## INTRODUCTION

This paper focuses on two key issues which gravitate around the subject of theory development in entrepreneurship. First, there have been contradictory recommendations on future research methods and designs. Some have called for an emphasis on quantitative methods, and some have suggested the need for more qualitative research in order to develop better theory. The rationale underlying these contradictory recommendations suggests a belief in an "either-or" dichotomy between qualitative and quantitative research as a means of furthering a theory of entrepreneurship, a dichotomy which this paper argues is false.

Second, contradictory recommendations regarding research methods is indicative of lack of consensus on the substantive research questions requiring attention in the field in order to develop theory. This paper offers a view that research questions should be segmented into two domains: 1) issues involving the dynamics between the entrepreneurial firm and the competitive environment, and 2) issues involving the dynamics within the entrepreneurial firm. Viewing these as macro and micro issue sets, and placing them against qualitative and quantitative research design methods, yields a matrix of alternatives providing interesting and valuable possibilities for research direction and theory development.

## QUANTITATIVE-QUALITATIVE DICHOTOMY

Entrepreneurship today remains a field wherein we understand some of the gradations but lack an overarching theoretical paradigm which serves to guide future research and practice (Bygrave, 1989; Hisrich, 1988; Wortman, 1987). Research in the field has been viewed as consisting of simplistic descriptive studies (Bygrave, 1989; Low & MacMillan, 1988), using simple statistics (Vesper, 1988) in *a posteriori* analysis (Low & MacMillan, 1988), with few efforts directed at causal inference (Wortman, 1987). Thus, without a unifying set of constructs it is difficult to synthesize

the findings of many studies in a meaningful fashion. Complicated by variation in the unit of analysis in many studies (Gartner, 1989) and incomparable case selection (VanderWerf & Brush, 1989), individual studies expose different facets of entrepreneurship in a non-cumulative fashion (Campbell, 1991). Without an integrating view of the dimensional boundaries the result is often confusion regarding the true nature of the subject. Lumpkin & Dess (1996) acknowledge a lack of consensus on how to characterize entrepreneurship and on the level of analysis to which entrepreneurship research should be directed.

Contradictory recommendations have been made for future research efforts in order to make headway in developing theory. Some have called for experimental research and methods to establish causal inference (Low & MacMillan, 1988; Vesper, 1988), suggesting a shift toward quantitative research methods. At the same time, however, others call for renewed efforts within the qualitative research tradition to develop theory (Bygrave, 1989; Smith, Gannon, & Sapienza, 1989).

Generally one can distinguish between two research schools, which are often thought to compete with each other (Deshpande, 1983). The logical positivist/empiricist school (Reichardt & Cook, 1979) is consistent with quantitative analysis, and the orientation is toward testing and validation of theories, constructs, and relationships. The idealist/phenomenologist school (Reichardt & Cook, 1979) is consistent with qualitative methods, and is oriented toward discovery, understanding relationships and building theory. Because the field of entrepreneurship is viewed as being pre-paradigmatic, the need to understand contributions to theory building directs attention toward qualitative research. Reichardt and Cook (1979) characterize the qualitative research paradigm on a number of related dimensions: concerned with behavior from the actor's frame or reference; exploratory, expansionist, inductive; process-oriented, and holistic, synthetic in nature. It suggests deep observations over time, going beyond static snapshots at a point in time.

A close examination of the characteristics of the qualitative paradigm reveals that entrepreneurship research efforts to date have only partially fulfilled its tenets. Criticisms leveled at entrepreneurship research have to do with mainly descriptive, isolated case study, static frames of reference which have not fostered cumulative theory building. Where entrepreneurship is viewed as a dynamic over time involving either the creation of disequilibrium in a market (Schumpeter,

1934) or the taking advantage of disequilibrium (Kirzner, 1973), relatively static vignettes may tend to miss and/or misrepresent critical aspects. Slicing up and viewing new ventures in time periods convenient for research may result in a distortion of the reality of the object of study.

