

Paul Samuelson and Development Economics: A Missed Opportunity

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At the end of the Second World War, the attention of many economists turned to the territories that had been controlled by the Western colonial powers. Politically, most were newly independent countries, or about to be. Economically, they were far behind the countries of the West, and some were afflicted with severe poverty. Concern about these countries led to what is called development economics.

Growth and development became watchwords for segments of the economics profession. Yet as we look back on these prescriptions half a century later, it does not seem as though they provided much guidance for the emerging countries. Today many countries, from Ghana to India, remain backward, with large portions of their people in poverty. A few such as South Korea and Taiwan, have moved toward prosperity, but they were not the ones expected to do so.

There are many reasons for the lagging economic performance by underdeveloped countries, but one is surely the fact that important economists misunderstood the factors underlying growth. Many influential economists and the governments of the emerging countries liked the idea that government policies, including Keynesian management policies, could spur growth (Bell, 1987).

Not all economists believed this, especially early on. Prominent among the dissenters was Peter T. Bauer (1991). However, as growth began to fascinate economists, the down-to-earth theories of Bauer, based more on empirical evidence than on econometric models, faded in influence.

The purpose of this essay is to look at development economics by assessing the views of a leading American economist of his generation, Paul Samuelson, as expressed in various editions of

his famous textbook, *Economics: An Introductory Analysis* (Samuelson, 1951, 1961, 1964; Samuelson & Nordhaus, 1985, 1995).

Samuelson's text shook the economic world when it appeared. Introducing Keynesian economics as the basis of economic analysis, the book was a phenomenal success, says Mark Skousen (1999), and 90 percent of the economics departments used his textbook by the end of the 1950s (over a million copies had sold by the 1961 edition) (Skousen). Because of Samuelson's prominence over the past 50 years, the treatment of development economics in his text should give at least a first approximation of mainstream understanding of development economics and how it changed.

My methodology is more a literary analysis than anything else. Because development economics is only lightly treated in an introductory text, my method is to review the few chapters that feature it (usually one or two) and report on changes in the choice of subjects, the examples to illustrate them, the organization of the discussions, and their tone. The changes should echo the revisions in mainstream attitudes about development economics.

The editions I selected were the ones I could readily find that spanned most of the fifty-one years that this book has been instructing undergraduates. There is one large gap—the 21-year period between 1964 and 1985.

The first edition of *Economics: An Introductory Analysis* was published in 1948. However, it ignores international development, except for references to the conflict between protectionism and free trade. The editions that I reviewed closely were: the second, published in 1951; the fifth, published in 1961 (the one that introduced both my husband and me to college-level economics); the sixth, published in 1964; the twelfth, by Samuelson and a co-author, William D. Nordhaus, published in 1985; and the fifteenth, published in 1995, with Nordhaus as coauthor and with the assistance of Michael J. Mandel.

As we will see, while the book reflects economists' mounting interest in development during the postwar period, very little constructive theory emerges. Samuelson's evolving text shows us a missed opportunity. When Samuelson wrote in 1964, the key word in most economic discussions these days is >growth= (721),

he meant to a large extent theories about how the advanced economies grew, theories such as the Ricardo-Marx-Solow growth model. Samuelson's text presents such theories as if they provide a foundations for developing backward economies. Yet, in fact, they offered little.

Several theories specifically directed to the growth of underdeveloped countries did emerge in the 1950s and they appeared gradually in editions of the text. But they weren't very rigorous, and Samuelson was somewhat skeptical of them at first. Yet by 1985, these questionable theories had become the centerpiece of Samuelson's (and Nordhaus's) chapter on economic development.

Samuelson's text gives us a window on a tragedy—the failure by economists to build relevant theories about development. That failure created a vacuum that allowed international Aexperts@ and governmental authorities around the world to collude (sometimes unwittingly) in policies that retarded rather than spurred growth. For example, many governments took advantage of money-lending institutions such as the World Bank to obtain funds for Acapital development,@ yet the development never occurred, because the dams, factories, and palaces that were built were unproductive. Urban elites and their government-supported coteries took advantage of rural agricultural citizens, while money from foreign institutions and indigenous farm production ended up in Swiss banks. (See, for example, Ayittey, 1992).

