# Michael Porter on competition

BY MICHAEL E. PORTER

## Part 1. Introduction*

Competition has intensified dramatically over the last decades, in virtually all parts of the world. It was not long ago that competition was all but absent in many countries, and in many industries. Markets were protected, and dominant market positions were the rule. Even where competitors were present rivalry was anything but intense. Stifling government intervention blunted competition, as did outright cartels.

While we now associate the absence of competition with developing economies, it is easy to forget how much change has also taken place in advanced nations. The breakup of cartels and powerful business groups and the intensification of competition had much to do with the remarkable post-World War II economic progress of Germany and Japan. The most competitive Japanese industries today developed under intense internal competition, such as in consumer electronics and cars. Yet the development of large parts of the Japanese economy remains stunted by restraints

---

* *Introduction*, from ON COMPETITION 1–17 (1998). 

to competition, in fields such as financial services, chemicals, and retailing.

Even in the United States, the nation with perhaps the strongest commitment to competition during the twentieth century, huge sectors of the economy have until recently been extensively regulated. Telecommunications, transportation, energy, and other sectors all provide vivid examples of the power of competition to unleash innovation and drive unheard of rates of progress.

Very few industries remain in which competition has not intruded on stability and market dominance. No company, and no country, can afford to ignore the need to compete. Every company, and every country, must try to understand and master competition.

The study of competition, in its full richness, has preoccupied me for two decades. While trained as an economist and steeped in the discipline of economic reasoning, I have sought to capture the complexity of what actually happens in companies and industries in a way that both advances theory and brings that theory to life for practitioners. My goal has been to develop both rigorous and useful frameworks for understanding competition that effectively bridge the gap between theory and practice. Striking this balance is challenging, and success sometimes eludes me. My secret weapons: using my ideas in actual practice to expose fuzziness in my thinking, raise new questions, and inform subsequent work.

This book draws together, for the first time in one place, more than a dozen existing and new articles I have written on competition. The articles address competition at multiple levels and in different settings, but a common perspective and set of frameworks unite them.

Most of the articles here first appeared in the *Harvard Business Review*. While I have also published extensively elsewhere, the *Review* has seemed to me the best forum from which to try to influence practitioners. The editors of the *Review* have also provided extraordinary help in making my ideas clearer and more accessible.

I could not resist the opportunity, however, to include two new articles written especially for this collection. One addresses clusters, an important idea introduced in my work on the competitive advantage of nations; the second covers global strategy and reflects my most recent thinking.

The book has three parts. Part I addresses competition and strategy for companies, first at the level of a single industry and then for multi-business or diversified companies. The structure and evolution of industries, and the ways in which companies gain and sustain competitive advantage in them, lie at the core of competition. A sophisticated understanding of these issues provides the foundation on which all else is built. Diversification, for example, cannot be approached sensibly without linking it directly to competition in individual businesses.

Part II addresses the role of location in competition. Interest in the competitiveness of nations, states, and cities has grown rapidly as competition has spread and intensified. Traditionally, competitiveness has been seen primarily as an issue for governments. Moreover, many theorists claimed that location diminishes in importance as the mobility of capital and technology rises and companies become more global in their activities. The articles in Part II challenge both of these notions. In them, I seek to show how prosperity for both companies and countries depends on the nature of the local environment in which competition takes place. A framework for understanding the influence of location on competition reveals new roles for companies in shaping their competitive context; the need for a new type of relationship between business, government, and other local institutions; and new ways of thinking about government policy. Understanding the influence of location on competition, together with the ideas in Part I, is essential to setting a global strategy.

Part III draws on the frameworks in Parts I and II to address some important societal issues. The environment, urban poverty, health care, and income inequality are normally seen as social problems. As the articles in Part III illustrate, however, each of them is inextricably bound up with economics and, more specifically, with competition. Bringing a sophisticated understanding of

competition to bear is not only revealing but offers concrete, workable approaches to solutions.

*Competition and strategy: core concepts*

The collection begins with "How Competitive Forces Shape Strategy" (1979), the oldest article and my initial effort to influence practitioners. This article, applying the perspectives of industrial economics to strategy, introduces a systematic framework for understanding the structure of industries and how they change.[1] The performance of any company in a business can be divided into two parts: the first attributable to the average performance of all competitors in its industry and the second to whether the company is an above- or below-average performer in its industry. This article concentrates on the first part, that is, on the large and sustained differences in the average profitability of industries. Using the "five-forces framework," consisting of the bargaining power of buyers, the bargaining power of suppliers, the threat of new entry, the threat of substitutes, and the intensity of rivalry, I describe the determinants of long-term industry profitability and ways that companies can influence them.

"What Is Strategy?" addresses the second part of the profitability equation: the profitability differences among competitors. I had tackled the subject of positioning, or the creation of an advantaged approach to competing in an industry previously,[2] but "What Is Strategy?," first published in 1996, contains my latest thinking. In this article, I argue that a firm achieves superior profitability in its industry by attaining either higher prices or lower costs than rivals. The sources of these price or cost differences among competitors can in turn be divided into two types: those due to differences in operational effectiveness, or attainment of best practice, and those due to differences in strategic positioning. Both operational effectiveness and strategy can best be understood by dividing the firms into activities, the discrete economic processes firms perform in competing in any business. Activities are defined more narrowly than are traditional functions. I introduced a framework for systematically examining activities and

their connection to competitive advantage, called the value chain, in my book *Competitive Advantage.*

All companies must continually improve operational effectiveness in their activities, but sustainable performance differences will most often depend on having a distinctive strategic position. Strategy differences rest on differences in activities, such as the way companies go about order processing, assembly, product design, training, and so on. Strategies are sustainable because of tradeoffs, or choices that firms make to offer certain types of value but sacrifice others. Both competitive advantage and tradeoffs depend not only on individual activities but on the fit among numerous activities.

The first two articles in Part I provide the core analytical frameworks for developing strategy at the level of an individual business: industry structure and competitive advantage/activities. The next two articles in Part I—"How Information Gives You Competitive Advantage" and "End-Game Strategies for Declining Industries"—apply and extend these core frameworks to address important competitive strategy questions. "How Information Gives You Competitive Advantage" (1985) addresses the role of information technology in affecting competition. In it, Victor Millar and I suggest that information technology plays a role in both industry structure and competitive advantage. The five-forces framework provides the structure for analyzing the industry effect, while activities and the value chain provide the structure for examining the competitive advantage effect. Although this article was written more than ten years ago, the issues are still current. Today's concerns include the role of the Internet, new computer-aided design and manufacturing technologies, and enterprisewide information systems. The tools in this article provide an approach to understanding the competitive significance of the latest generation of information systems and software.

In "End-Game Strategies in Declining Industries" (1983), Kathryn Harrigan and I apply industry structure thinking and competitive advantage thinking to industries undergoing sustained decline due to the emergence of a superior substitute product, a shrinking customer group, or for other reasons. While industry

decline is by no means inevitable, this article tackles the question of how to think strategically about competing in an industry facing decline. The tools of industry structure help firms to predict whether an industry can remain profitable as it gets smaller and whether continued participation is desirable. The logic of competitive advantage helps firms to think about what profitable position they can occupy in the shrinking industry. In any economy, a significant number of industries will always be declining, just as some will always be emerging. My observation has been that too often companies, to their detriment, suspend strategic thinking when they find themselves in declining businesses.

The first four articles in Part I address strategy in a single business, or what I call *competitive strategy*. The individual industry is the core level of strategy, because it is at this level that industry profitability is determined and competitive advantage is either won or lost. The article "From Competitive Advantage to Corporate Strategy" (1987) addresses strategy at the other important level—the overall strategy of a corporation diversified into more than one business. I call this *corporate strategy*. Many accounts treat diversification as a distinct question, separate from competitive strategy. This false dichotomy, however, starts to explain the dismal performance of most companies in diversifying over the last three decades, a result vividly illustrated by the data presented in my article. Bad things often happen to companies that attempt to separate their thinking about diversification from their strategies for competing in their various businesses.

