Table of Contents

Editorials

Editors' Note

How do Firms and the Economy Benefit from Parents?
*By Zdravka K. Todorova*

Got Buckaroos?
*By Jonathan Watkins*

Debunking the Myth of the Social Security Crisis
*By Udomdej Leesengheng*

Who is going broke - Uncle Sam or you?
*By Zdravka K. Todorova*

Articles

What did you See?: Different Visions of Economic Methodology
*By D. Marshall Meador* (UMKC)

A Public Policymaker’s Dilemma: Economic Development Meets Complexity Theory
*By Dan Melton* (UMKC)

HIV/AIDS in Heavily Indebted Poor Countries and Global Finance
*By Zdravka K. Todorova* (UMKC)

Book Reviews

*A History of Post Keynesian Economics Since 1936* (John E. King, 2001)
*Reviewed by Eric Tymoigne* (UMKC)

*A New Guide to Post Keynesian Economics* (edited by Ric Holt and Steven Pressman, 2001)
*Reviewed by Fadhel Kaboub* (UMKC)

Announcements
The Eighth International Post Keynesian Workshop (June 19-29, 2004)

Oeconomicus call for papers

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Editor's Note

The following four editorial articles are reprinted with permission from *The Kansas City Aurora* ([www.kcaurora.com](http://www.kcaurora.com)), an independent student newspaper serving UMKC and the Greater Kansas City community. The articles report on events co-sponsored by the UMKC Economics Department and the Center for Full Employment and Price Stability (CFEPS).

Fadhel Kaboub, Editor

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**How do Firms and the Economy Benefit from Parents?**

*Nancy Folbre talks about parenthood as a part of the production process*

*By Zdravka K. Todorova*

Feminist Economist Nancy Folbre gave a talk at UMKC on November 7, entitled "The Great Imaginary Strike of Parents and other Care Workers: An Economic Scenario."

Folbre used the concept of parents’ strike as a metaphor. "I don't think that parents actually will ever go on strike if they are not paid to take care of their children - the nature of parenthood as an altruistic commitment would not allow this to happen," Dr. Folbre said.

The main thread in the talk was that parenthood contributes to the production process by assuming the cost of raising the labor force.

"Imagine that corporations are not hiring workers but are purchasing androids, and that an android takes 18 years to produce, not unlike a worker. What if somebody (families) are willing to produce androids for free, because they love androids and the process of producing androids ?!"

Folbre used the android analogy to illustrate the value that parenthood contributes to the economy.

"Imagine further", Folbre said, "that androids require new batteries every week. You can think of batteries as worker’s wages. Given that families produce androids for free, employers utilizing androids do not have to do anything else except replacing the batteries (paying wages) - the android itself will be provided at zero cost."

Using this metaphor Folbre illustrated that the altruistic nature of families and child

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bearing lowers the cost for firms in acquiring workers (androids), and contributes to the economy as a whole.

"Classical political economy takes labor as the most important input into the production process. It looks at the difference between the value of the wages (batteries) and the value of what workers (androids) produce," Folbre explained.

"Feminist economists," Folbre added, "are looking at the difference of how much does it cost to produce the android (worker), and how does this cost change over time."

Randal Wray, UMKC Economics Professor, pointed out that "wages are reduced far bellow what is necessary to reproduce the family unit."

Folbre reminded the audience that "right now in economics most of the work on the family is done within the framework of Neoclassical economics, based on individual utility maximization," and not within classical political economy or feminist economics.

Neoclassical economic theory models child-bearing decisions in terms of personal calculus of pleasure and pain. "By having a child, according to Neoclassical economics, you simply are revealing a preference for this particular expenditure," explained Folbre.

In this framework of reasoning, children are raised for "personal consumption," and utility maximization, hence the public should not be concerned with the child bearing process and cost.

On the other hand, if you look at parenthood as a part of the production process, which brings about the "production" of labor force, there is place for public concern about child and parent provisioning.

Nancy Folbre emphasized that she is interested in illustrating what firms and the economy as a whole would have to pay if parents stop providing child bearing "service".

Although the process of producing and reproducing the workforce is an essential part of the economy, "it tends to be excluded from consideration because it is not priced," said Folbre. "Such work seems to be invisible. One way to make it visible for public policy makers is to put a number (a dollar value) on it."

However, putting a monetary value on the cost of child bearing is not only technically difficult, but also raises philosophical and ethical concerns.