Samuelson, of course, is not responsible for these developments. As we shall see, Samuelson was not even an outspoken proponent of government control. He merely assumed that Keynesian policies would work if the countries used them wisely (rather than allowing them to spur inflation or excessive protectionism). Yet he allowed the mainstream, with theories that were full of holes, to dominate his discussion of development economics rather than demanding that they be viewed in the light of empirical evidence. The few dissenting comments in the 1961 edition soon disappeared. Had Samuelson been more alert to the absence of empirical tests supporting the growth theories, he might have helped avoid the dangerous vacuum that ultimately resulted.

In the rest of this paper, I will comment specifically on the discussion of development economics in each edition. For space reasons, I have limited discussion to the highlights of each edition's treatment. I will then make some concluding observations.

Economics: An Introductory Analysis. Second edition, 1951.

Near the end of the book, Chapter 32 discusses Postwar International Economic Problems. (The first edition did not address this topic.) The problems are mostly reconstruction and trade problems with other industrialized countries, many of which were still reeling from the Second World War.

The one significant discussion of foreign development is an upbeat explanation of the formation of the International Bank for Reconstruction and Development and its sister institution, the International Monetary Fund (684-685). Samuelson explains the reasoning behind the International Bank (later known as the World Bank). It is that many regions of the world could profitably use our capital for their industrial development, but private American citizens are not willing to lend. Substantial private lending died some time in 1929, perhaps forever. Americans would invest, however, Samuelson continues, if such capital transactions could be made safe (684). So, the leading nations of the world (except the Soviet Union) have agreed to supply money that will be the basis for long-term credits. He ventures that if sound, these loans will be paid in full. If some go sour the loss will be paid out of the bank's interest or premium earnings. If still more go sour, the loss will spread over all the member nations not on Uncle Sam alone (684-5). In addition, President Truman's newly proposed Point Four program, designed to provide American technology to underdeveloped countries (690), is briefly mentioned, with most of the discussion consisting of an excerpt from Truman's 1949 Inaugural Address.

The 1951 edition, like the first edition, has a chapter on trade and comparative advantage and one on protectionism and tariffs. The latter chapter (Chapter 34) addresses the infant industry theory—the view that young industries need protective tariffs while they are growing. Samuelson is somewhat skeptical of the theory (and

will remain so throughout subsequent editions). He writes: There is certainly something to this, at least as a theoretical possibility (721), but notes that empirical evidence is ambiguous.

In sum, in the second edition Samuelson describes the creation of the IMF, the World Bank, and the Point IV program, endorsing them on the grounds that Americans are no longer willing to invest in other countries' economies. He also reiterates the importance of free trade. He concedes that the infant industry argument may be justified (on the grounds that it will lead to future comparative advantage) but he is not convinced.

Economics: A Introductory Analysis, Fifth edition, 1961

By 1961, economic development had become a more important topic. A new chapter, Problems of Economic Growth and Development (Chapter 35), was added beyond the general chapter on international economic problems (Chapter 34). The new chapter begins with this statement: All the economic principles we have learned can now be brought to bear on perhaps one of the most challenging problems of the next quarter century—the problems of underdeveloped economies (775).

Samuelson devotes several pages to persuading his readers that Americans should want to help other countries. Then Samuelson turns to diagnosis and therapy. To discover why countries are poor, Samuelson says, we must turn to the four economic fundamentals: population, natural resources, capital formation, and technology (782). These four fundamentals will be consistent throughout the next 34 years. Let us look at them in turn.

Population. Samuelson briefly raises the Malthusian concern—whether birth rates will fall before living standards actually deteriorate (783). Samuelson is not able to answer this question and does not try. He discusses other issues such as improving the quality of human resources through better health care and education.