"From Competitive Advantage to Corporate Strategy" takes a different approach. It argues that while corporate strategy differs from competitive strategy, the two must be intimately connected. Corporate strategy, like competitive strategy, involves questions both of industry and competitive advantage. At the level of the corporation, however, the questions become somewhat different. From an industry perspective, corporate strategy is concerned with the choice of industries in which a company should compete and how it should enter them. From a competitive advantage perspective, the central question at the corporate level becomes how being part of the overall corporation enhances (rather than under-

mines) the competitive advantage of individual business units. "From Competitive Advantage to Corporate Strategy" explores these issues, making use of the concepts of industry structure and the value chain. It shows how the notion of activities can be used to understand the strategic logic of diversification, and how corporate strategy must be linked to organization and management practices.

Companies have not lost their taste for diversification since this article was first published, and the diversification track record in the 1990s remains problematic. Notions of core competencies and critical resources have replaced discredited portfolio models in guiding much diversification, but too often the results differ little. These new ideas are imprecise and disconnected from relative cost and differentiation. Experience has shown that diversification not closely tied to sustainable competitive advantage at the business unit level often destroys economic value.

*The competitiveness of locations*

The core concepts of competitive and corporate strategy provide the foundation for examining any competitive situation. With ever increasing frequency, however, competition crosses borders. Firms compete across geographic locations with national, regional, and global strategies. Developing international (or cross locational) strategy requires two new sets of ideas. The first concerns the role of location in competition. As firms begin to compete across borders, they gain the ability to locate activities anywhere. International strategy, then, must involve an understanding of how location affects competitive advantage. The second new issue raised by international competition is the opportunity for firms to gain competitive advantage through coordinating activities across borders in regional or global networks.

Part II begins with the issue of location. In "The Competitive Advantage of Nations" (1990), I develop a new theory of the competitiveness of nations, states, and other geographic areas. Most treatments of competitiveness have concentrated either on macroeconomic policies (government budget deficits, monetary

policy, opening of markets, or privatization) or on comparative advantages due to endowments of inputs such as labor, natural resources, and capital. My article takes a very different approach, arguing that the competitiveness of locations is primarily rooted in the nature of the business environment they offer firms. Access to labor, capital, and natural resources does not determine prosperity, because these have become widely accessible. Rather, competitiveness arises from the productivity with which firms in a location can use inputs to produce valuable goods and services. Moreover, the productivity and prosperity possible in a given location depend not on what industries its firms compete in, but on how they compete. Traditional distinctions between high tech and low tech, or between manufacturing and services, have little relevance in an economy in which virtually all industries can employ advanced technologies and high skill levels to achieve high levels of productivity.

The roots of productivity lie in the national and regional environment for competition. In "The Competitive Advantage of Nations," I capture the effect of location on competition in a framework graphically depicted as a diamond made up of four primary facets: factor conditions, demand conditions, the context for strategy and rivalry, and related and supporting industries. The diamond metaphor has become common in referring to my theory. Government policies can influence all four parts of the diamond positively or negatively. "The Competitive Advantage of Nations" explores these sources of competitiveness, how they change, and the implications for governments and companies. Diamond theory is not only a tool for managers but also a microeconomic-based approach to economic development for governments that is closely tied to actual competition.

"Clusters and Competition: New Agendas for Companies, Governments, and Institutions," one of the two articles written especially for this collection, explores one of the most important ideas in my overall competitiveness theory—the concept of clusters. Clusters are geographic concentrations of firms, suppliers, related industries, and specialized institutions that occur in a particular field in a nation, state, or city. This new article pulls

together what I have learned about clusters both from research and in practice, in terms of cluster theory, the role of clusters in competition, and their implications for government policy, company and institutional behavior. Clusters are a prominent feature on the landscape of every advanced economy, and cluster formation is an essential ingredient of economic development. Clusters offer a new way to think about economies and economic development; new roles for business, government, and institutions; and new ways to structure the business-government or business-institution relationship. Dozens of cluster initiatives have sprung up in many parts of the world, and this article summarizes some of the learning gleaned from both advanced and developing economies.

"How Global Companies Win Out" (1982) moves from the influence of location to the role of corporate global networks. In it, Thomas Hout, Eileen Rudden, and I describe some of the basic characteristics of a global company and why a truly global company is more than just a company operating in many nations. The article outlines a number of ways in which coordination across nations enhances competitive advantage, illustrated with three case studies of prominent global competitors.

The final article in Part II, "Competing Across Locations: Enhancing Competitive Advantage through a Global Strategy," is the second article newly written for this collection. It brings together the two dimensions of international strategy—location and global networks. The concept of activities, so important to understanding competitive advantage in general terms, provides the basic framework for international strategy as well. When competing across borders, firms can spread activities to multiple locations to harness their locational advantages, while coordinating among dispersed activities in a variety of ways to harness network advantages.

"Competing Across Locations" develops the implications of this framework for global strategy in a particular business. Global strategy taps the innovation advantages of locating headquarters or "home-base" activities in cluster locations while spreading other activities to other locations to source low cost inputs and

gain access to foreign markets. Coordination transforms this array of dispersed activities into a global network. Earlier thinking about global strategy, which focused only on globalness and networks, was clearly too simple. This new article aims to take global-strategy thinking to the next level. It also makes clear that global strategy is just a special case of the more general issue of competing across geography. The same framework can be applied to a local producer striving to become national.

*Competitive solutions to societal problems*

A deep understanding of domestic and international competition offers powerful insights into a wide variety of societal problems. Part III begins with an article on the environment, "Green and Competitive: Ending the Stalemate" (1995), written with Claas van der Linde. Environmental improvement is often seen as at odds with economic competitiveness because environmental standards can impose costs on business. This view, however, derives from a static and oversimplified view of competition. Drawing on my work on competitiveness, "Green and Competitive" suggests that "environment versus competitiveness" is a false dichotomy.

In the new thinking, competitiveness arises from increasing productivity in the use of resources. Productivity improvements must be never-ending. Seen in this light, virtually all forms of corporate pollution are manifestations of economic waste; for example, resources used inefficiently or valuable raw materials discarded. Improving environmental performance through better technology and methods, then, will often increase productivity and offset or partially offset the cost of the improvements. This implies that environmental regulation should focus on reducing the transactions cost of the regulation itself, which adds neither environmental nor economic value, while facilitating product and process innovation. Corporations should see environmental improvement not as a regulatory matter but as an essential part of improving productivity and competitiveness.

"The Competitive Advantage of the Inner City" (1995) addresses the economic distress of America's urban cores. Urban

poverty has been seen primarily as a social problem, and proposed solutions have focused on meeting the pressing human needs of inner-city residents. But the problem is equally an economic one. Without accessible jobs and opportunities for creating wealth, social investment will be insufficient to achieve lasting benefits. Moreover, while there have been efforts at inner-city economic development, too many have tried to defy the laws of the marketplace. Based on the presumption that inner cities face many competitive disadvantages as business locations, "economic" development has often consisted largely of creating non-profits and relocating government buildings. Alternatively, large subsidies have been used in attempts to influence companies' location choices.