UMKC Economics Professor Fred Lee, questions this enterprise. He argues that since child bearing is non-market activity, there is no notion of "cost" in providing for children. "I have a problem," Dr. Lee said, "when somebody says that child bearing cost so much, I always thought that people who decide if they would have children on the basis of how much it will cost them, would need a psychological care."
Folbre argued that in the world we live in, "constructing estimates provide an important political tool." It would have not been necessary to put a price value on parenthood, "if we lived in a world, where children were well provided for, and in which there was enough public provisioning."

Wray pointed out that putting a monetary value on child bearing is "helpful for public policy formulation."

"We perceive child bearing as a gift of nature – an altruistic motivation that underlies that parents are going to provide for. I do not quarrel over the motivation of parenthood - I value an altruistic motivation," said Folbre.

However, "The notion that we cannot put a price on that has been used as a way of concealing the tremendous lack of public support of children."

"The process of rearing children cannot be simply assigned to the individual parents. There has to be some mechanism for designing and enforcing social responsibility for child bearing," Folbre emphasized.

She argued that we cannot design a system like that unless we know how much parenthood contributes to the production process by assuming the cost of raising the labor force. "We cannot just sit back because this is not an economic issue," stated Folbre.

In her empirical work, Dr. Folbre combines the estimates of monetary value of parental time with estimates of expenditures on child rearing. "If parents put that money and invest it, and obtain a return of 5%, eighteen years later that money would be equal to $272,643."

Thus, Folbre estimates the actual capitalized value of the expenditures on children by the average U.S. family, that individual parents assume. Hence, she estimates parents’ contribution in monetary terms to firms and the economy as a whole.

James Sturgeon, Economics Professor at UMKC, pointed out that "it is almost amusing to think about the $272,643 that we would have at the end of our life, if all of us choose not to have children. There will be nobody to produce the stuff for us to buy with that ‘saved’ money!"

"That is right. I think child rearing is a good example of coordination problems that individual rationality cannot solve," said Folbre in agreement with Sturgeon.

Jane Wood, Director of the UMKC Women's Center told the KC Aurora that "Nancy Folbre's discussion, becomes even more significant given the current healthcare crisis in our nation."

Nancy Folbre is a Professor of Economics at the University of Massachusetts-Amherst,
Jonathan Watkins

and is an Associate Editor of the journal Feminist Economics. Folbre authored the book The Invisible Heart: Economics and Family Value, which deals with the non-monetized aspects of caring labor and its relation to free markets and the pursuit of self-interest.

Folbre’s talk at UMKC was sponsored and organized by The Women’s Center, the Department of Sociology, Criminology & Criminal Justice, Women’s and Gender Studies Program, and the Department of Economics at UMKC.

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**Got Buckaroos?**

*Program highlights government deficits and job creation*

*By Jonathan Watkins*

Warren Mosler was the morning keynote speaker in his talk entitled "UMKC's 'Buckaroo' Community Service Program" at the Center for Full Employment and Price Stability (CFEPS) all-day workshop, "Is Uncle Same Going Broke? A Workshop on government deficits," on Monday, November 17, 2003.

The 'Buckaroo' program is not only a way to get UMKC students involved in the community, but it is also a learning tool to replicate the US monetary system. Mosler explains that the UMKC monetary system has started through "UMKC's desire for public service. They want students to do community service."

Mosler explains that "Buckaroo economics replicates the essence of the US monetary system" by highlighting the difference between the issuer of a currency and user of someone else's currency.

The value of the Buckaroos is defined by the issuer (UMKC) and they have value by enforcing a student tax payable only in Buckaroos. The value is determined by the issuer and "UMKC levies a tax payable only in Buckaroos." Currently, the value is set at one buckaroo per one hour of community service.

According to Mosler, UMKC has chosen to use this program to demonstrate that "anyone willing and able to work can go to these community service places and earn buckaroos."

"Economics students have provided some 2800 hours of service to the community through the Buckaroo program," said Randall Wray, Professor of Economics at UMKC.

The US government issues money in exchange for goods and services, whereas UMKC issues Buckaroos in exchange for community service. Mosler states that this

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demonstration of the monetary systems shows that this "policy option (of full employment) is a viable option."

According to Mosler, "UMKC fully expects that the matter of course is to spend more Buckaroos than it collects." This is exactly the same way the US government operates. Neither UMKC, nor the US government, needs to receive the money from the tax other than to help make their currency desirable and to give value to the currency.

Discussing the issue of trade, Mosler states that "exports are always a cost, and imports are always a benefit." The country running the surplus balance of trade finds it desirable to hold our currency in exchange for their goods and services.

Mosler hopes that through the program highlighting how a nation's monetary system operates will bring up "student awareness to levels where we can think and act intelligently about" government deficits and policy formation.