He brings up disguised unemployment (783). He contends that in most underdeveloped countries there is a large part of the manpower pool that does almost nothing because there is nothing for it to do. However, he notes in a footnote that T.W. Schultz (who later went on to receive a Nobel) and Gottfried Haberler doubt that

much disguised unemployment exists (783). Samuelson's solution to disguised unemployment is for governments to pursue expansionary fiscal and monetary policies (783), although he recognizes that there are dangers to this such as inflation and a deficit in international payments.

Natural resources. Samuelson comments that poor countries typically have been poorly endowed by nature, but he suggests that further development now largely comes from better use of existing resources (784). He recommends land reform and in this case cites T.W. Schultz approvingly. Schultz has praised land reform as having turned sand into gold (785).

Capital formation. Samuelson gives this topic more attention than any of the others. The problem is largely one of undersaving, he contends, although he observes in a footnote that P. T. Bauer disputes the existence of much undersaving (786). To Samuelson, however, undersaving is obvious. Poor people barely on the edge of subsistence will not have saved much, he writes (786).

Samuelson lists many other problems that hold back capital formation in underdeveloped countries—from a contempt for commerce (786) to investing in inappropriate things such as jewelry in India and luxury apartments in places that need industrial equipment. And governments copy the advanced standards of the Western world, such as high minimum wages that discourage employment and pension systems that cost more than the economy can afford.

The low state of foreign investment is another problem. Samuelson dismisses private foreign investment as having disappeared with the First World War, due to the absence of the international gold standard, the danger of government confiscation, and the resistance of modern developing countries to long-term concessions. Today, he says we must search out new instrumentalities for foreign investment such as agreements between governments, or various government guarantees of private ventures (789).

Technology. Samuelson is cautiously optimistic (789) about the impact of technology because so much new technology is available to developing countries. The new lands do not have to

develop still unborn Newtons to discover the law of gravity.... They do not have to go through the slow meandering climb of the Industrial Revolution....@ (790) He observes that new technology is embodied in new capital so that capital formation and technology are mutually reinforcing@ (791). He also recommends that the government establish agricultural extension services and vocational schools.

Samuelson offers a hypothetical example of how a country, which he charmingly calls Alertia, could begin stimulating its own economic growth@ (793) through such steps as improving the tax system, providing social overhead capital,@ making government loans to the private sector, and retiring public debt. Samuelson approves of some government policies that Alertia tries but raises doubts about others. For example, Alertia's government accepts the infant industry@ theory, and protects some industries from foreign competition, presumably to allow them to grow. However, Samuelson notes that the airport and the steel mill still require a government subsidy. Even so, he is optimistic. Alertia presents a fascinating spectacle. No one knows quite where she is going; but to everyone this much is clear: she is on her way@ (796).

In sum, the 1961 edition gives a generally optimistic forecast for developing economies. It seems evident to Samuelson that the government should take actions that increase the caliber of human resources, bring in capital through government-to-government foreign investments, and adopt relevant technology. He assumes a major role for governments, both the country's own and the governments of the developed countries, who will provide investment funds. The pending difficulties seem relatively minor.

Economics: An Introductory Analysis. Sixth edition, 1964.

This edition, which followed immediately after the previous one, treats economic development much more soberly. Alertia, whimsically hypothesized in the fifth edition, disappears. The chapter on Problems of Economic Growth and Development@ (Chapter 36) is now preceded by a new chapter, The Theory of Growth,@ which begins with the statement, The key word in most economic discussions these days is >growth=@ (721). Apparently, factors such

as the problems of underdeveloped nations, the seemingly rapid growth of the Soviet system, and the strong postwar rebound of Japan and Germany, as well as growing academic interest in the economic history of the industrialized nations, have sent economists back to their history books and theoretical models.