Rather than concentrate on competitive disadvantages, "The Competitive Advantage of the Inner City" turns received wisdom on its head. In it, I argue that only by focusing on the competitive advantages of inner-city locations will economic development be sustainable. Applying my broader work on competitiveness to inner cities, I outline the advantages of inner cities, which are manifested in the many hundreds and even thousands of successful inner-city-based companies in major cities all across the country. An approach that builds on these advantages while tackling frontally the competitive disadvantages of inner cities as a business location offers a new model for addressing our most distressed communities. There is nothing inevitable about the decline of cities if we shift our focus from reducing poverty to creating jobs, income, and wealth.

Health care is another pressing social concern facing the nation, where high costs and the large number of people without health insurance have triggered a national debate on how best to restructure the system. In "Making Competition in Health Care Work" (1994), Elizabeth Teisberg, Gregory Brown, and I argue that cost cutting and managed care will not provide a sustainable solution. Only through continued innovation in medical treatment and service delivery methods can the cost of health care be controlled without rationing care or eroding its quality.

The article explores how faulty incentives produced a form of competition that improved quality but drove up cost. The recent revolution in managed care and the move to capitation has skewed incentives in the other direction, toward rationing care and undermining quality. Further, this new structure has also created barriers to innovation. In "Making Competition in Health Care Work," we outline a new strategy, calling for modified incentives, widely available information on treatment outcomes, and a renewed orientation toward innovation.

The final article in Part III, "Capital Disadvantage: America's Failing Capital Investment System" (1992), takes on the controversial issue of how American capital markets and corporate governance practices affect the long-run prosperity of our economy. At first glance, this may seem obvious: America's capital markets, the most efficient in the world, contribute greatly to the productivity of American industry. A deeper look, however, reveals a more complex relationship. Clearly, the American system fosters efficient use of capital, as the relentless pressures for profit improvement attest. These pressures have created a near-term advantage for American industry, especially given the barriers and impediments to efficiency improvement in Europe and Japan.

The question remains, however, whether the American system as currently structured fosters the appropriate rate of investment in the long term, in such things, for example, as advanced capital goods, R&D, market development, and skills training. Without high rates of investment in capital per worker and in training, not only may companies be unable to sustain their competitive advantages but less-skilled workers will face stagnant prospects and increasing inequality.

Rapid stock trading, a preoccupation with near-term stock-price appreciation, along with a lack of incentives for investors to monitor long-term company prospects raise questions about the alignment between stock-market valuation and the sources of companies' competitive advantage. Interestingly, the legendary American venture-capital system has a very different structure than that of the mainstream capital markets, with patient

investors, active monitoring, and long-term ownership of large, controlling equity stakes.

In "Capital Disadvantage," I draw on research by other scholars and lay out the case for why the American capital-allocation system may outperform those of other countries in some respects, while still falling well short of the ideal in other respects. The problems now afflicting Europe and Asia make it tempting to declare the American system the winner. Anemic economic growth in the United States, coupled with rising inequality, however, suggest that the need remains for serious scrutiny of our system.[3]

The articles in Part III represent the beginnings of a new integration of economic and social policy. Traditionally, economic and social policy have been seen as distinct and often competing. Economic policy concerns itself with creating wealth by providing incentives, encouraging savings and investment, and minimizing government intervention. Social policy has concentrated on providing for public education and other human needs, aiding disadvantaged groups, protecting citizens through various forms of regulation, and, recently, preserving the environment. Social policy has relied heavily on market intervention, subsidies, and redistribution.

Social policymakers tend to see the market as the problem and consequently attempt to modify its outcomes. Economic policymakers tend to see government intervention as the problem. Social advocacy groups often view business as the problem. Businesses see social goals as outside their realm of interest and view a strong economy, unshackled by counterproductive intrusions, as the best social program.

These old dichotomies are false ones and represent an increasingly obsolete perspective. Social and economic goals are not inherently conflicting in the long run. A productive and growing economy requires educated, safe, healthy, decently housed workers who are motivated by a sense of opportunity. Economic competitiveness need not be traded away to preserve the environment, because corporate pollution results from unproductive use of resources. The only real conflict lies in means. Efforts to advance

social goals via redistribution, subsidies, and market distortion usually fail and inflict in the process steep economic costs, as illustrated in my articles on the environment and the inner city. Similarly, efforts to boost profits at the expense of worker training, motivation, and a sense of well being will fail in the long run.

Instead of such flawed approaches, we need a new one based on harmonizing and pursuing simultaneously economic and social goals. This can be done through a central focus on innovation and competition—working through the market rather than against it. Social programs must prepare individuals to enter and succeed in the market system, not insulate them from it. Efforts to address social issues, such as pollution and the high costs of health care, must harness innovation and competition to address underlying causes, rather than attempt to shift the costs onto some other group within society.

The articles in Part III illustrate these principles, using as illustrations health care, the environment, and urban poverty. The same principles, however, can be applied to many social issues, including social security, education, or housing. Fannie Mae, for example, has done as much as any other social program to bring affordable housing to people with low incomes while still itself making a profit. By reducing the cost of financing and by finding creative ways to assess creditworthiness without resorting to traditional metrics (such as income level and large required down payments), Fannie Mae has expanded home ownership in a sustainable way, which encourages other low-income people who aspire to home ownership to better manage their finances.

"Capital Disadvantage" connects closely to these issues, as well. It shows how artificial short-term profit pressures can lead companies to make choices that compromise their own and society's long-term interests. Hence, scrutiny of our capital-market system has an important role in the creation of a context for bringing together social and economic goals.

*Expanding frontiers*

As I hope is evident, my work rests on a core set of ideas about competition and contains a consistent perspective. Yet my ideas continually evolve and have broadened over time to encompass new dimensions. Industry structure, an activity-based view of competitive advantage, and my more recent theory of the role of location in competition represent the three core frameworks that cut across all my work. My understanding of each one and of the connections among them is continually being deepened and extended.

Exploration of one question concerning competition and strategy has suggested the next question, and that one the next. Thinking about competition and strategy in a single industry, for example, led me to an interest in the influence of diversification on industry competition. Early work on positioning provided the impetus for the activity-based view of the firm. Thinking about activities led me to puzzle over the influence of globalization, which in turn raised the question of how location mattered. A focus on location forced me to confront the role of government in competition, not just companies. My work on location also triggered an interest in economic development, urban poverty, and environmental policy.

Over time, I have been led to explore new units of analysis. My initial work stressed *industry* at a time when the firm as the unit of analysis was dominant. Building on thinking about the firm as a whole, my subsequent work stressed the *activity*. Building on the focus on industry, my later work added consideration of the *cluster* and the *geographic location*.

As each new question arose and each new set of ideas developed, I have been led to re-examine what came before. The activity-based view of the firm caused me to refine and extend my earlier thinking about generic strategies. My recent work on distinguishing operational effectiveness and strategy ("What Is Strategy?") both builds on earlier work and informs it. The new theory has deepened my understanding of positioning, and linked it more tightly to activities. Through this new work, I have also extended activity theory through the concepts of tradeoffs and fit.

The distinction between operational effectiveness and positioning also sheds new light on a wide variety of other issues. Financial market pressures, for example, can be desirable motivators of operational improvement, but often lead companies to compromise their unique strategic positions by pursuing growth in segments where they lack any real advantage. Another example of the distinction is in evaluating the role of information technology in competition. Much of the new information technology is being directed at improving best practice—operational effectiveness—rather than enabling unique positioning. The lurking danger with the new generation of IT tools, however, is that too many companies will apply them in the same way. This will have the unwitting effect of homogenizing competition, undermining customer choice, and triggering mutually destructive rivalry.

The research on location has opened up important new connections as well. The most obvious one is in an enriched conception of global strategy. Location, however, clearly plays a role in industry structure and competitive advantage, including helping to define feasible forms of competing. The state of the diamond and the extent of the cluster can raise or lower barriers to entry into an industry, the power of customers and suppliers, and the mix and threat of substitutes. Locational factors also influence the forms of rivalry that are feasible in a nation or state, ranging from imitation and price competition in developing economies to innovation and differentiation in advanced ones. In developing economies, for example, locational deficiencies mean that local firms face great difficulties in attempting to enter attractive industries and in avoiding destructive price rivalry. At the same time, government intervention and a shortage of capital often suspend competitive forces and preserve monopolies.