Warren Mosler is a founder and a Principal of AVM, L.P., and a founder and principal of III Associates and III Offshore Advisors. He is also the co-founder of C-FEPS and UMKC's Buckaroo Community Service Program. His economics writings may be viewed at www.warrenmosler.com

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**Debunking the Myth of the Social Security Crisis**

*Social security faces a real problem, not a financial one*

By Udomdej Leesengheng

On Monday (Nov.17), the Center for Full Employment and Price Stability (CFEPS) and the Department of Economics at UMKC held an all-day workshop on government deficits entitled "Is Uncle Sam Going Broke?"

Stephanie Bell, Assistant Professor of Economics at UMKC, and Research Associate at CFEPS, addressed some of the "myths" about the social security crisis, and how they relates to the debate about government deficits and national debt.

Dr. Bell claimed that many people do not understand how the trust fund really operates. "Popular reform proposals are designed to deal with a financial problem that does not exist," said Stephanie Bell.

Social security is not a pension plan, rather it is a social insurance program provided by the government. "It is the most popular and successful program that the U.S. government has ever implemented," Bell explained. However, there is now a widespread belief that

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the social security trust fund is going bankrupt and that "social security is ticking bomb," said Bell

Hence the various proposals to save social security such as devoting some portion of the federal budget surplus to "shore up" the trust fund, to privatize (all or part of) the trust fund, and to reduce the cost of running the program (raising the retirement age, cutting benefits, means-testing).

According to Bell, the social security financial insolvency or bankruptcy is impossible to occur since "a government can not become insolvent with respect to obligations in its own currency."

So what are the major misconceptions about the social security trust fund?

Firstly, we must realize that "there are no pennies in the trust fund. Trust funds are merely accounting identities, and the ability to pay out benefits does not depend upon the balance in the trust fund," said Bell. "What really happens is a simple debit and credit operation in the T-balance account (assets and liabilities)."

Secondly, many social security reform proposals to save the program are designed to deal with a financial problem that does not exist. Bell explained that there is no financial constrain, hence "the real dilemma is not a financial one."

Instead, there is a real constrain of a shrinking labor force due to the baby-boomers who will be retiring and will begin to receive benefits. The real problem then is that "there will not be enough goods and services provided for the retiring population," said Bell.

Professor Bell concluded her presentation by providing some alternative recommendations for the social security program:

- Old Age Survivors and Disability Insurance (OASDI) Trust Funds should be returned to a pay-as-you-go system.
- Reconsider labor and employment policies.
- General fiscal policy should be biased to encourage faster growth, greater employment and higher labor force participation due to the real constrain of shrinking labor force as baby-boomers reach retirement.

For more information about this CFEPS workshop and the social security debate, visit www.cfeps.org
Who is going broke - Uncle Sam or you?*

Government Deficits Improve the Private Sector's Balance Sheet

By Zdravka K. Todorova

Rather than crowding out private spending, government deficits improve balance sheets in the private sector, while government surpluses worsen them. This was the main message of the C-FEPS workshop "Is Uncle Sam Going Broke?" held at UMKC on November 17, 2003.

Presenters demonstrated that there is a close relationship between public deficits (government injects more money into the economy than it collects in taxes) and the private sector surplus (firms and households revenues are less than their spending).

Source: Scott Fullwiler, Wartburg College

Warren Mosler, C-FEPS co-founder and distinguished research associate, argued that when the government receives more income (taxes) than it spends (government expenditures), another sector such as the private sector, is spending more than it is earning. In this case the private sector is net borrowing (running a deficit), while the government sector is running a surplus.

"Every past successful attempt at significantly reducing the national debt has coincided with the onset of economic depression," said Scott Fullwiler, James A. Leach Chair in Monetary Economics at Wartburg College.

"During the post war era, the private sector surplus as a percent of GDP had almost never been below zero. However, during the 1990s expansion, record public sector surpluses and trade deficits meant that-by definition-the private surplus reached a record low," stated Fullwiler.

"Researchers from the Levy Economics Institute predicted that these public sector surpluses were not sustainable."

"The ensuing recession led to a reversal in the fiscal stance while record low interest rates failed to stimulate a private sector buried under record debt burdens and reduced income flows," argued Fullwiler.

The private sector balance equals the government sector balance minus the external sector balance. Thus, if the government sector runs a surplus (collects more taxes than it spends), and the external sector runs a deficit (imports more than exports), the private sector will have to run a deficit.

Dimitri Papadimitriou, President of the Levy Economics Institute, showed that currently the U.S. private sector balance is -1% of GDP (deficit), whereas the government balance is -5% of GDP (deficit), and the external sector's balance is -6% of GDP (deficit).