Thus, this chapter summarizes in a somewhat technical way various theories about the economic history of the industrialized world. The chapter discusses and provides graphs to illustrate classical theories proposed by Adam Smith, Malthus, and Ricardo, with their emphasis on the labor theory of value, concern over growing population, and the fixed nature of land. It introduces new versions of these ideas, such as an emphasis on technology and the Acapital deepening@ theory of Robert Solow. A specialized appendix discusses a number of recent theories to explain growth.

The chapter on developing countries (Chapter 36, AProblems of Economic Growth and Development@) has not changed much, but there are signs that more research and more theories have emerged. Samuelson cites in a footnote three books as Auseful anthologies@ on the subject of economic development (Morgan, Bretz, and Choudhry 1963; Agarwala and Singh, 1960, Okun and Richardson, 1961).

Samuelson writes that Afor two decades economists have been intensively interested in economic development. While they have developed no unified theory that differs from the basic growth model introduced in the last chapter, they have added to that model some special features@ (760). He goes on to discuss W. W. Rostow=s Atake-off@ concept (761)Cthe idea that at a certain point an economy=s growth begins to accelerateCand Paul Rosenstein-Rodan=s emphasis on Asocial overhead capital,@ government-provided investments that we now call infrastructure (761-762).

Samuelson appears to agree with Rosenstein-Rodan, but he criticizes a few other theories, including Rostow=s Atake-off.@ About this theory he says somewhat acerbically that Arevolution is always better drama and journalism than evolution@ (761).

Samuelson challenges another topical idea, Abalanced growth,@ by pointing out that the theory of comparative advantage, as well as empirical evidence, suggest that early growth will not be

balanced (763). He questions some nations' emphasis on industrialization at the expense of agriculture. Proponents of industrialization, he says, may be confusing cause and effect. Rich men smoke expensive cigars; but going out to buy an expensive cigar will not make you rich (763).¹

Economics, Twelfth edition, 1985

We now fast-forward 21 years. Samuelson has a co-author, William A. Nordhaus, Yale professor and former member of President Carter's Council of Economic Advisers. The book is called simply *Economics*, and this, the twelfth edition, is introduced as the most sweeping revision since the landmark 1948 edition (vii). There are notable changes in the treatment of development economics, although some are stylistic rather than substantive.

Once again, a chapter on economic growth, Chapter 36, Economic Growth: theory and Evidence, precedes the chapter on economic development. As before, early theories of how economies progress (the classical models of Smith and Malthus) appear, but with more direct application to the real world—for the most part, the industrialized world. For example, in the sixth edition, the Ricardo-Marx-Solow theory was noted, but in this edition, the main point of that theory, capital deepening is stressed, rather than the theory itself.

Growth accounting is introduced—the use of mathematical models to determine the relative contribution of labor, capital, and technical change to economic growth. The work of Simon Kuznets, John Kendrick, and Edward Denison is discussed. We now see charts showing actual patterns of economic growth in the United States during the 20th century. Like the 1964 edition, this one has an appendix to the growth chapter that discusses economic growth theories in more detail.

¹By the fifteenth edition, this analogy has been changed to rich people buying BMWs.

The next chapter is *The Economics of Developing Countries*. The basic structure of the chapter, which we saw in 1961 under the title *Problems of Economic Growth and Development*, has not changed much, but there is a much longer section on *Population and economic conditions*, which outlines the Malthusian view, describes the hope for lowered population growth offered by the *demographic transition*, and mentions steps that governments are taking to control population (814-818).

As the four fundamentals are discussed, past themes recur: *disguised unemployment* (820), *too little saving* (820), the need for *social overhead capital* (821). A new section explains *debt and the debt crisis* (812). Although previous editions had expressed doubt that the private sector in the developed countries would lend money to the developing countries, apparently this fear proved unfounded, and now many countries can't pay the loans back.

The text elaborates on a term fleetingly mentioned in previous editions, *vicious cycle*. In less-developed countries, low incomes cause low saving, low saving inhibits capital, and lack of capital slows down productivity, say Samuelson and Nordhaus (823). Breaking this vicious cycle is difficult.

