

“Globalization and Economics”

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Globalization and Economics

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Globalization: What is it? What does economics have to say about it? What does it imply for the prospects for the U.S. economy? And what does it imply for the economics profession?

What is Globalization?

You hear the term globalization all the time. There are demonstrations against it, speeches in favor of it, and incessant talk about it. If you do an Alta Vista search for globalization you get over 300,000 hits; if you mention a book with globalization in the title to publishers you can see the saliva; and if you put globalization in the title of your course, you increase enrollment by 40 percent. Globalization is hot.

But what is it? Clearly, globalization has something to do with increased integration of the world society, with an emphasis on increased economic integration. It also has something to do with businesses changing their reference point--thinking globally rather than locally. Finally, it has something to do with technological change. But, although the term is new, none of these elements, nor academic discussions of them, are. They have existed since, at least, World War II. For example, the economic integration of world economies has been ongoing over the last fifty years, as countries have worked through GATT and the WTO to reduce trade restrictions. In the 1960s and 1970s there was major discussion of the growth of the multinational corporation as businesses changed their reference point from domestic to international. Similarly, technology has been continually bringing the economies of the world closer together. For

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example, throughout this period improved transportation, such as air transport, made the world smaller, and improved communication, such as the international expansion of telephone service, made it possible for individuals around the world to talk as if they were neighbors. All these changes were chronicled in the academic discussion.

So what's new is not the process, but the name; globalization is simply a new name that has been given to the process of the latest cycle of internationalization. Perhaps the most significant development leading to the use of the new term is the political breakdown of the former Soviet Union. That breakdown ended the Cold War as we knew it and created a true world market place in which discussions of intergovernmental relations began to focus more on economic than political considerations. Businesses could start thinking of all countries as potential consumers and producers rather than as potential allies or enemies. This changed the focus of thinking from politics to economics, and changed the term to characterize it from internationalization to globalization.

What Does Economics Have to Say about Globalization?

While economics cannot provide answers about the effects of globalization, it can provide insight by putting issues into perspective, and that is what I will briefly try to do here. My first point is that globalization is part of a process of specialization and expanding trade—a process that has been ongoing since the 1600s. The nature of that expanding trade has been significantly influenced by the international political environment, so it is not a smooth expansion. Generally, however, the movement has been toward increased trade. Consider the colonization that occurred in the 1700s. That colonization established trade among continents and close political and economic integration among areas all over the world. It globalized our dealing with the world as much or more than recent events. The gold standard provided an international monetary

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standard that made trade among various countries financially feasible. Then the development of corporations and the protection of insurance allowed global trade to proceed, and are as important to the globalization of the world as the Internet. In short, trade, led by technology, drives the economy toward a globalized economy.

Trade, in turn, is part of a broader set of developments in specialization and the division of labor. The gains from this specialization have driven the economy forward, and, when combined with the institutional development of markets that foster that trade, have morphed into the dynamic process of growth. It is a dynamic process that takes different forms at different times, but the process is one that Adam Smith discussed back in 1776. Consider the following passage from Smith's *Wealth of Nations*.

This division of labor, from which so many advantages are derived, is not originally the effect of any human wisdom, which foresees and intends that general opulence to which it gives occasion. It is the necessary, though very slow and gradual consequence of a certain propensity in human nature which has in view no such extensive utility; the propensity to truck, barter, and exchange one thing for another... (This Propensity) is common to all men, and to be found in no other race of animals, which seem to know neither this nor any other species of contracts. Nobody ever saw a dog make a fair and deliberate exchange of one bone for another with another dog. Nobody ever saw one animal by its gestures and natural cries signify to another, this is mine, that yours; I am willing to give this for that. (Pg.--)

Smith explains how trade leads to specialization and division of labor, which leads to technological growth, which leads to economic growth, which leads to more specialization and more division of labor, which leads to more trade. You end up with a virtuous circle that drives economies forward and creates the wealth of nations.

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The following chart, adapted from the work of Angus Madison (1995), shows the close correlation between the development of markets in the late 1700s as the primary organizing factor of the economy and the world growth rate.

insert chart (to be sent hard copy)

It makes clear the fact that markets have been associated with growth. Now correlation does not mean causation, but the close correlation between the introduction of markets and the increase in the growth rate puts the onus on those who would argue that markets are not conducive to growth.

My reason for dwelling on this discussion of specialization and trade is to emphasize that globalization is part of a broader evolutionary process in economics that has been going on for centuries and will likely continue to go on for centuries. Sometimes the dynamics of trade operate within the arbitrary confines of a nation state; at other times the dynamics of trade and specialization operate outside the confines of a state, but the dynamics of trade and specialization lie at the foundation of globalization.

