

Economic Development and “National Competitive Advantage”

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Abstract

Despite the preponderance of economic theory and research which argues to the contrary, the notion that national economies stand in a fundamentally competitive relationship with one another remains surprisingly widespread. In recent years, some of the most influential impetus for this misperception has come from Michael Porter's book, *The Competitive Advantage of Nations*. This present paper examines Porter's conceptualization of “the competitive advantage of nations” in relation to economic development and trade theory. It is argued that Porter neither proposes nor demonstrates in any way that nations stand in a competitive relationship to one another as regards trade and economic development.

Key words:

comparative advantage, competitive advantage, economic development,
Michael Porter

I. Introduction

It is universally agreed that it is better to be rich and healthy than to be poor and sick. This is why most governments, most of the time, give highest priority to the issue of raising the standard of living of the nation. To, in other words, economic development. The emergence of many newly independent states in the aftermath of World War II provided particular impetus to efforts to better understand the nature of economic development. In reflection of this, it was only during the early postwar period that development economics emerged as a distinct field of study.

Economic development is a complex phenomenon that is arguably linked to almost

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every facet of a nation's physical, socio-cultural, political, and economic environment. It is not surprising, therefore, that numerous contending perspectives have emerged regarding the fundamental nature of economic development, and of appropriate governmental policies to support it. Research efforts and practical national experience over the last half of the 20th Century have clarified the relative merits of some of these disparate views of economic development.

One newer concept that seems to have considerable, and growing, influence over popular and policy conceptions of the nature of economic development is centered on the concept of "national competitive advantage". This concept has its roots in research initiated by Michael Porter of Harvard University's School of Business and first reported on in his 1990 book, The Competitive Advantage of Nations¹⁾. The title of Porter's book suggests an, intended, linkage to or contrast with the established concept of national "comparative advantage", which is a fundamental component of economic explanations of international trade.

Unfortunately, the book's title is also consistent, syntactically, with the erroneous idea that nations fundamentally stand in an economically competitive relationship with each other. At numerous places in his book Porter, himself, explicitly denies this latter proposition. Nevertheless, the book and subsequent appropriations of its terminology have often contributed to the widely held belief that nations stand in a "zero-sum" competitive relationship with one another regarding both trade and overall economic development.

This present paper attempts to outline the fundamental conceptual issues and postwar pattern of economic development and relate these to the concept of national comparative advantage found in trade theory and to the concept of national "competitive advantage" introduced in Porter's book.

The paper first looks at the issues central to economic development and its objectives. Secondly, trade theory and the concept of comparative advantage are discussed in the context of postwar economic development. Thirdly, the concept of competitive advantage presented in Porter's book, and its relationship to his earlier research, is discussed. Fourthly, the paper addresses the question of what, if any, is the connection between Porter's conceptualization of the "competitive advantage of nations" and economic development. A concluding discussion assesses the relevance for national economic development policies.

II . The Fundamental issues in economic development

The process of economic development can be both shaped by and re-shape almost every aspect of a nation’s life. Social class distinctions, how individuals perceive their relationship to society as a whole, existing social, economic, and cultural institutions can all affect the course of economic development and, in turn, be altered by it. It is true, as well, that “man does not live by bread alone” and, for some people the loss of valued traditions and norms that can accompany economic development outweigh its benefits.

But for most people, most of the time, the benefits of economic development are unambiguously attractive and they expect this to be a high-priority policy goal of their government. As it happens, the benefits of successful economic development appear to be more than purely material. Efforts to measure more broadly the well-being of a nation’s citizens show that those who enjoy a materially higher standard of living also tend to enjoy a higher standard of living in many other, less materialistic, dimensions as well.

At root, however, economic development is focused on raising the material standard of living of a nation and this is commonly measured in terms of gross national product (GNP) per capita or gross domestic product (GDP) per capita. These are both measures of total output divided by total population. The higher the value of total output per head of population, the higher can be the standard of living they enjoy.