Location also strongly influences competitive advantage and the types of strategies firms can choose and successfully implement. The state of local infrastructure, the skills of local employees, and other diamond conditions directly influence operational effectiveness. Diamond conditions, such as local demand sophistication, unique skill pools, and the local presence of related industries, can also shape the types and variety of strategic positions

chosen, in terms of customer segments selected or product varieties stressed. The business environment at locations not only influences the choice of strategy, but also the ability to carry out strategies. At the level of activities, it is also evident that access to many of the resources, capabilities, and skills that contribute significantly to a firm's uniqueness depends on the nature of the local environment.

Location also bears on corporate strategy. Diamond conditions influence the types of corporate value added that truly affect competitive advantage. In developing countries, value is created by a corporate parent's ability to provide capital access and to introduce professional management. This helps explain the prevalence of conglomerate groups in many emerging economies.[4] In more advanced economies, portfolio management adds little value, and other approaches to diversification are needed; here, diamond conditions affect the kinds of synergies that are feasible.

One connection between location and my earlier ideas creates an apparent puzzle. The industry-structure framework shows how powerful buyers and suppliers and intense rivalry can depress profitability, while diamond theory suggests that local rivalry, demanding customers, and sophisticated local suppliers foster competitiveness by stimulating and supporting high productivity and rapid innovation. How can these be reconciled? First, we must distinguish between the industry in a single location and the industry globally. The presence of a favorable diamond in one location, including intense local rivalry, allows firms based there to achieve collectively a higher level of productivity and also to progress faster than firms based in other locations. Profitability in the local market may be lower, but the global profitability of firms based there will be superior. Another way of making the same point is to recognize that diamond conditions will affect the ability of firms based in a location, on average, to gain a competitive advantage over firms based elsewhere. Average industry profitability globally will be dependent on average industry structure globally.

The work on location illuminates the importance of dynamic improvement to competitive advantage. It shows how rapid

upgrading and innovation is needed to create and sustain advantage in advanced economies. In contrast, the industry-structure and activity frameworks did not focus on change; rather, they apply at any point in time. My early investigations were heavily cross-sectional (for example, answering such questions as why some industries are more profitable than others at a given time or why one rival is more profitable than another). These were the logical first questions. My recent work on operational effectiveness and positioning, however, begins to bridge positioning, location, and dynamic improvement. It stresses the necessity of continual improvement in operational effectiveness but emphasizes the need for continuity in strategy, along with the concomitant need for relentless improvement in the means for carrying out strategy. Both operational effectiveness and strategy, however, are influenced by location.

Finally, a deeper understanding of competition, enriched by work on location, has opened up a whole new frontier for exploring the connection between competition and social issues. I am earlier in this process, which is continuing.

New connections remain to be discovered, and my learning about competition is unlikely to stop anytime soon. One unchanging certainty, however, is that competition will continue to be both evolving, unsettling, and the source of much of our prosperity. If this collection could convey only one message, I would want it to be a sense of the staggering power of competition to make things better—both for companies and for society.

*Notes*

1. This article became the lead chapter of my book *Competitive Strategy: Techniques for Analyzing Industries and Competitors* (New York: Free Press, 1980).
2. For my earlier work on positioning, see *Competitive Strategy*, Chapter 2, and *Competitive Advantage: Creating and Sustaining Superior Performance* (New York: Free Press, 1985).
3. In 1995, I co-chaired a bipartisan group of business, financial, and government leaders that further explored some of these issues. Its report, "Lifting All Boats," is a good companion piece to my arti-

cle. See "Lifting All Boats: Increasing the Payoff from Private Investment in the U.S. Economy," a report of the Capital Allocation Subcouncil (Robert Denham and Michael Porter, co-chairmen) to the Competitiveness Policy Council, September 1995.

4. These and other aspects of corporate groups in developing economies are explored in T. Khanna and K. Palepu, "Why Focused Strategies May Be Wrong for Emerging Markets," *Harvard Business Review* 75, no. 4 (1997): 41–51.

## Part 2. The "new" microeconomics*

Adam Smith, so many years ago, laid the foundations of economics around the notions of specialization within enterprises, specialization across countries, and the power of unencumbered competition. His pin factory legitimized the place of business and profitmaking in society. In spite of being a discipline founded on an essay about business, however, it is probably fair to say that economics has had its greatest influence outside of the firm. It has guided fiscal, monetary, and international trade policy, and informed public policies in a variety of other areas. More recently, economics has provided powerful tools for practitioners in the capital markets. Other interesting work is beginning to gather steam around internal incentive problems within firms.

In the area of business competition, however, most company leaders would not turn to economics for guiding insights. The role of business economists reflects this state of affairs. Although there are exceptions, business economists by and large concern themselves with general economic conditions, supply and demand forecasting, regulatory issues, and capital market analysis rather than competitive strategy.

The Adam Smith Address itself is an important case in point. Most past addresses were delivered by macroeconomists, and the others focused exclusively on government. In fifteen years, only

* The Adam Smith Address: Location, Clusters, and the "New" Microeconomics of Competition, from 33 BUSINESS ECONOMICS 7–13 (Jan. 1998). 

one address referred to business, much less business competition. The economist was Milton Friedman, and his title was "The Suicidal Impulse of the Business Community."

Why the disconnect? As one who has dedicated an entire career to bridging economics and business, I have found that the barriers lie in a number of areas:

1. Business leaders are interested in answers to the important questions they are facing, not the questions that necessarily advance scholarly literatures.
2. Theories or models that require restrictive assumptions are untenable, because managers cannot hold everything else equal. Standard economic models of firms and product markets have captured little of the complexity and dynamism of actual competition. Managers are looking for ways of addressing important competitive questions that capture the complexities, rather than abstract from them.
3. Economists begin with the presumption that firms are governed by markets, and economic models leave little or no latitude to managers. Managers know that firms have considerable latitude to create buyer value and shape markets.
4. Concerns of businesses go well beyond issues that can be addressed with the preferred tools of the profession.
5. Finally, economists have rarely seen their roles as guiding competitive strategy or, for that matter, helping companies push profits up. Instead, most of us have been trained to take society's perspective, and the bulk of work on competition is policy-oriented and designed to hold profits down.

Fortunately, a growing number of economists, many working in industry and in business schools, are beginning to change this state of affairs. We are now beginning to sketch the dimensions of a "new" microeconomics of competition that is informing the choices of actual firms. I put the word new in quotation marks because, while some dimensions of competition are truly new in the sense of reflecting new conditions in the economy, many elements of competition captured in the new thinking have been present for decades and even centuries but have been undiscovered *or*, more often, unappreciated. The ideas that are actually influencing business practice sometimes come packaged in the form of mathe-

matical models that have been the bread and butter of the profession. Most, however, are contained in frameworks that structure the complexity of competition and inform the choices managers must make.

There are several strands of the new literature on competition and competitive strategy. Here I would like to focus on one strand that is beginning to influence thinking and practice both in companies and in governments: the role of location in national and international competition.

*Location and competition*

There is a long history of research in economics in which geography was far more central, in which Adam Smith himself participated. Marshall's *Principles of Economics* contained a fascinating chapter on the externalities of specialized industrial locations. Economic geography was an important topic in the first five decades of the twentieth century, although dominated by models of spatial cost minimization. In recent decades, however, location has been all but absent from economic models. The growing global movement of goods, information, capital, and technology in recent decades has led to a tendency to see geography as diminishing in importance to competition.