Economic Texts and Globalization

When you read the economics textbooks of the 1990s, you did not read much about the growth process. In fact the textbooks of that decade seldom mentioned division of labor, specialization, and technology. Instead they talked about Pareto optimality and static efficiency in micro, and business cycles in macro.

One of the positive feedback effects of globalization on economics texts is that it is changing them. The initial change has occurred in macro where growth is now given equal billing with business cycles, albeit in a somewhat sterile Solow growth model. In micro, the change was much harder to make and is still coming together. The reason is

that the textbook presentation of micro is intricately entwined with ideas of static efficiency and allocation theory. Dynamic elements, such as increasing return, learning by doing, and path dependencies are not to be found in the texts because they are hard to integrate with their static discussions of efficiency; they muddy the efficiency story.

One cannot blame the texts for their content; they simply reflect the profession. Globalization is changing the profession's focus, albeit slowly, from static efficiency to dynamic issues of growth, and in twenty years, I hope, the micro presentation in the texts will include significantly more discussion of the division of labor, specialization, and dynamic efficiency than it now does.

The shift in focus away from the dynamic efficiency and toward static efficiency occurred in the work of David Ricardo. Adam Smith was writing before the Industrial Revolution took place. Thus when he gave examples of specialization, such as the famous pin factory, they were internal to a firm. But the dynamic argument was there. Ricardo was writing when the Industrial Revolution was in full swing, and he could have expanded the dynamic elements of Smith's discussion. But he did not; instead he focused on the static dimensions of comparative advantage and efficiency. This allowed him to make a wonderfully complete formal presentation of the advantages of trade and the role that comparative advantage plays in trade. But his formal proof came at a significant cost; he had to give up many of Smith's dynamic arguments—learning by doing, the role of the extent of the market, increasing returns, and path dependencies.

The profession followed Ricardo, and the static model that evolved from Ricardo's work emphasized the law of one price—the law describing the process through which prices of both factors and goods are driven toward their end state: equality across geographic areas. But in focusing on that law, the texts missed another important law of economics—the law of dynamic growth, the law that states that trade will drive

economies to grow through specialization, learning by doing, and economies of scale. It is this law that globalization is causing texts to rediscover.

Globalization and the Two Economic Laws

The key element of the globalization story that the textbooks lack involves the interplay between the law of dynamic growth and the law of one price. The story told by the law of one price is one of diffusion of growth. If the benefits of globalization were diffuse, there would be little interest in globalization. But while globalization does make society as a whole richer in an economic sense (notice I said richer, not better off—that's a much harder question) and increases the wealth of nations, globalization does not mean growth for everyone; it can lead to enormous disparities in income. To understand that part of the story one must understand the law of dynamic growth.

The key element of the dynamic law of growth for globalization is that it pushes the economy toward disequilibrium. Whereas the law of one price diffuses the benefits of trade, the law of dynamic growth tends to be place specific. The cumulative process that drives it affects certain areas significantly more than other areas. There are two reasons for this.

The first has to do with the spread of ideas. The growth process begins with an idea in an industry. That idea spreads to other individuals communicating with friends in a different industry. These friends are then stimulated to integrate that idea into their industry, and the growth process continues. Since the close communication necessary for this process to work often has a geographic component, the cumulative growth process generally has a geographic component. For example, a firm might figure out a better way of coordinating its labor through flextime. Workers and managers talk and other firms

who see that it works adopt it. Making new ideas work involves many aspects where one needs specific advice as to what works and what doesn't. Thus, continual consultation is needed. This need for continuous consultation tends to make the dynamic growth occur unevenly geographically throughout the economy.

The second reason involves investment. Growth generates income, which creates an investment fund that allows more experimentation and more learning by doing. So successful firms have funds to invest, which tends to make them even more successful. Since financial markets for new ideas, such as the venture capital market, generally have a significant geographic component, they too tend to make the dynamic growth occur unevenly geographically throughout the economy. The result is Kaldor's virtuous circle.

The above argument is that there are relative winners in the growth process. But if there are relative winners, there must be relative losers; the other side of the law of dynamic growth is the areas that do not grow, or grow much slower than average. They end up with a vicious circle of no growth and fall further and further behind. The dynamic law of growth creates enormous income inequalities that put strains on the social and political systems.