This can, equivalently, be discussed at a more micro-level in terms of the level of output per worker in an hypothetical “representative” factory where productivity is equivalent to the national average. In this case, the relevant measure is the value of the output created per worker in some standard unit of time. This is measured in terms of value added per capita (i.e. per worker) per unit of time (for example, per hour, week, or year).

Value-added in a company or factory is the difference in value between what is bought-in from outside suppliers and the value of the final output (see Figure 1). The creation of value-added is the basis of all economic activity and the more efficiently value-added is created the higher can be the standard of living.

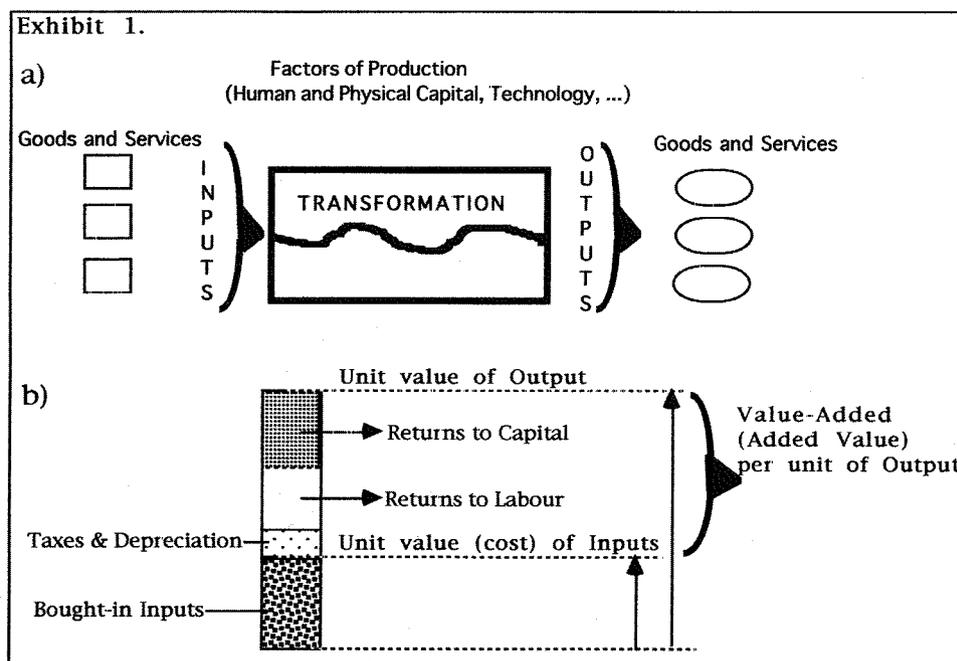
The essence of economic development is, then, increasing the overall level of value-added per capita in a nation. As Figure 1. b) suggests, this is determined by the difference between the value of unit inputs and unit output -and, of course, by the number of output units produced per capita per unit of time (hour, week, month). Measures of national

average value-added per capita, such as GNP per capita, reflect the average productivity level of the overall national economy. The higher is this productivity, the higher can be the national standard of living.

National economic development, therefore, concerns the issue of raising productivity levels (value-added per capita levels) in a nation. As examination of Figure 1. indicates, all else being equal, per capita value-added can increase if;

- a) the unit cost of inputs is reduced (for example, through external, upstream, cost-reducing productivity increases),
- b) the unit value of output is increased (for example, through value-increasing change in the nature of output) and.
- c) the number of units of output per capita per hour is increased (for example, through improved production process technology, skills, or know-how).

The central issues of contention in economic development have been concerned with



how best to ensure that resources are allocated in such a way as to increase value-added per capita. How, in other words, to ensure that total inputs are converted into outputs in such a way as to maximize national productivity and secure a rising standard of living. At the heart of this question is the issue of the extent to which the allocation of inputs and outputs should be influenced by governmental planning and influence as opposed to

market competition.