Theories of economic development mentioned in the 1961 and 1964 editions receive more attention and more approval. The new edition provides three graphs to illustrate the three most important or at least most current ideas: *Rostow's take-off theory*; the *backwardness hypothesis* of Alexander Gerschenkron; and the *balanced growth theory* (not tied to a specific name), which Samuelson had pretty much dismissed earlier. Samuelson and Nordhaus conclude this chapter with a discussion of three specific strategies: the question of *industrialization vs. agriculture*, *import substitution vs. export promotion*, and the dangers of *overspecialization*.

In sum, this edition gives fuller attention to the various currents in economic development—the *vicious cycle*, *disguised unemployment*, *take-off*, the *backwardness hypothesis*, and *balanced growth*—as well as Malthusian concerns about *overpopulation*. An active role for the government is assumed; yet

there is no discussion of possible pitfalls (as there was, briefly, in 1961) or what limits governments should have.

Economics. Fifteenth edition, 1995.

The fifteenth edition is again written by Samuelson and Nordhaus, this time with the assistance of Michael J. Mandel, the economics editor of *Business Week*. While there are again two chapters directly related to economic development, they are no longer sequential. Economic Growth and Aggregate Supply is now Chapter 28. Discussion of economic growth theories has been given more prominence and largely severed from discussion of developing economies.

Indeed, the book has significantly changed shape. The authors explain in the preface that they are synthesizing growth theories and findings into the section on macroeconomics (xxxii). Theories of economic growth are now presented as an integral part of aggregate supply and potential output (xxxiii). Aggregate supply, a core element of macroeconomics, is now discussed at the same time as theories of economic growth. While this gives economic growth more prominence, it ends the previously implied connection between theories of growth and actual experience in developing countries.

Chapter 28 introduces the four elements in development: human resources, natural resources, capital formation, and technology (531). (These will be discussed again in Chapter 36, Strategies of Economic Development.) Initially, this chapter follows the format of the earlier editions but then adds extended discussion of aggregate supply.

Chapter 36, Strategies of Economic Development, is similar to the 1985 chapter. It reviews the four fundamentals, without the extended discussion of population this time. The chapter graphs the three leading views of the development process: the takeoff, the backwardness hypothesis, and balanced growth (708). Two of the narrower issues highlighted in the 1985 edition—industrialization vs. agriculture and inward vs. outward orientation—are still there, but the question of overspecialization has given way to state vs. market. This discussion notes that

A government should minimize its intervention or control in sectors where it has no comparative advantage (711).

The chapter has an eight-page addition on alternative models for development, which discusses the Asian dragon, the market Leninism of China, as well as socialism and Soviet central planning. In previous editions, socialism and centrally planned economies had been discussed separately, but the Berlin Wall has fallen and the Soviet Union is included as a failed model.

The Asian dragons offer some guidance, the text suggests. According to a cited paper from the World Bank, they have pursued policies of high investment rates, low inflation, sound currency, an outward orientation, and government-sponsored competition (713). This edition is the first of the five to discuss the Asian dragons. The 1985 edition had mentioned NICs (newly industrialized countries), specifying South Korea, Mexico, and Singapore as examples. Mexico has slipped off the list.

Thus, in 1995, discussion of developing economies is separate from the growth theories and mingled with discussion of the collapse of Soviet central planning and the uncertainties facing socialists. The countries that are showing economic growth—the Asian dragons and China—are depicted as possible models for development, but with little analysis of how they got where they are.

The missed opportunity

Now that we have sampled 47 years of Samuelson editions, what lessons can the evolving discussions tell us about mainstream views of development economics during those years?

To begin with, Paul Samuelson's views and the views of mainstream development economists are not necessarily the same. And to his credit, Samuelson never wavers from his support of free trade. While he was initially open to the infant industry argument, he abandons it when empirical evidence fails to support it.

However, Samuelson did not address the problems raised by the emerging discipline of development economics. Had he questioned them more in this influential textbook, his scrutiny might have forced more realism into their formulation and applications.