Hence there is a call for more experimental, causal-oriented studies, and large database correlational research. But quantitative methods of testing and verification do not contribute to the kind of understanding which leads to theory building in the first place (Bacharach, 1989; Deshpande, 1983). Viewing organizations in the framework of ungrounded abstractions will also distort the reality of the objective of study (Mintzberg, 1979). For example, what constructs within an overall theoretical framework of entrepreneurship command our attention, and what are the relationships and interactions between constructs? What relationships or interactions should be tested? With definitions of entrepreneurship itself still variable (Bygrave, 1989; Lumpkin & Dess, 1996; Wortman, 1987), how will measures be operationalized and with what validity and reliability? What is an appropriate level of analysis in entrepreneurship research - the individual, the top management team, or the firm (Lumpkin & Dess, 1996)? These questions are fundamental to a theoretical perspective and do not lend themselves to quantitative methods for answers. While methodologically quantitative analysis is designed to test alternatives to the null hypothesis, the advent of analytical technology and the availability of large databases allow for increases in statistical power such that rejection of the null hypotheses are most often found and reported. Lacking a grand theory (Bacharach, 1989) of entrepreneurship, an additional danger of an emphasis on quantitative research is that the constructs used and relationships tested are those developed or borrowed from other disciplines and other theoretical paradigms. If emphasized, entrepreneurship research as a body of work may be nothing more than an amalgamation of perspectives and ideas from many sources, versus an internally consistent system of constructs and relationships developed from within.

### MACRO-MICRO DICHOTOMY

To make progress the field must go beyond a simple qualitative/quantitative dichotomized view of research methods. The identification of critical questions in the field overcomes a method orientation toward conducting research and focuses on a problem orientation (Campbell, 1991).

Lumpkin and Dess (1996) propose two domains to help define the questions and the research agenda for the field, by differentiating between the act of entrepreneurship and entrepreneurial orientation. They equate the act of entrepreneurship with new entry, which explains what

happens by entering markets with new products or services; entrepreneurial orientation describes how new entry is undertaken, and is concerned with the propensity of the entrepreneurial entity to act on market opportunities (Lumpkin & Dess, 1996). Their description of entrepreneurial orientation is attractive in part because it pulls together into some sort of supra-construct a number of ideas and concepts highlighted in previous research. On the other hand, the concept of entrepreneurial orientation is presented as a firm level construct in which even the "individual entrepreneur is regarded as a firm" (Lumpkin & Dess, 1996: 138). This is in contrast to a significant body of research that has identified key process differences and changing dynamics that exist as firms and their management teams grow beyond the single individual (Kazanjian, 1988; West & Meyer, Forthcoming). Furthermore, the separation of orientation from the act of entrepreneurship would seem to overlook a very dynamic connection which exists between how an entrepreneur or team views opportunity and how that opportunity is pursued (West & Meyer, 1996).

As an alternative formulation, this paper suggests that a different set of domains might be more useful in defining questions for a research agenda for entrepreneurship. These include: 1) the dynamic relationship between the entrepreneurial firm and its external environment, and 2) the dynamics within the entrepreneurial firm's internal environment. These domains might be viewed as macro and micro orientations, respectively. Penrose defines the productive opportunities for entrepreneurial firms as "interstices," a boundary between economic conditions and the "unusual ability, original ideas, and considerable versatility" of "prospective entrepreneurs" (1959: 222). Macro elements refer to these interstices, the relationships of prospective entrepreneurs to the environment and the economy which lead to the pursuit of opportunities. Van de Ven (1992) suggests a macro perspective is required to examine many questions involving the role of entrepreneurship. On the other hand, the micro elements of entrepreneurship are those factors, conditions, and processes within entrepreneurial firms which lead to success or failure. Thus Low and MacMillan (1988) describe organizational births as the result of macro factors, while organizational deaths result from micro factors.

Two advantages accrue from an agenda which considers macro and micro aspects of entrepreneurship. First, as defined above, both domains focus on dynamic factors. Entrepreneurship is an act of becoming as entrepreneurs operate with intentions through time (Bird, 1992) and "undertake time-dependent sequences of activities and events" (Van de Ven, 1992: 6). Entrepreneurship involves an ongoing dynamic of time and place, and research on entrepreneurial activity both externally and internally should

center on the evolving set of circumstances which entrepreneurs and their firms confront in each domain. Second, any problem of level of analysis for entrepreneurial activity is avoided. Individual entrepreneurs and founders may be subjects of study in either macro or micro domains just as easily as management teams or entire firms. More specifically, the problems associated with transitions from management by an individual such as the founder CEO to management by a team (Meyer & Dean, 1990) represent one central question in the micro domain.