This has been a defining issue of the 20th Century evident, at its extremes, in the broad division of the world into the communist bloc of countries emphasizing central government economic planning and the market economy countries emphasizing market-based solutions to resource allocation issues. The superior economic performance of the market economies, and the economic and political collapse of communism towards the end of the century resolved the extremes of the issue in favour of market competition and market-based approaches to economic development.

III . Market Failures and Government Intervention

The collapse of communism did not, however, establish the superiority of a completely “laissez faire”, or “hands-off” role for government, which was never the norm in even the market-based economies. Subtler questions of when and how government should intervene in the economy remain. The general economic prescription is that government intervention is appropriate when and where markets fail to generate nationally optimal outcomes.

One such example of “market failure” can occur if, for example, costly research and development activity in a specific company generates knowledge which others can use without paying for it. In this case, the firm’s costly R&D activity generates value for which it is not rewarded and, under those circumstances, it is likely to invest less in such activities than is socially optimal. Where such “externalities” are an important aspect of an activity a case can be made for government to subsidize the activity.

The broad range of government initiatives in education, health, transportation and other infrastructure creating activities can be seen as examples of government intervention which addresses activities for which there are important, even crucial, externalities from such investments which market forces would not adequately reward. If government does not intervene, these investments will not be made at all -or will be occur only at a lower and less than optimal level.

Another example of market failure can occur when, as is almost usual in modern economies, markets are less than purely competitive. This can be because participants are able and willing to subvert purely competitive market outcomes in order to increase the benefits which accrue to them. This is a distinct possibility when, for example, the industry is oligopolitic and contains there are relatively few participants. In such circumstances firms

are more able to collude with one another in order to set prices at levels which most benefit themselves. Here there can be a need for government legal and institutional intervention and oversight to ensure that outcomes are based on competitive, not collusive, activity.

A similar, more extreme, example occurs when the nature of an economic activity, such as electric power or water distribution, is such that it is, on technical grounds, most efficiently carried out by a single firm. In these cases government intervention sometimes takes the form of a national (government controlled) monopoly or, if the activity is carried out by a privately-owned monopoly, government control of output pricing.

It is important to note, as the above discussion indicates, that the process of economic development does not inherently involve any interaction whatsoever with other countries.²¹ This is why the general analytic approach to economic development is, and must be, based on concepts and assumptions which do not presume the existence of, nor logically depend upon, such interactions with other countries. Such is the case with regard to such conceptual foci as; the efficient allocation of resources, competition, and “market failures” -none of which, as concepts, assume or require the presence of international economic activity.

Nevertheless, it is a fact that a great deal of the Post World War II controversy surrounding economic development centered on the issue of international trade. In particular, a central division in economic development approaches in the 1950's and 1960's was between those advocating an “import-substitution” industrial policy and those advocating an “export-oriented” industrial policy.

In either case, there is an implicit focus on national industrial policy -governmental policy with regard to industrial development. The approaches diverge in their implications regarding international trade. Discussion of these two approaches and of their apparent relative effectiveness is therefore best deferred until after a brief overview of trade theory and, specifically, the venerable concept of “comparative advantage”.

IV. The Fundamentals of Comparative Advantage

If two parties voluntarily agree to trade with each other (for example; apples for oranges, or clothing for money) we can, and do, assume that both parties find it in their interest to do so. If the parties live on opposite sides of an international border, then they are engaged in international trade which each party finds it in their interest to take part in.

International trade theory takes it for granted that the direct parties to an exchange each benefit from the trade and is therefore concerned with larger questions. One of these is, does such trade benefit not only to the direct parties involved but their nations as well? Another is, what accounts for the patterns of trade that occur between various countries?