As the foremost Keynesian of his day, Samuelson assumed a strong governmental role in developing countries, parallel to the role he expected government to play in industrialized countries. He does not seem to have pursued the implications very far, however. If he had done so, he might have recognized that other countries, with very different laws, customs, and history, were vulnerable to governmental control by powerful individuals and groups, control that could, and did, deter rather than foster growth.

Thus, he never deviated from the view that the four essential components of economic growth are human resources, natural resources, capital formation, and technological change. While these are indeed components, they are not explanatory variables. Samuelson does not seem to have recognized this.

The new economic school known as the new institutional economics or property rights school, pioneered by Douglass North and Ronald Coase, suggests quite different sources of growth. The institutional characteristics of a society—that is, the rules, laws, habits, and customs—determine how people in a country act and therefore how their economies develop. Institutions must promote economic freedom if they are to promote prosperity. This view has recently been confirmed by indices of economic freedom (Gwartney and Lawson, 1998). Countries that have laws and traditions that allow economic freedom are the ones that are developing economically. Because Samuelson treated institutions as given, and largely irrelevant, he never made any headway in explaining why some countries—those with institutions that discourage growth—did not grow very fast.

Nor did Samuelson ever apply public choice economics to understanding the governments of underdeveloped countries. Public choice, which started off quietly in the 1950s, did not reach Samuelson's text even as late as 1985. He and Nordhaus devoted several pages to the subject in 1995, but none in the development chapter.

Public choice economics would have given a dose of reality to the growth theories. It would have explained why governments can rhetorically urge actions to help their people but take such steps as confiscatory taxation, monopsonistic behavior in buying domestic

farm products, and wasteful infrastructure products that never earned a dime (Wick and Shaw, 1998).

What is particularly sad is that economics did not need either the new institutional economics or public choice economics to come up with a better understanding of the factors leading to growth. Peter Bauer, who has remained a critic of mainstream development economics throughout his life, understood them years ago.

In an essay published in 1991, Bauer looked back on his years as a dissenter. He wrote that the conventional growth models that became popular in the postwar period take as given such decisive factors as the political situation, people's customs, beliefs, and attitudes, and their state of knowledge (Bauer 1991, 195). His own empirical work in Southeast Asia and West Africa in the 1940s and 1950s had led him to disagree with almost every leading tenet of the mainstream.

Bauer found, for example, significant differences in economic performance and hence in achievement among groups (192). Even though both Chinese and Indian laborers had come to Malaya as poor and uneducated immigrants, there were striking differences in productivity between the two groups. Bauer also discovered, as mainstream economists apparently did not, that significant economic development had already occurred in the less-developed countries of the world. Among the contributing factors were the introduction of the rubber plant to Southeast Asia and of cocoa to British West Africa, both of which led to the ownership of large tracts of land by indigenous people.

Bauer also saw that trade (including internal trade by people who might otherwise be viewed as mere farmers) contributed enormously to economic growth in West Africa. He saw that capital was being invested in the agricultural sector of West Africa, and disputed the view, which became conventional wisdom in Samuelson's text, that undersaving was inevitable. In Bauer's opinion, mainstream economists were blind to this capital investment because it did not appear in the aggregate statistics that mainstream economists (foolishly, it turned out) relied on for their analysis. And Bauer never accepted the existence of the vicious cycle of poverty.

Conclusion

In conclusion, the mainstream Keynesian analyses recorded in Samuelson's text offered very thin gruel for developing countries. Largely irrelevant growth theories and principles that failed to explain the state of economies. Collecting this research for his text, Samuelson may have seen that it was inadequate. Yet rather than challenge the conventional wisdom as it began to take shape over the postwar years, he merely reported what the mainstream was saying. In fact, his initial skepticism faded. Along with other leading mainstream economists, he failed to apply the growing understanding of the characteristics of governments and critical institutional factors to question the conventional wisdom. Along with his colleagues, he never transcended the limitations of Keynesian growth theories. The world is poorer as a result.

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