The questions resulting from a focus in the macro domain represent a different research agenda from the questions resulting from a focus in the micro domain. Much research has been devoted to micro issues addressing the second agenda, such as that dealing with entrepreneurial characteristics, leadership, vision, and top management team dynamics. Macro factors such as equilibrium forces, population ecology, inter-firm flows of personnel and technology, barriers and gateways to entry, and opportunity perception represent a different set of questions. A convenient means of evaluating dimensions of entrepreneurship research, then, is to dichotomize both macro and micro dimensions against the qualitative and quantitative paradigms in a 2x2 matrix (Table 1).

The bulk of entrepreneurship research lies in quadrant 4 of the matrix, research that has quantitatively evaluated the micro factors contributing to success or failure of firms. Descriptive studies examining the psychological and demographic characteristics of entrepreneurs generally fall into quadrant 4 (although some which correlate characteristics with formations may legitimately claim to fall in quadrant 2). Such research has been generally termed the "traits" approach. Studies of the relationships between performance dimensions and top management team

dimensions such as heterogeneity (Bantel & Jackson, 1989) are also found here, as is life cycle stage research (Kazanjian, 1988).

More recently, researchers have focused on quadrant 3's qualitative view of micro factors in an attempt to push beyond the merely descriptive. For instance, Eisenhardt (1989) has examined the process of decision-making in "high-velocity" environments, through in-depth on-site observation in a limited number of high tech companies. Meyer and Dean (1990) develop the "executive limit" scenario describing the crisis which founder entrepreneurial teams meet as they attempt to make the transition to growth stage development.

Interest in quadrant 2 research has surfaced. New venture creation can be viewed from the perspective of the supply of and demand for entrepreneurs. Disequilibrium can be "pushed" by one type of entrepreneur, or it can "pull" another type toward equilibrating behavior. This "rates" approach includes study of differences in business formations based upon geography, entry barriers and gateway conditions, and population ecology considerations (Dean, 1992). These studies provide an informative view as to gross trends and relationships. But since many research designs have been correlational in nature, in many instances they do not provide an enhanced view of the reasons why firms start up, or why they take the form and actions they do.

Greater understanding of the reasons why firms form necessitates a focus of effort in quadrant 1 of the research matrix. Here research might identify the attributes of disequilibrium market conditions to which prospective entrepreneurs are attentive. Better understanding of opportunity recognition and the contextual interpretation of the external environment by individuals or teams within entrepreneurial firms may reveal why certain trends are observed in quadrant 2 research. Many of the research questions in quadrant 1 would thus seem to revolve around

**TABLE 1 Entrepreneurship Research Matrix**

	QUALITATIVE RESEARCH	QUANTITATIVE RESEARCH
<b>MACRO FACTORS</b>	<b>Quadrant 1</b> Disequilibrium - attributes, threshold conditions Uncertainty, contextual interpretations Opportunity perception Information acquisition & use	<b>Quadrant 2</b> Rates - geography, societies, barriers to entry, gateways to entry Population ecology Strategy
<b>MICRO FACTORS</b>	<b>Quadrant 3</b> Decision-making process Repeat entrepreneurs Liabilities of newness Vision	<b>Quadrant 4</b> Traits - characteristics, demographics Top management team dynamics Leadership Life cycle stages

issues of how entrepreneurs confront uncertainty (Knight, 1921) or acquire and use information about the external environment (Cooper, Folta, & Woo, 1995; West & Meyer, Forthcoming).

A grounded, on-site macro-oriented investigation of new entry is the least explored sector of research. Questions already posed correlationally in quadrant 2 might successfully be explored qualitatively in quadrant 1. How do entrepreneurs view barriers to entry? What constitute gateway conditions? How do entrepreneurs view the incumbent organizational inertia which prevents larger existing firms (and often those from which entrepreneurs come) from pursuing the interstices? What information and information processes differentiate those who are successful in starting up from those who are not?