What stops this place-specific cumulative process of growth is the law of one price. When differences among regions get too great, the law of one price starts working. That law of one price can operate in a number of ways. Workers and firms may move into the growing area. This in-migration holds profits and wages down from what they would have otherwise been. Alternatively, successful people and firms, who have internalized the new idea, can move from successful to unsuccessful, cheaper, locales to hold their costs down and improve the quality of all their lives. For example, the high

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rents and shortages of workers in Silicon value drive firms to other places—Sacramento, Utah, Vermont, India and Costa Rica. But this diffusion process is slow, and is often overwhelmed by the ongoing place specific-growth. Full diffusion takes place only in those industries where significant growth has ended. For major technological changes that can be twenty or thirty years.

There are many institutional arrangements that can influence the diffusion. The friendship network, the regulatory structure, the communications network, and the financial network are examples. The study of growth, and hence the study of globalization, requires a study of these networks and information flows in an information poor contextual setting.

At the end of the story of growth, the law of one price always wins out. It is that ending that the textbooks and the profession have focused on. But society has little interest in that long run ending. It is interested in the interim period, which can be decades or even centuries. In that interim period we can get the enormously large differentials in wages and prices of goods. The fact that the law of one price will eliminate these “eventually” is not particularly relevant to policy makers. When “eventually” actually arrives, most policy makers are out of office. Policy makers tend to be interested in the now and the near future—the intermediate run is their long run. It is for that reason that policy discussions tend to focus on how countries or regions can get on the right side of the law of dynamic growth.

Economics does not have much specific to say about these policy issues other than the general platitudes. Trade and specialization require a regulatory structure--agreements about property rights and enforceable contracts. Inevitably, as technology changes, the ideal regulatory structure

changes, and as it does political pressure is brought to bear on nation states and existing regulation. As international trade expands, to deal with global externalities, and to provide a more efficient regulatory structure, the nature of governmental regulation must change. More international cooperation is required; new institutions must develop, and new agreements must be reached. Standards must be developed. A language of communication must be chosen. The nature of these standards makes a big difference in how various areas will fare within the global economy.

If history is any guide, the regulatory structures will lag the economic developments, and will be forever playing catch-up, but the pressures will be there. Thus, while I do not see an international government, I do see an increased set of international agencies charged with coordinating regulation and dealing with the political side effects of globalized production and trade.

What Does Globalization Have to Say about Prospects for the U.S. Economy?

In the 1990s the U.S. was on the right side of the place-specific growth. Part of the reason for this was that it had the right institutions for growth—relatively low personal taxes, a well developed venture capital market, firm property rights for ideas, and significant government support of research that private individuals were allowed to appropriate. These attributes, combined with a large amount of dumb luck, started a dynamic virtuous circle of growth, and led to calls of the U.S. economy having reinvented itself and become a new economy. I believe these calls are overblown. Much of the U.S. success is simply “right place, right time.”

The answer to the question of how long the “new economy” will continue reduces to the question of how long it will take the law of one price will diffuse the benefits of growth and how much place-specific growth will occur in the U.S. The answer to these

questions depends on a number of issues. Probably the most important is U.S. immigration policy. The U.S. has an enormous shortage of skilled workers. If major immigration of skilled foreign workers is allowed, in the immediate run high tech wages will be held down and firms will be more likely to stay in the U.S. In the intermediate run, the advantage of this policy for the U.S. is less clear. These skilled workers will provide the seeds for ideas to spread to other countries. If they return to their home countries, taking their earnings and their knowledge with them, in the intermediate run that immigration can hasten the workings of the law of one price. However, if little immigration is allowed, firms are more likely to move activities outside U.S. borders, increasing the probability that the cumulative growth process will take off elsewhere. So regardless of U.S. policy, the pressure of the law of one price will be there.

The development of the Internet and e-commerce will work to increase the speed of the diffusion by making geographic place less important, but not by as much as globalization zealots claim. The reality is that the Internet has significant limitations as a market place. To emphasize this point I suggest to my students that they think of the Internet as simply a fancy catalogue with speed ordering. There are clearly limits to what one will buy through a catalogue (at least until virtual reality becomes a reality). Thus the expansion of the Internet's influence will be limited.

Goods that fit the catalogue Internet sales model have certain characteristics. They must be goods that one does not need to test out, or try on before buying. They must be goods that one does not care who is selling. They must be goods that have a significant standardization and generic quality. That limits the range of retail goods significantly, making b2c (business to customer) expansion limited.