The origins of modern trade theory lie in an analysis presented in 1817 by David Ricardo which introduced the idea of “comparative advantage” and demonstrated that trade is mutually beneficial to the nations between which trade occurs. In its essentials, Ricardo’s analysis showed that trade with other countries allows nations to shift labor resources from activities where they have lower productivity into those where they have higher productivity.

What made the Ricardian theory of comparative advantage particularly important is that it showed that trade can be mutually beneficial to two countries even if one of the two countries has higher productivity in all products. Krugman and Obstfeld³⁾ cite the example of clothing, an industry in which advanced countries such as the USA have much higher productivity than newly industrializing countries such as China. Nevertheless, advanced countries import a great deal of clothing from countries such as China, and export hardly any to China.

The reason for this is that, because the technology of clothing manufacture is relatively simple, the productivity superiority of advanced industrialized countries over China, while real, is less than their productivity superiority over China in more technologically sophisticated products. Thus, by importing clothing from China they can divert labor resources to other industries where they can be even more productively employed. China, likewise, can import more technologically sophisticated products from advanced countries and thereby divert resources from where it is relatively less productive into other industries, such as clothing manufacture, where it can be relatively more productively employed.

Trade theory nowadays is still importantly based on the logic of Ricardo’s analysis. Moreover, the Ricardian formulation of comparative advantage is broadly consistent with observed patterns of trade. That is to say, countries do tend to export products in which their labor productivity is higher and import those in which it is lower. Thus, trade is mutually beneficial to the participating nations involved because it allows them to attain higher levels of productivity. Higher levels of national productivity are precisely the focus of economic development. Let us now return therefore to the earlier discussion of economic development and postwar economic development policy trends.

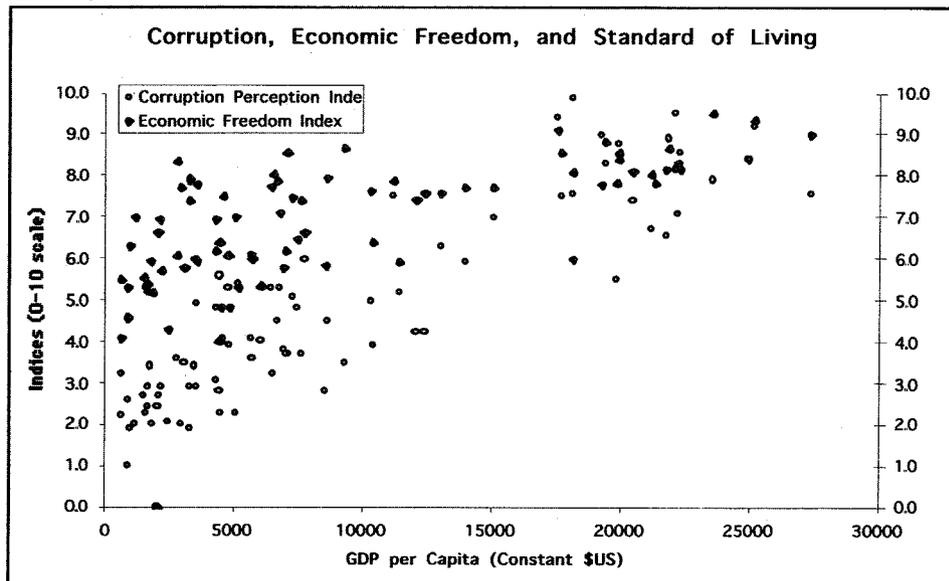
V. Trade and Economic Development

It is, first, necessary to emphasize that economic development theory and experience to date make it clear that the fundamental requirements for raising the standard of living of a nation do not inherently involve other countries. What is most important are such inherently domestic issues as; raising the education and literacy level of the population, developing stable financial institutions, eliminating corruption and, most generally, stimulating and maintaining a free economy in which market forces are not excessively inhibited by individuals or by government intervention. (see Exhibit 2)

While economic development does not fundamentally dependent upon international trade, it is a fact that engaging in international trade furthers the process of economic development. This is because, as the above discussion indicated, trade serves to increase the average productivity level of participating nations. This is evident in the course of post Second World War economic development.