Thinking in recent decades about the influence of location on competition has been based on relatively simple views of how companies compete. The dominant view in the post-World War II period rested on endowments of generic factors of production (e.g., natural resources, capital, labor). In this thinking, competition is driven by cost, and cost depends on the cost of inputs. The prescriptions are to accumulate factors and compete where the nation had a comparative advantage.

Factor endowments continue to play a role in locational competition, but factors *per se* have become less valuable as the opening of more countries to the global economy expands their supply, as national and international markets for factors become more efficient, and as the factor intensity of competition diminishes. Factor endowments continue to influence the location of resource

extraction and labor-intensive activities but play a diminishing role in determining wages and standard of living.

More recently, a view of competition resting on increasing returns to scale has gained currency. In this thinking, having a large home market is valuable. Governments should invest in scale-sensitive activities such as R&D and intervene to limit "wasteful" internal competition. Nurturing "infant industries" to allow them to achieve critical mass is also important. In this type of competition, government intervention aims to tilt competition and win market share in particular industries (so-called industrial policy).

While economies of scale are certainly present in competition, the influence of scale *per se* seems to be diminishing. Modern, flexible technologies are often less scale sensitive than in previous generations. Outsourcing coupled with close relationships with suppliers have mitigated the need for in-house volume. Globalization has opened up early access to huge foreign markets and diminished the importance of size *per se* in local markets.

Most importantly, however, the significance of both factor endowments and increasing returns to scale rest on a static, cost-minimization view of competition. Actual competition is far different. Competition is dynamic and rests on innovation and the search for strategic differences. Close linkages with buyers, suppliers, and other institutions are important not only to efficiency but to the rate of progress. While extensive vertical integration (e.g., parts, services, training) may have been the norm, a more dynamic environment runs the risk of making vertical integration inefficient, ineffective, and inflexible.

In this broader and more dynamic view of competition, location affects competitive advantage through its influence on *productivity and especially on productivity growth*. Productivity is the value created per day of work and unit of capital and physical resource employed. Factor inputs themselves are abundant and readily accessed via globalization. Prosperity depends on the productivity with which factors are used and upgraded in a particular location.

The productivity and prosperity of a location rest not on what industries its firms compete in, but *how* they compete. Firms can be productive in any industry if they employ sophisticated methods, use advanced technology, and offer unique products and services, whether the industry is shoes, agriculture, or semiconductors. Conversely, mere presence alone in any industry does not guarantee prosperity if firms are unproductive. Traditional distinctions between high tech and low tech, manufacturing and services, and others have little relevance *per se*. Improving the productivity of *all* industries enhances prosperity both directly and through the influence one industry has on the productivity of others.

The prosperity of a location depends, then, on the productivity of what firms choose to do there. This sets the wages that can be sustained and the profits that can be earned. Both domestic and foreign firms contribute to the prosperity of a location based on the productivity of the activities they perform there. The presence of sophisticated foreign firms often enhances the productivity of domestic firms, and vice versa.

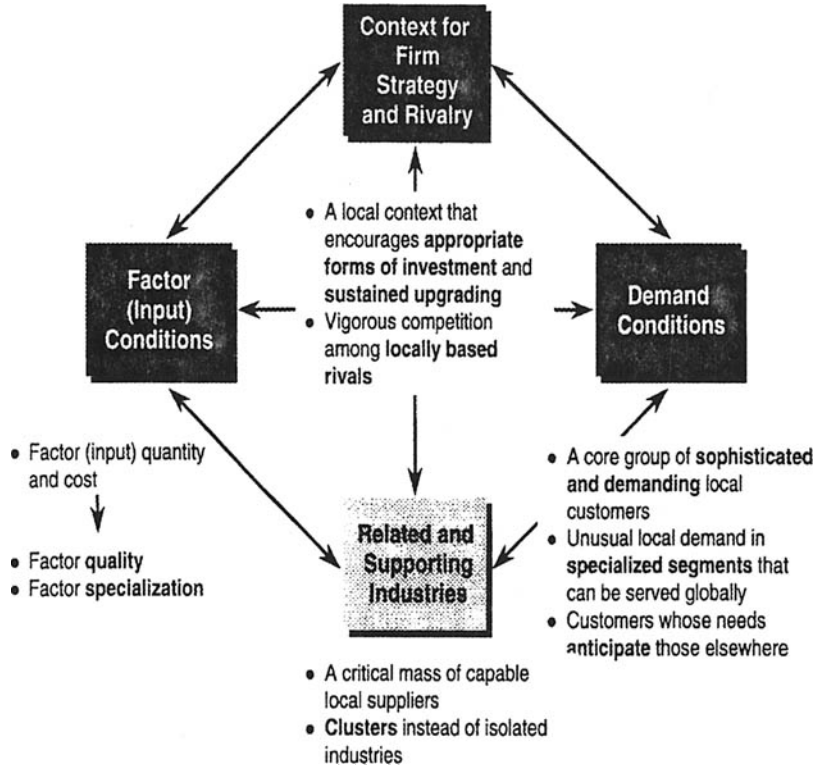
The sophistication of how companies compete in a location is strongly influenced by the quality of the business environment. For example, firms cannot use advanced logistical approaches unless there is high-quality transportation infrastructure. Firms cannot compete with high-service strategies unless they can access well-educated people. If regulatory red tape is onerous, time must be devoted to endless dialog with government, or if the court system does not resolve disputes quickly and fairly, firms waste money and management time without contributing to customer value.

Capturing the nature of the business environment in a location is challenging, given the myriad of locational influences on productivity. In *The Competitive Advantage of Nations*, I modeled the effect of location on competition via four interrelated influences (see Figure 1).[1] A few areas deserve highlighting.

---

[1] See footnotes at end of text.

**Figure 1 The National (State, City) Business Environment**




Factor conditions refer to the basic inputs that allow competition to take place. They range from tangible things, such as physical infrastructure to information, the legal system and university research institutes that all firms draw upon in competition. Basic inputs and inputs that are generic across many industries can be a source of competitive disadvantage, but are diminishing as a source of advantage because many locations have them. To increase productivity, factor inputs must improve in efficiency, quality, and, ultimately, specialization to particular cluster areas. Specialized factors, especially those integral to innovation, are not only necessary for high levels of productivity but tend to be less tradable.

The context for firm strategy and rivalry refers to the rules, incentives, and norms governing the type and intensity of local rivalry. Economies with low productivity are characterized by little local rivalry. Rivalry, if it occurs at all, involves imitation. Moving to an advanced economy requires that vigorous local rivalry develops and shift from cost alone to include differentiation. While the character of rivalry is strongly influenced by other aspects of the business environment (e.g., the available factors, local demand conditions), the investment climate and policies toward competition set the context. The investment climate is broadly defined and includes macroeconomic and political stability, the tax system, labor market policies affecting the incentives for workforce development, and intellectual property rules and their enforcement. All these contribute to the willingness of companies to invest in upgrading capital equipment, skills, and technology. Antitrust policy, government ownership and licensing rules, and policy toward trade and foreign investment have a vital role in setting the intensity of local rivalry.