Consider Priceline's "name your own price" business model—it is useful in rationing off time-dimensional goods such as hotel rooms and airline seats, but it is less

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likely to be successful at selling storable goods, where, because of inventory, net marginal costs fluctuate little. C2c (customer to customer) sales are essentially flea markets, and are more a hobby for people than a significant economic event. So the goods that best fit into the e-commerce model are b2b (business to business) sales, and that is where most of the growth of Internet sales will likely be. Increases in b2b Internet sales will slightly speed up the law of one price, but they will leave geographic elements highly important.

Probably the biggest advantage the U.S. has in continuing its lead in the latest round of technological improvements is that the standard language of business communication has become English. This gives an enormous comparative advantage to English speaking countries, and is worth trillions of dollars in wealth to them. Had Spanish developed as the de facto language, the recent U.S. growth would not have occurred. Imagine the cost of training the 200 million people in the U.S. who do not speak Spanish to speak Spanish to a level where they can communicate effectively. At \$10,000 per person, that would be \$2 trillion dollars. And even then many individuals would not be facile at Spanish communication. But it is precisely such cost that is being presented to developing countries as an entry cost to take part in the Internet revolution. Interestingly, the smaller countries, which have adopted English as their primary second language, are in a better position than larger countries that have not. Thus, Finland may be in a better position than France to take a lead role in the global economy.

When one thinks of global equity, a case can be made for a transfer from English-speaking nations to non-English speaking nations to partially compensate them for adapting to the English standard. I don't expect such a transfer to occur. But at some point pressure will come for such transfers.

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The second advantage the U.S. has is the seeming acceptance by the world of its liberal property rights approach to ideas. Currently U.S. patents and copyrights are being given for broad conceptual business methods, such as one-click shopping, name-your-own-price auctions, and supplying movies over the Internet, along with the more traditional technologies and ideas that have been allowed to be patented. These patents are being given out for a relatively long time relative to the changing technology. Some of these methods and technologies will become the standards, and if accepted by world economies, they will involve trillions of dollars flowing into the U.S. long into the future. U.S. policy recognizes this and has made acceptance of U.S. intellectual property rights a requirement for countries entering the world-trading environment. I expect these property rights to be a hot issue of contention in the future.

Despite these two advantages, eventually I see the law of one price as overwhelming the law of dynamic growth for the U.S., and as that happens, the end of the U.S. new economy. That end will come suddenly. In manufacturing, the law of one price has already overwhelmed the law of dynamic growth. Manufacturing is now global. But, luckily for the U.S. manufacturing makes up only a small fraction of the cost of a product. Thus, as U.S. manufacturing is transferred abroad, the process actually creates jobs in the U.S. Consider Nike shoes. A subcontracting company produces all Nike shoes, primarily in China. But when one buys Nike shoes, the actual shoes make up only a small percentage of their costs. What one is actually buying is a collection of activities that goes into the value added of shoes--the advertising, distribution, and legal services--and much of that has remained in the U.S. Countries will be looking for ways to maintain the value-added stream within their individual borders, but in each aspect they must fight the law of dynamic growth.

What Does Globalization Imply for the Economics Profession?

Let me now turn to my final question: How will globalization affecting the economics profession? This question has more general relevance than it seems since the discussion can be seen as a case study for how globalization might proceed in other industries in the future. The heart of my story is that at some point in the next fifty years the law of one price will exert itself and remove the U.S. domination of the academic economics market. When that happens the U.S. centered structure of the profession will change. Virtual universities, collections of scholars from around the world who have combined into an accredited program of study in a particular field, will increase enormously, and will significantly displace many geographically-based programs.

Growth of these virtual universities will put pressure on existing universities to develop and expand their brands. This will most likely be done by newly developed accrediting agencies, which will be created by an international consortium of universities. How fast these virtual universities take off depends on technological growth. True virtual universities will only develop when in-person classes are replaced by complete virtual classes, where each student, regardless of where they are, is virtually recreated in an interactive classroom setting. When one can enter a virtual connection port and it is almost impossible to distinguish “being there” and “virtually being there,” place specific dynamic growth will be undermined and the law of one price will rule. But that is decades away.

In the interim quality U.S. programs will remain, but weaker programs will either die or enter into virtual partnerships that increase course options for their students. Most will merge into consortiums and the degrees they give will be consortium degrees. The best of the current campuses will remain as places where students can live if they choose, but a graduate student accepted into a "virtual university" will be able reside at any of the

twenty or so locations that comprise the physical "university" -- or can reside at none of them, as long as he or she is close to a virtual communication port. I would expect that students attending these virtual universities will be generally geographic nomads, residing at two or three individual schools during their studies to work personally with specific mentors.