In the early postwar period there was a strong consensus that economic development in the less-developed countries required an active national industrial policy. There was controversy however as to how best to choose specific industries as the focus of development. The major dichotomy was between approaches that focused on “import substitution”, or

Exhibit 2.



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the development of domestic production to take the place of imports, and “export-oriented” approaches which focused on the development of industries that could be competitive in foreign markets.

There is considerable debate as to whether or not a targeted industrial policy of either type is necessary for economic development. What is now clear, however, is that countries which adopted export-oriented industrial policies enjoyed much higher rates of economic development than did countries which adopted import-substitution industrial policies. Nevertheless trade has played an important role in economic development theory and practice.

Consider, first, that in the absence of trade domestic production must necessarily rely on, and be constrained by, domestic resources and production possibilities. Trade theory informs us that an industrial policy focused on developing import substituting industries will necessarily involve replacing lower-cost imports with higher-cost domestic production. This consumes relatively scarce resources and uses them less productively than they could be employed in elsewhere in the domestic economy.

It is also not surprising, given that government intervention in the economy is best focused on rectifying market failures, including inadequate levels of competition within an industry. import substitution industrial policies seek to divert more resources to supported industries than they could attract without government intervention. In so doing, such policies expose these industries to a level of competition which is less, not more, than it would otherwise be. In particular, it will be less than it would be if the country were open to imports.

In the aggregate, this will tend to lower the levels of per capita value-added achieved. On the other hand, in the presence of trade, a country is more likely to have access to products at the lowest possible costs -because they have access to lower-cost foreign suppliers and, in addition, domestic suppliers who face a level a higher level of competition, and more incentives to use resources productively. In addition, some domestic industries, with access to foreign as well as domestic markets for their products, will be better able to reap economies of scale not otherwise attainable. These factors all make it more likely that an export-oriented industrial policy will better ensure that resources are allocated productively and that value-added per capita is maximized.

In summary, then, economic development is necessarily concerned with raising the average level of value-added per capita in a nation. This requires that scarce resources be

allocated among competing uses so as to ensure that they are used most productively. This is most likely to occur in a market-based economy. The role of government intervention in a market-based economy should be limited to redressing market failures. Among the potential sources of market failure is a lack of competition.

The role of trade in economic development is related to economic development then in the following ways;

1. It can increase the level of competition faced by domestic industry, and thereby better ensure that resources are allocated to their most productive uses.
2. It can reduce the cost of relatively scarce resources, or products using them, by enabling their import from countries where they are relatively less scarce.
3. It can allow some industries, through exports to foreign markets, to achieve higher levels of productivity through economies of scale which would not be possible within the domestic market alone.

We turn now to the question of whether the concept of “national competitive advantage” has any relevance to the economic development of a nation.

VI. What is “national competitive advantage”?

The research reported in Michael Porter’s book The Competitive Advantage of Nations is best understood in the context of his previous research. His early research was focused on the nature of competition within industries and his influential book, Competitive Strategy⁴⁾, significantly clarified and broadened the parameters for analyzing competition in an industry. It was based upon a great deal of extensive analysis and case study research examining specific industries.

He proposed an analytic framework which, in addition to rivalry between existing firms within an industry, explicitly brought upstream supplier industries, downstream customer industries, industries supplying substitute products, and potential new industry entrants into the industry analysis of competitive strategy. A subsequent book, Competitive Advantage⁵⁾ addressed the question of how, given the nature of industrial competition, a firm can seek to achieve and sustain superior returns.

As this makes evident, Porter’s initial orientation was not to national economic development nor to international trade, but to corporate, firm-level, strategic management. His research in this latter area led him however, to an appreciation of the extent to which highly competitive firms in some industries tend to be disproportionately located in one or a few

a specific locations internationally. This was the impetus for a major collaborative research effort to examine, through intensive international case studies, a number of industries which displayed this pattern. It is this research which is reported on in The Competitive Advantage of Nations.