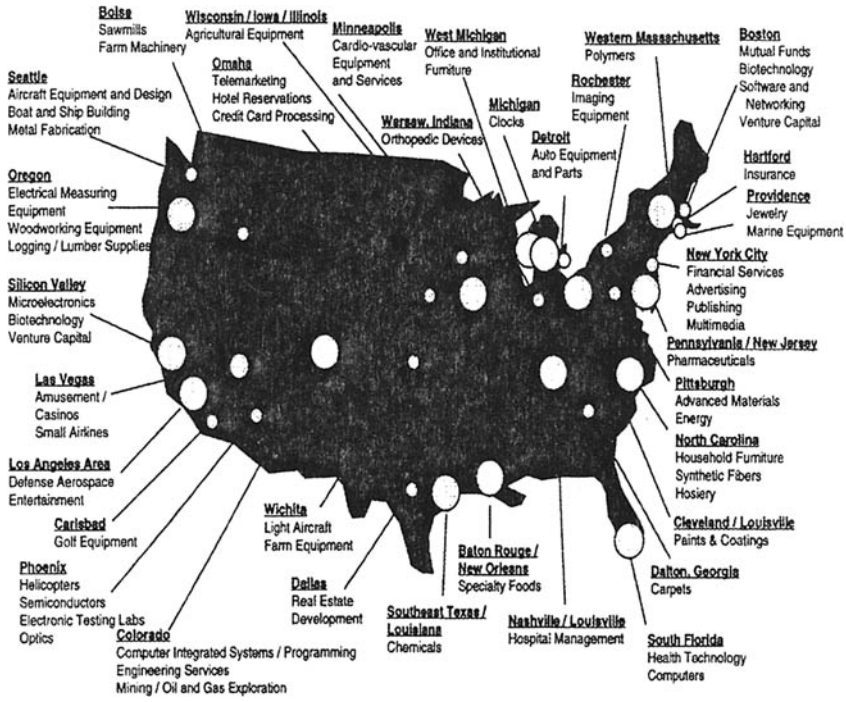
Demand conditions at home have much to do with whether firms can and will move from imitative, low-quality products and services to competing on differentiation. Sophisticated and demanding customers at home press firms to improve. They offer insights into existing and future customer needs that are hard to gain in foreign markets. Local demand also reveals segments of the market where firms can differentiate themselves. Government has an array of policy levers to upgrade home demand that are rarely utilized, such as setting challenging but flexible quality, safety, and environmental standards, the use of government procurement to stimulate product improvement and innovation, policies governing buyer information and recourse to products or services of poor quality, and policies that encourage early adoption of new products and services. Related and supporting industries refer to the local pressure or absence of suppliers of materials, components, machinery and services, as well as the existence of related industries. Productivity and productivity growth is highest where there is a *cluster,* not isolated firms or industries.

CLUSTERS A cluster is a critical mass of companies in a particular field in a particular location, whether it is a country, a state or region, or even a city. Clusters take varying forms depending on their depth and sophistication, but most include a group of companies, suppliers of specialized inputs, components, machinery, and services, and firms in related industries. Clusters also often include firms in downstream (e.g., channel, customer) industries, producers of complementary products, specialized infrastructure providers and other institutions that provide specialized training, education, information, research, and technical support, such as universities, think tanks, vocational training providers, and standards-setting agencies. Finally, many clusters include trade associations and other collective bodies covering cluster members.

The geographic distribution of clusters in one advanced economy is illustrated by the partial cluster map of the United States shown in Figure 2. The map illustrates just a few of the geographically concentrated clusters that are present, ranging from familiar ones such as Hollywood, Wall Street, and High Point to less familiar clusters, such as golf equipment in Carlsbad, California and optics in Arizona. In identifying clusters, it is important to distinguish between "exporting" industries and those that primarily serve the local market.

Clusters increase productivity vis-à-vis outsourcing or vertical integration through improving access to specialized inputs and information, facilitating complementarities among cluster participants, and improving incentives and performance measurement. More important, in many cases, is the role of clusters in improving the rate and success of innovation. Finally, clusters lower barriers to new business formation that improve the environment for productivity. While traditional agglomeration economies centered on cost minimization, cluster advantages rest on information, transactions costs, complementarities, and incentives as well as "public" goods that result from both public and private investments.

**Figure 2 Selected Regional Clusters of Competitive U.S. Industries**




*Economic geography*

Clusters are often concentrated in particular geographic areas, and sometimes in a single city or metropolitan region. Geographic concentration occurs because proximity serves to amplify many of the productivity and innovation benefits of clustering already described. Transactions costs are reduced, the creation and flow of information improves, local institutions are prone to be most responsive to a cluster's specialized needs, and peer pressure and competitive pressure are more keenly felt.

The economic geography of cities, states, and nations is characterized by specialization, which appears to increase as an economy becomes more advanced. A relatively small number of clusters account for a major share of the economy of a geographic area, and an overwhelming share of the economic activity that is

"exported" to other locations as well as the fields where there is "foreign" investment by locally based firms.[2]

Clusters competing with other locations based in a geographic area are the primary *long-run* source of economic growth and prosperity in the area. Such clusters can grow far beyond the size of the local market and absorb workers from less productive industries. The demand for local industries, in contrast, is inherently limited. It is derived primarily from the success of exporting industries directly or indirectly.

Economic geography in an era of global competition, then, involves a paradox. In an economy with rapid transportation and communication and accessible global markets, location is fundamental to competition. It has been widely recognized that changes in technology and competition have diminished many of the traditional roles of location. Resources, capital, and other inputs can be efficiently sourced in global markets. Firms can access immobile inputs via corporate networks. It is no longer necessary to locate near large markets.

It is natural, perhaps, that the first response to globalization was to pursue these benefits by shifting activities to low-cost locations. However, anything that can be efficiently sourced from a distance has been essentially *nullified* as a competitive advantage in advanced economies. Global sourcing mitigates disadvantages but does not create advantages. Moreover, global sourcing is normally a second-best solution compared to a cluster.

Paradoxically, then, the enduring competitive advantages in a global economy are often heavily local, arising from concentrations of highly specialized skills and knowledge, institutions, rivals, and sophisticated customers in a particular nation or region. Proximity in geographic, cultural, and institutional terms allows special access, special relationships, better information, powerful incentives, and other opportunities for advantages in productivity and productivity growth that are difficult to tap from a distance. Location matters, then, albeit in different ways at the turn of the twenty-first century than in earlier decades.

*The role of government*

Governments have a great stake in the influence of location in competition, because it is governments that are directly responsible for improving the well being of citizens in particular geographic areas. Governments all over the world have acutely felt the pressure of competition from other states and nations to attract the investments of international companies. A good deal of effort and public resources are expended in this endeavor, which is often based on very rudimentary thinking about what makes locations competitive.

For government, old distinctions between *laissez-faire* and intervention are simplistic. Government, first and foremost, must strive to create an environment that supports rising productivity. This implies a minimalist government role in some areas (e.g., trade barriers, pricing) and an activist role in others (e.g., ensuring vigorous competition, providing high-quality education and training). Artificial distinctions between social and economic policy must fall away, because the two are inextricably tied in defining the environment for productive competition. These are positive and constructive roles for virtually all of a nation's institutions in competitiveness, whether they are schools, consumer societies, or the judicial system.

The ideas I have outlined have many other important implications for government policy, only a few of which can be sketched here. First, sound macroeconomic policy is necessary but not sufficient for productivity growth. There is consensus about much of macroeconomic policy as it relates to competitiveness, e.g., prudent government finances, policies to encourage savings, reduction of government's role in the economy, and many nations have gone through macroeconomic liberalization and stabilization. Yet this does not ensure a prosperous economy unless the microeconomic foundations of productivity and productivity growth are present.

Second, government policy must go beyond renouncing negative roles in the economy and pursue its affirmative agenda. Governments around the world today are much better at articulating

what they will not do—"We will not subsidize; we will not protect; we will stop owning businesses"—than what they will do. Government has essential roles in ensuring that appropriate factor conditions are present as well as setting a context that encourages upgrading through appropriate policies in areas such as antitrust, intellectual property, taxation, and the regulation of product quality, safety, and environmental impact.