Qualitative research in quadrant 1 also offers a useful means of enhancing and extending current understanding through a focus on the fundamental macro dynamics of disequilibrium and sensitive dependence on initial conditions (chaos). It will provide some understanding of the basic attributes of disequilibria as entrepreneurs interpret them, and how such attributes become evident to entrepreneurs in the macro-environment. Threshold levels of disequilibria conditions which finally prompt individuals to undertake entrepreneurial endeavors might be identified. Do entrepreneurs view their "productive opportunities" as moving the system toward some greater, more complex level of equilibrium, or as moving it away from equilibrium into regions with unknown boundaries? Thus research in this quadrant might be at the heart of theory-building work.

### BOUNDARY BETWEEN DOMAINS

While questions arising within each quadrant of the matrix in Table 1 present a viable research agenda, consideration of the boundary between the domains also presents research opportunity.

A "macro-micro dilemma" has long existed in the social sciences, and centers on how the actions of individual agents result in structure and changes in structure at a much more aggregated level of analysis (DiMaggio, 1991). Organizational sociologists increasingly adopt a systems view over mere aggregation to help explain translations between levels, relying on complex patterns of interactions between micro, meso, and macro levels (DiMaggio, 1991).

The concept of complex systems may be useful in understanding the boundaries between external and internal environments of entrepreneurial firms. Changes in the perception of opportunities or of uncertainty in an industry (quadrant 1) often precipitate changes in internal organization and processes (quadrant 2). Similarly, changes

internally in organization and process (for example, the constitution of a separate new product development team) may result in the introduction of products or services which reshape the industry environment and prompt changes in the relationship between the firm and the industry. DiMaggio (1991) proposes that role theory may be useful in understanding systemically how the exchanges and translations between macro and micro environments are effected. Alternatively, researchers might employ organizational network analysis (Miles & Snow, 1986) which views entrepreneurial organizations as efficient and effective information acquirers and processors. The latter view would not be inconsistent with issues in quadrant 1 having to do with uncertainty and information processing, and when aggregated in quantitative research might offer explanations for patterns revealed in quadrant 2 studies.

Consideration of boundary issues also focuses attention on the acquisition of resources by entrepreneurial firms. Resource based theory (Barney, 1991) informs us that resources reside within the firm, and that they are not factors which can be purchased in external factor markets. For startup firms the founder/CEO must represent the only real resource. And yet successful entrepreneurial organizations are presumed to develop significant resource strengths over time. How does a firm move from a position of low resources to high resources? What level and kind of exchanges with the external environment enable the entrepreneurial firm's resource position to grow in this fashion? These questions probe at the boundary between quadrant 2 and quadrant 4.

Finally, bridging between qualitative and quantitative domains may also be revealing. For example, in examining evolving top management team dynamics in new ventures, West (1995) moves between the qualitative quadrant 3 and quantitative quadrant 4 domains in an exploratory longitudinal study involving on-site visits, interviews, and data collection for statistical analysis. In this fashion expanding qualitative research findings to larger samples with more sophisticated measurement instruments can confirm ideas and concepts induced via qualitative methods, and can lead to more sophisticated and full-blown theory development.

### REFERENCES

- Bacharach, S. B. 1989. Organizational theories: Some criteria for evaluation. *Academy of Management Review*, 14: 496-515.
- Bantel, K. A., & Jackson, S. E. 1989. Top management and innovations in banking: Does the composition of the top management team make a difference? *Strategic Management Journal*, 10: 107-124.
- Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99-120.