Porter's earlier work has been very influential not only among academics but also among businessmen and has deepened the level of academic understanding and the sophistication of business practice regarding competitive strategy in industry. His more recent work has been similarly influential, but has had the unfortunate, and unintended, side-effect of encouraging many businessmen and lay persons to believe that nations stand in a fundamentally competitive relationship with each other.

The research reported in The Competitive Advantage of Nations studied a group of industries in which firms displayed both success in international markets and a pattern of geographic concentration in particular countries. The study revealed that the geographic concentration and the success in international markets were related. Specifically, firms in these industries benefited from a complex interweaving of supplier and other, supporting, industries and firms which were disproportionately present in their chosen location.

Porter argues that these industry-specific "clusters", in and of themselves, provide participant firms and industries with an advantage in international markets. The research devoted a great deal of effort to identifying and understanding the nature and function of these inter-firm and inter-industry linkages. In addition, some conclusions are drawn as to how specific supportive infrastructure has emerged in support of the cluster activities as a whole. Finally, the research examined the question of how such clusters of industry and firms were formed.

It appears that, in most cases, such clusters have deep historical origins and much happenstance in their evolution. Accordingly the processes by which the clusters emerged display few commonalities -except in that they tend to be related to some set of basic (and differing) regional characteristics which contributed to their beginnings. Such "basic regional characteristics" can be seen, then, as supportive advantages which the location offered and which could stimulate the emergence of an industry-specific cluster. "Could", not "would" is the operative word -because there is a distinct flavour of historical accident and chance evident in most of the clusters examined.

The locational clustering of industries is not a new phenomenon, nor is it, in itself, a novel object of research. Indeed, it has long been a topic of interest to economic

geographers.⁶⁾ The topic has attracted increased attention in recent years and this has led to advances in efforts to develop more rigorous models of the processes involved in cluster formation and dissolution.⁷⁾

However, whereas much research by economic geographers has been concerned with why and how such industrial centers emerge in particular locations, Porter's emphasis is much more on specific industry clusters that are the geographic base for globally successful firms and on understanding how these clusters function internally. In particular, he is concerned with how they affect the global competitive strengths of cluster member firms.

VII. (Locational) Comparative Advantage as a basis for (Industry) Competitive Advantage

Porter's book is concerned with the competitive strength of firms and industries-not countries. It could not be otherwise, because it is firms and industries which compete, not countries. The term "comparative advantage", on the other hand, applies to countries or regions of countries, not to firms and industries. How, then, are these two concepts related? In brief, the exploitation of the comparative advantages of a particular location (e.g., nation or region) makes possible higher productivity than is attainable in locations which do not possess those same advantages. This higher productivity, in turn, provides relevant firms and industries located there with a competitive advantage over firms less favourably located.

Consider, first, how traditional examples of comparative advantage based on natural endowments can be relevant to the competitive strength of firms and industries which benefit from them. The Burgundy region of France possesses a soil, topography, and climate which is particularly suitable for the growing of grapes. This gives the region a comparative advantage (relative to other products and regions) in wine production. All else being equal, a company choosing to produce wine in that region will, because of those "natural" location-specific productivity advantages, have a competitive advantage over competing companies located in less advantaged locations.

But Burgundy, today, provides much more than just these "natural" productivity advantages. There is also in the region a wide-ranging web of "man-made" expertise and capabilities embodied in a host of supporting industries and infrastructure. These man-made aspects of the location also contribute to the present day productivity-enhancing comparative advantage of the Burgundy region for wine production.

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It is the higher productivity made possible by the combination of both natural and man-made comparative advantage which provides firms which locate there with a competitive advantage over firms in less favourable locations. In other words, the comparative advantages of a location (country or region) can be the basis of a competitive advantage for specific firms and industries located there -regardless of whether the comparative advantages are rooted in purely natural or in the man-made characteristics of a location.