Third, while there are important economywide (horizontal) roles of government in enhancing general purpose inputs and institutions (e.g., schools, ports, the legal system), there is also an important role for government in facilitating the upgrading of clusters. Clusters are providing a new way of thinking about the economy and of organizing economic development efforts in many states and nations. Clusters extend thinking about many aspects of economic policy, such as export promotion, attraction of foreign direct investment, science and technology policy, technical and vocational training, and infrastructure. Clusters provide a means for bringing together firms and institutions and identifying the impediments and constraints that are holding back productivity.

A cluster orientation is very different than industrial policy. In industrial policy, government targets "desirable" industries and intervenes in competition to tilt market outcomes in a nation's favor. In cluster theory, all clusters can improve productivity and deserve attention. The focus is not on distorting competition but removing obstacles and constraints to productivity growth.

Fourth, cluster theory suggests new levers for government in improving productivity and prosperity. An example is demand side policy. Most treatments of economic policy ignore demand side considerations altogether, or advocate such things as pumping up aggregate demand or expanding the size of the local market. Cluster theory focuses not only the size of local demand but its role in upgrading and innovation, which depends more on the quality or nature of local demand than its size. Regulation or policies that encourage the early development of local markets for new products, or which encourage the purchase of advanced product varieties, can have a far greater impact on competitiveness than supply side policies. Such demand-side policies were among

the most positive aspects of Japanese economic policy, which overall has had serious weaknesses. In industries such as robotics and machine tools, users received incentives to purchase the latest generation of products.

Finally, the new thinking about clusters and the role of location in competition provides a way to sort out the appropriate roles of government at the global, regional, national, state, and local level. It is clear that each of these geographic units is relevant to competition in somewhat different ways. One clear implication of the new thinking is a more important role for local and state governments in economic policy than has been typical. Another implication, growing out of some of my recent work, is the productivity benefits of coordination among neighboring countries.

*The agenda for companies*

The role of location in competition suggests important new agendas for companies. Thinking about competition and competitive strategy has been dominated by what goes on inside companies. If anything, location is seen as diminishing in importance as globalization allows companies to source financial capital, goods, and technology from anywhere and site operations at other locations to access inputs there.

Yet the prominence of clusters suggests that much of competitive advantage lies *outside* companies and even outside their industries, residing in the locations at which their business units are based, i.e., companies have an important stake in the business environment of their business units that goes far beyond local taxes, electricity costs, and wage rates. The health of the cluster is important to the health of the company. Companies may actually benefit from having more local companies in the same field, in spite of the tendency to think that this will create more local competition, drive up input costs, and make it more difficult to retain employees.

While a full treatment is beyond the scope of this essay, a few implications for companies are illustrative. First, global strategy,

or more generally competing across locations, must harness the advantages of spreading activities across locations but also capture the innovation advantages of a clear headquarters (or home base as I call it). Increasingly, multinational companies are locating some product line home bases outside of their home nation.

Second, private investments in "public" goods are common and often economically justified. Investments in cluster-specific assets such as university research and training centers, specialized infrastructure, and testing laboratories yield returns even though other firms may also benefit. Investments by individual firms can be tied to special access to such assets, which helps to address free rider problems. The spillover benefits to many firms and industries mean that many firms have an incentive to contribute even if they do not have large market shares.

Third, cluster theory suggests a prominent role for trade associations and other collective bodies, which can be competitive assets rather than merely lobbying and social organizations. Associations, especially if they are organized around clusters rather than individual industries, can take on collective functions and help capture spillovers and linkages.

Fourth, cluster theory casts a whole new light on the question of corporate location. Globalization and the ease of transportation and communication have led to a predictable surge of outsourcing, with companies relocating many facilities to low wage, taxes, or other input costs. Outsourcing can reduce locational disadvantages, but cluster theory suggests a more complex story. Locations with low wages and low taxes often lack efficient infrastructure, available suppliers, timely maintenance, and other conditions that clusters offer. Many companies have discovered that these productivity disadvantages can be more than offsetting. Yet the low wages or taxes are easy to measure up front, while productivity costs are hidden and unanticipated.

Locating in an existing or developing cluster, then, often lowers total cost, and increases innovation potential. Home base or headquarters activities should sometimes move to locations outside a company's home country if there is a more vibrant cluster

elsewhere. There is the beginning of a shift back toward clusters in locational choices, both in international location (where some outsourced activities are moving back to advanced nations) and locational choices within nations (where remote sunbelt or other sites are giving way to locations near clusters).

Finally, when activities are located in places isolated from other firms in the same field, the challenge is to build a cluster. This involves wooing suppliers, encouraging local institutions to make supporting investments, finding ways to build the local stock of specialized inputs, etc. Corporate location, then, involves far more than building offices or factories.

*Clarifying contemporary policy dilemmas*

The role of location in the "new" microeconomics of competition informs some vexing policy issues that have resisted progress. One is government and corporate practice toward the environment. Standard economic models, with a static, cost minimization framework, make environmental improvement as inevitably costly and hence involving a tradeoff with competitiveness. In the new microeconomics, competitiveness arises from rising productivity in the use of resources. Innovation in products and processes is never ending. Virtually all forms of corporate pollution involve the inefficient use of resources, because raw materials are wasted, processes are not reused, and hard to handle toxic materials are involved. Investments to improve environmental performance through better technology, then, will often improve productivity and partly or fully offset their cost in the long run. This suggests that environmental regulation should be focused on reducing the transactions costs of the regulation itself and facilitating product and process innovation. Corporate practice should focus on viewing environmental performance not as a regulatory matter but an essential component of productivity.

Another troubling problem confronting us today is inequality, which has been rising in the recent decade in parallel with the opening of competition in the world economy. Some see inequality as an inevitable flaw in capitalism. Through the lens of these

ideas about competition among locations, however, inequality is more a failure of government policy and institutions than a failure of capitalism. The focus should be on addressing the root causes of inequality, not stopping or distorting the competitive process in the vain hope of achieving equal outcomes.

In a global economy, it is clear that individuals with high skills will prosper because of the widening market for their services, while individuals with low skills will have to "compete" with lower-wage workers in other nations for mobile jobs. At the root of inequality, then, is differences in skills, incentives, and opportunities available to individual citizens. Poor education and training systems are not the fault of capitalism but of public policy. The lack of equal opportunity facing many citizens is not inevitable but a failure of society and government as well.

Inequality is also exacerbated by two other causes, both addressable by appropriate policy. One is limits to competition—collusion, monopoly, and artificial restrictions on entry—that gives business owners too much power to appropriate returns. The other is distortions to capital markets that penalize long-term investment in capital equipment, technology, and workforce development.[3] Capitalism is not the root cause of inequality, then, but rather the particular context for capitalism that has been created in countries such as the United States.

We can also apply this thinking about location and competition to a range of other problems, such as the economic distress of inner cities,[4] the appropriate social roles of business, and the challenges now facing advanced nations such as Japan and Germany. All require that we connect economic concepts and economic thinking to the reality of actual competition and to the concerns of business. I am hopeful that the gap between economics and business will continue to narrow, so that economics can gain the influence in business that Adam Smith's work presaged.

*Notes*

1. M.E. Porter, Chapters 3 and 4, 1990.
2. I use the term exports to apply to industries that compete outside a geographic area even if they are destined for another state and not a foreign country.
3. These issues are controversial. For a discussion, see Denham and Porter (1995).
4. M.E. Porter (February 1997) and M.E. Porter (1995).

*References*

R. Denham and M.E. Porter, "Lifting All Boats: Increasing the Payoff from Private Investment" in the *U.S. Economy*, Capital Allocation Subcouncil report to the Competitiveness Policy Council, 1995.

M.E. Porter, "New Strategies for Inner City Economic Development," *Economic Development Quarterly*, Volume 11, Number 1, February 1997.