- Bird, B. J. 1992. The operation of intentions in time: The emergence of the new venture. *Entrepreneurship Theory and Practice*, Fall: 11-20.
- Bygrave, W. D. 1989. The entrepreneurship paradigm (I): A philosophical look at its research methodologies. *Entrepreneurship Theory and Practice*, Fall: 7-26.
- Campbell, J. P. 1991. The role of theory in industrial and organizational psychology. In M. D. Dunnette, & L. M. Hough (Eds.), *Handbook of industrial & organizational psychology*, 39-73.
- Cooper, A. C., Folta, T. B., & Woo, C. 1995. Entrepreneurial information search. *Journal of Business Venturing*, 10: 107-120.
- Dean, T. J. 1992. *Demand determinants of new venture formation in U.S. manufacturing industries*. Unpublished Ph.D. dissertation, University of Colorado. Boulder, CO.
- Deshpande, R. 1983. "Paradigms lost": On theory and method in research in marketing. *Journal of Marketing*, 47: 101-110.
- DiMaggio, P. 1991. The micro-macro dilemma in organizational research: Implications of role-system theory. In J. Huber (Ed.), *Macro-micro linkages in sociology*, 76-98.
- Eisenhardt, K. M. 1989. Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, 32: 543-576.
- Gartner, W. B. 1989. Some suggestions for research on entrepreneurial traits and characteristics. *Entrepreneurship Theory and Practice*, 14: 27-37.
- Hisrich, R. D. 1988. Entrepreneurship: Past, present, and future. *Journal of Small Business Management*, October: 1-4.
- Kazanjan, R. K. 1988. Relation of dominant problems to stages of growth in technology-based new ventures. *Academy of Management Journal*, 31: 257-279.
- Kirzner, I. M. 1973. *Competition and entrepreneurship*. Chicago: University of Chicago Press.
- Knight, F. H. 1921. *Risk, uncertainty and profit*. Boston, MA: Houghton Mifflin.
- Low, M. B., & MacMillan, I. C. 1988. Entrepreneurship: Past research and future challenges. *Journal of Management*, 14: 139-161.
- Lumpkin, G. T., & Dess, G. G. 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21: 135-172.
- Meyer, G. D., & Dean, T. J. 1990. An upper echelons perspective on transformational leadership problems in high technology firms. *Journal of High Technology Management*, 1: 223-242.
- Miles, R. E., & Snow, C. C. 1986. Organizations: New concepts for new forms. *California Management Review*, 28: 62-73.
- Mintzberg, H. 1979. An emerging strategy of "direct" research. *Administrative Science Quarterly*, 24: 580-589.
- Penrose, E. T. 1959. *The theory of the growth of the firm*. New York: John Wiley & Sons.
- Reichardt, C. S., & Cook, T. D. 1979. Beyond qualitative versus quantitative methods. In T. D. Cook, & C. S. Reichardt (Eds.), *Qualitative and quantitative methods in evaluation research*, 7-32.
- Schumpeter, J. A. 1934. *The theory of economic development*. Cambridge, MA: Harvard University Press.
- Smith, K. G., Gannon, M. J., & Sapienza, H. J. 1989. Selecting methodologies for entrepreneurial research: Trade-offs and guidelines. *Entrepreneurship Theory and Practice*, Fall: 39-49.
- Van de Ven, A. H. 1992. Longitudinal methods for studying the process of entrepreneurship. In D. L. Sexton, & J. D. Kasarda (Eds.), *The state of the art of entrepreneurship*, 214-242.
- VanderWerf, P. A., & Brush, C. G. 1989. Achieving empirical progress in an undefined field. *Entrepreneurship Theory and Practice*, Winter: 45-58.
- Vesper, K. H. 1988. Entrepreneurial academics - how can we tell when the field is getting somewhere? *Journal of Business Venturing*, 3: 1-10.
- West, G. P., III. 1995. *Strategic renewal through knowledge creation: The impact of top management team time orientations and communications*. Unpublished Ph.D. dissertation, University of Colorado. Boulder, CO.
- West, G. P., III, & Meyer, G. D. 1996. *Strategic anticipation: Future time orientations and related communication patterns within top management teams*. Paper presented at Strategic Management Society Annual International Conference. Phoenix, AZ.
- West, G. P., III, & Meyer, G. D. Forthcoming. To agree or not to agree: Consensus and performance in new ventures. *Journal of Business Venturing*.
- Wortman, M. S., Jr. 1987. Entrepreneurship: An integrating typology and evaluation of the empirical research in the field. *Journal of Management*, 13: 259-279.