Porter’s focus is on a particular type of man-made “comparative advantage” , emerging from some more primitive “natural” comparative advantage. These primitive comparative advantages provide firms and industries with an initial competitive advantage, at least locally. But the emphasis in Porter’s analysis is on the subsequent evolution (often over a long period of time) of an organically interwoven mutually supportive cluster of firms and industries which he argues, in itself, can generate a significantly greater comparative advantage for that location. This, in turn, becomes the basis of a significantly greater, international, competitive advantage for the specific firms and industries which comprise the cluster.

It, of course, follows that the exploitation of such a man-made “emergent” comparative advantage, because it raises productivity, is beneficial to national economic development -just as is the effective exploitation of any other type of comparative advantage. But, clearly, Porter does not imply or argue for the proposition that nations stand in a competitive relationship to one another with respect to either trade or economic development. Porter emphasizes that, on the contrary, these are not arenas for zero-sum competition between nations.

They may also not be arenas for a focused and activist national development policy. Porter does argue that the comparative advantage provided by such man-made industrial clusters is of particularly great importance in a modern industrial economy. But, perhaps because the formation and operation of such clusters is still only poorly understood, Porter does not argue for a narrowly targeted industrial policy focused on a nation’s “cluster” industries. Indeed, Porter emphasizes the importance of fairly mainstream government development initiatives focused on education and physical and institutional infrastructure development. For the present, it would appear, the role of cluster analysis in national development policy is necessarily limited.

This is reflected the views of the World Bank, as expressed by R. S. Khemani;

“Competitiveness should be equated with productivity: It relates to measures

that firms, industries, regions and governments cautiously adopt to foster, maintain and increase productivity on a sustainable basis. (...) The popular business literature deal with countries competing with each other. However, it is firms and industries, and not nations that compete in the global market. (...) Focusing on specific clusters should only be used as a window to identify systemic problems that impede productivity and competitiveness.”

Thus, the considerable interest in and research on industrial “clusters” stimulated by Porter has, thus far, not generated any clear implications for economic development policy. It remains to be seen how fruitful his line of research will ultimately be in furthering understanding and practice of economic development. What is less ambiguous, however, is the unfortunate stimulation the title of his book has given to the popular misperception that nations stand in an inherently competitive relationship with one another in terms of trade and economic development. This is because it links, at least syntactically, “nations” and “competitiveness”. Krugman has described this usage of the word competitiveness as a “poetic way of saying productivity”, and has called the enterprise a “dangerous obsession”. It seems clear that the danger is real, given how widely Porter’s work has been misunderstood by the general public, business people, and even some academics,

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Endnotes

- 1) Porter, *The Competitive Advantage of Nations*. New York : The Free Press, 1990. Republished with a new introduction, 1998
- 2) A country existing in total autarchy would, just the same, have some standard of living and it would be dependent on the level of per capita value-added generated. This level, and the standard of living it supports, might be relatively higher or lower than those of other countries, or that of the same country at some point in the past.
- 3) Krugman and Obstfeldt, *International Economics, Theory and Practice, Fifth Edition*, Reading ; Addison-Wesley, 2000
- 4) Porter, *Competitive Strategy : Techniques for Analyzing Industries and Competitors*, New York : The Free Press, 1980
- 5) Porter, *Competitive Advantage : Creating and Sustaining Superior Performance*, New York : The Free Press, 1985
- 6) See for example, F. E. Ian Hamilton's article “Models of Industrial Location” in, Chorley, Richard J. and Peter Haggett *Socio-Economic Models in Geography*, University Paperbacks, Methuen, London, 1967.
- 7) See, for example, Fujita Masahisa, et al., *The Spatial Economy : Cities, Regions, and International Trade* The MIT Press, Cambridge, 2002