M.E. Porter, "The Competitive Advantage of the Inner City," *Harvard Business Review*, May–June 1995.

M.E. Porter, "*The Competitive Advantage of Nations*," The Free Press, New York, 1990.

## Part 3. Survey question detail*

| | Question |
|---|---|
| **I. Company Operations & Strategy** | |
| 9.07 Nature of Competitive Advantage | Competitive advantages of your nation's companies in international markets |
| 9.14 Value Chain Presence | International companies in your country |
| 6.09 Attention to Staff Training | Staff training is |
| 9.06 Capacity for Innovation | The state of technology in companies |
| 9.03 Control of International Distribution | To sell internationally, companies in your country |
| 9.04 Extent of Branding | Companies who sell internationally |
| 9.10 Breadth of International Markets | International companies in your country |
| 9.11 Extent of Regional Sales | International companies in your country |
| **II. Quality of the National Business Environment** | |
| **A. Factor (Input) Conditions** | |
| **1. Physical Infrastructure** | |
| 4.01 Overall Infrastructure Quality | Overall infrastructure in your country is |
| a. Basic | |
| 4.02 Road Infrastructure Quality | Road infrastructure |
| 4.09 Power Infrastructure Adequacy | Your country |
| 4.03 Railroad Infrastructure Development | Railroads are |
| 4.05 Port Infrastructure Quality | Port facility and inland waterways are |
| 4.04 Air Transport Infrastructure Quality | Air transport is |
| b. Advanced | |
| 4.06 Telephone / Fax Infrastructure Quality | Telephones and fax machines are |
| 4.08 International Direct Dial Communications Costs | Direct dial international phone service is |
| 4.11 Quality of Warehousing, Storage, & Distribution (logistical) Networks | Warehousing, storage facilities, and distribution networks are |
| **2. Administrative Infrastructure** | |
| 8.14 Safeguarding of Personal Security | The police in your country |
| 8.05 Judicial Independence | The judiciary in your country is independent and not subject to interference by the government and/or parties to the dispute |
| 8.10 Adequacy of Private Sector Legal Recourse | Private business has recourse to independent and impartial courts for challenging the legality of government actions and/or regulations |
| 2.02 Admin. / Regulatory Burden | Administrative regulations that constrain businesses are |
| **3. Information Infrastructure** | |
| 9.02 Business Information Availability | Information about business in your country is |

* Reprinted by permission of Michael E. Porter. This is the questionnaire used with Porter's, *Measuring The Microeconomic Foundations of Economic Development*, GLOBAL COMPETITIVENESS REPORT 1998 50 (Geneva: World Economic Forum) (1998).

| Low Score | High Score |
|---|---|
| low cost labor or natural resources | unique products and process |
| are primarily involved in production | conduct their own production, product development, distribution and marketing |
| generally neglected | heavily emphasized |
| imitate or source all technology exclusively from foreign companies | pioneer new products or processes |
| employ foreign distribution and marketing arrangements | have their own foreign distribution and marketing organizations |
| sell commodities or market under foreign brands | have their own brands |
| sell primarily in high-income markets | sell in both high-income and developing markets |
| sell little to neighboring countries | sell extensively to neighboring countries |
| | |
| | |
| far worse than in your major trading partners | far superior to that in other countries |
| | |
| constrains business development | meets business requirements very well |
| suffers from severe power shortage | has sufficient power generation capacity |
| underdeveloped | highly developed |
| underdeveloped | extensive and sufficient |
| inadequate | modern and efficient |
| | |
| not in widespread use and difficult to connect | widely used and highly reliable |
| prohibitively expensive | very affordable |
| grossly inadequate | well developed |
| | |
| do not effectively safeguard personal security so that it is an important consideration in business activity | effectively safeguard personal security so that it is not an important consideration in business activity |
| not true | true |
| not true | true |
| pervasive | minimal |
| | |
| scarce and hard to access | extensive and easily available |

| | Question |
|---|---|
| 9.15 Computer Utilization | Use of computers in your country is |
| **4. Capital Availability** | |
| 3.01 Financial Market Sophistication | The level of sophistication of financial markets in your country is |
| 9.16 Stock Market Access | Stock markets in your country are |
| 3.02 Venture Capital Availability | Venture capital is |
| **5. Human Resources** | |
| 7.05 Quality of Primary and Secondary Education | The primary and secondary system in your country |
| 7.04 Adequacy of Average Years of Schooling | Average years of schooling of the labor force is |
| 5.12 Quality of Scientists & Engineers | Your country |
| 6.16 Quality of Business Schools | Your country |
| **6. Science & Technology** | |
| 5.04 Public Investment in Non-Military R&D | Your country |
| 5.03 Quality of Science Research Institutions | Scientific research institutions in your country are |
| 5.06 University/Industry Research Collaboration | Research collaboration |
| **B. Demand Conditions** | |
| 9.01 Buyer Sophistication | Buyers in your country are |
| 9.12 Demanding Regulatory Standards | Regulatory standards (e.g., product standards, energy, safety) in your country are |
| 1.14 Openness of Public Sector Contracts | Public sector contracts are |
| **C. Related and Supporting Industries** | |
| 9.13 Domestic Supplier Quantity | Suppliers available in your country are |
| 9.05 Domestic Supplier Quality | Supplier capabilities in your country are |
| **D. Context for Firm Strategy and Rivalry** | |
| 5.11 Intellectual Property Protection | Intellectual property is |
| 8.03 Irregular Payments (Bribery) | Irregular, additional payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection, or loan applications are |
| 1.01 Tariff Liberalization | The level of import tariffs and quotas in your country |
| 1.02 Hidden Trade Barrier Liberalization | Hidden import barriers (other than published tariffs and quotas) are |
| 1.13 Openness to Foreign Investors | Foreign investors |
| 9.17 Intensity of Local Competition | Competition in the local market is |
| 9.09 Extent of Locally Based Competitors | Competition in the local market consists primarily of |
| 8.02 Effectiveness of Anti-trust Policy | Antitrust or anti-monopoly policy in your country |

| Low Score | High Score |
|---|---|
| limited or non-existent | sophisticated and widespread |
| | |
| lower than international norms | higher than international norms |
| accessible only to the largest firms | open to new and medium-sized companies |
| not readily available for risk-taking entrepreneurs | readily available for new business development |
| | |
| fails to equip young workers with basic skills | offers rigorous training in language, math, and sciences |
| far below international standard | well sufficient for your country to compete in the world economy |
| lacks well-qualified scientists and engineers | has a large pool of competent scientists and engineers |
| does not have a well-developed management education system for business executives | has first-class business schools to train managers |
| | |
| spends insufficient public funds in non-military R&D | commits substantial public resources to non-military R&D |
| not internationally reputable | truly world class |
| does not exist between universities and industry | is very close between universities and industry |
| | |
| unsophisticated; choose based on the lowest price | knowledgeable, demanding, and buy innovative products |
| lax or non-existent | among the world's most stringent |
| not adequately open to foreign investors | open to foreign bidders |
| | |
| largely non-existent | numerous and include most important materials, components, equipment, and services |
| inefficient, have little technological capability | internationally competitive, assist in new product and process development |
| | |
| not adequately protected in your country | well protected in your country |
| common | not common |
| significantly raises the cost of acquiring foreign materials and equipment for your firm | is not a serious impediment to your firm's access to foreign materials and equipment |
| an important problem in your country | not an important problem |
| may not acquire control in a domestic company | are free to acquire control of domestic companies |
| minimal. Market positions rarely change | intense. Market shares fluctuate constantly |
| imports | companies with operations in the country |
| is not effective at promoting competition | effectively promotes competition |

## Part 4. The five forces*