A Change in the Geographic Center of Gravity of Economics

This rise of virtual universities will mean a de-Americanization of graduate schools in general and of graduate economics programs in specific. Of course, the geographic center of the economics profession will be harder to measure since most foreign programs will have U.S. components and vice versa.

As the law of one price takes hold the economics profession will likely have three competing geographic centers: one in Europe, one in the United States, and one in Asia. The seeds of the end of American dominance of the economics profession are already being sown; today foreign students heavily dominate the student body of top economics programs. Currently, the majority of these top foreign-born economists are staying in the United States. At some point this will change and geographic units of virtual universities in their countries of origin will make lucrative offers to these economists to return home. As they move back home, they will take the top journals, reputations, and the core of the profession with them.

A second change that will occur because of globalization is increased specialization in economics training. Today "graduate work in economics" is rather unidimensional. Becoming "an economist" means studying economics at a graduate program in economics, and the majority of graduate programs, and all the top-ranked programs, are quite homogeneous. In the first years of graduate school, in particular, everyone learns essentially the same set of models, and the same approaches.

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Globalization will bring about division of labor and need for specialization. The majority of consortiums granting economics-related degrees will have multiple tracks. People no longer will become generic economists; instead they will become clearly designated specialists in public finance, health care, macro forecasting, forensic economics, industrial relations, and other areas.

Graduate study in economics will still start with one semester of general core courses: one in micro, one in complex systems analysis, and one in statistics, but these courses will not be the technical courses they are now; they will be survey courses given to acquaint students with the broad field of economics. Immediately after these courses, students will begin specialized study in one, or sometimes two, areas of specialty. Each of these areas of specialties, or tracks, will have its own set of required courses and knowledge.

The track that will be most equivalent to the program students follow today will be the economic theory track. But this track will become a specialty track for those few going on in theory; it will be very small; its requirements will be very difficult; and since few jobs will be available for its graduates, most of its graduates will have to spend some years in low-paid postdoctoral work hoping to find one of the few theoretical research positions available.

One of the new tracks will be a "general economics" track, which will primarily serve to prepare individuals to teach economics principles to undergraduates. That, as it is today, will be one of economists' most important jobs. This track will primarily give an overview of various subfields rather than going deeply into the technical aspects.

Redefinition of Boundaries

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This increased specialization will be accompanied by a redefinition of boundaries of graduate economics programs within institutions. Currently, firm institutional boundaries exist between public policy schools, arts and sciences schools, engineering schools, business schools, law schools, and medical schools. In the future, these boundaries will break down. New specialties will evolve out of a combination of schools or programs within schools. For example, a person studying health economics in the future will go to a health economics program that will evolve out of a combination of economics programs, medical school programs, and public policy school programs. A person studying macroeconomics will study jointly with engineering complex systems schools and an economics program. In the future there will no longer "economists," but, instead, health economists, statistical specialists, simulations experts who focus on economic issues, public finance specialists, and so on.

The changing of the boundaries will not come easily and will involve much infighting. Initially, as these programs grow they will hire their professors from existing graduate economics programs. But as they become more specialized and rigorous, these schools will become self-replicating. They will hire their own Ph.D. graduates to teach in their programs, develop their own journals, and split off from economics per se. As they do the demand for economists from traditional programs will fall.

Conclusion

This has been a far-ranging essay, but one that I hope has added some insight into the globalization concept. The arguments it made were the following. First, globalization is not new, but simply the latest incarnation of Adam Smith's story of specialization, division of labor, and trade. Its emergence on the scene has had a positive effect on the economics profession by forcing it to start to come to grips with the dynamics of growth,

and reduce its concentration on static efficiency and the law of one price. The texts are beginning to introduce these changes.

Second, once one brings back Smith's dynamic story, economic reality can be portrayed as a key determinant by two major forces—the static law of one price—driving the economy toward a equilibrium, and a dynamic law of growth, with its thermodynamic turbulence creating place specific growth and pockets of no growth.

Third, the U.S. economy in the early 2000s was on the right side of this virtuous circle, but that new economy will not continue forever. While the U.S. has a number of advantages going for it—the English language standard and the world acceptance of U.S. property rights of ideas--eventually the law of one price will diffuse those benefits, and the U.S. economy will falter.

Finally, a predicted loss of the U.S. dominance of the economics profession was presented as a case study for how the law of one price will eventually overtake the geographic specific growth that led to U.S. domination.

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