Presenters at the C-FEPS workshop emphasized that firms and households are users of the government currency, while the state is the monopoly issuer of the currency. Hence, the state cannot go "bankrupt" if it spends more than it receives in taxes. On the other hand, private sector can go bankrupt.

"Deficits incurred by a government issuing its own fiat currency do not threaten the government's solvency," said Randall Wray, UMKC Economics Professor. However, "continuously increasing debt burdens in the private sector are not sustainable," pointed out Fullwiler.

Workshop presenters explained that budget surpluses contribute to financial instability,
while deficits improve private sector financial positions. A declining private sector financial position is an indicator of possible financial fragility in the economy.

"What is necessary are models to guide policy that recognize the unsustainability of a continuous negative financial position in the private sector. Such models do not currently exist, " said Scott Fullwiler.

Current macroeconomic models used in policymaking, however, assume exactly the opposite: that a negative private sector balance can be sustained indefinitely.

For more information about government deficits, money, and national debt, visit:
www.cfeps.org
www.levy.org
www.mosler.org
What did you see?

Different Visions of Economic Methodology

By D. Marshall Meador*

Introduction

How should one go about a “discussion of the structure of scientific practice?” Before asking what it is that scientists do, one might be inclined to ask, “Who is a scientist?” If the answer is “one who does science,” then, inevitably, the next question is, “What is science?” Owing to the fact that many books, articles, and discussions have attacked that question, it will be left aside in this paper. The starting point of this discussion will be a very simplistic definition of science: any activity that seeks to describe and subsequently explain an event. Note that this is a two-fold definition, and both parts are necessary for its completeness. A description of an event is little more than an enumeration of what surrounds the event. The level of complexity may vary, but a detailed, in-depth description is still just a description. To qualify as science, explanation of the event must follow. That the color of the leaves of hardwood trees changes in the temperate zone as the sun crosses the equator from north to south is a description of an event. The explanation of why the color changes at that time brings one into the science of botany.

Events happen. That seems simple enough, and it surprises many that there is any question about the statement that events happen. A description of an event involves a listing of the “facts” involved in the event. The leaf was green, now it is orange. Should be as simple as that, it is a fact that the leaf was green and now it is orange. But as Chalmers explains [Chalmers 1999, 5], facts are slippery, treacherous little creatures. What one “sees” is very often conditioned by the background from which the observer comes. When Chalmers is discussing the thought that “facts” are prior to explanation, he says: “the fact that our perceptions depend to some extent on our prior knowledge and hence on our state of preparedness and our expectations and the fact that observation statements presuppose the appropriate conceptual framework indicate that it is a demand that is impossible to live up to” [Chalmers 1999, 12]. This is known as the problem of “theory-laden” observations. Consider the leaf, why is more appropriate to suppose the color change is related to changes in the internal chemistry of the leaf in response to fewer hours of daylight than to suppose the color change is because some beneficent deity knows that people like a diversity of colors? While that may seem a rather ludicrous comparison to the twenty-first century mind, it is only because the long history and wide-spread acceptance of botanical insights have taught most that the color change is due to some sort of seasonal change which induces

* The author would like to thank an anonymous referee for helpful suggestions.
change within the leaf. Observations in the western world of color changing leaves are conditioned upon education gained early in one’s life.

While the discussion thus far has centered on a leaf changing color, the reader is asked to consider an adult human being purchasing an apple from a roadside stand on the way home from work. Where observation of the leaf posed the problem of one’s prior knowledge and the effect of such knowledge upon the observation, one could watch leaves change throughout one season and across many seasons with little difficulty. The leaves, apparently, do not seem to mind being watched as their color changes. One may pluck leaves from the tree prior to their change, during their change, and after they have fallen from the limbs of the tree, all this with little objection from the leaves. Taking the leaves to a laboratory for microscopic and chemical analysis at various stages of change likewise elicits very little objection from the leaves. Returning to the adult purchasing an apple, suppose now that this adult had been observed stopping several times to buy an apple. A scientist desiring to explain why the person bought the apple will encounter, in all likelihood, some resistance when trying to take the person back to the laboratory for dissection to determine what motivated the apple’s purchase. Taking blood samples to determine glucose levels; examining the stomach’s contents; running brain wave scans prior to, during, and following the purchase; all these efforts to explain the observation will be resisted by the purchaser of the apple. After several attempts to secure such knowledge, the scientist will realize a different approach need be taken to explain why the purchase of an apple was made. Moving to another roadside stand, the researcher waits, and watches, and notices another male human stopping to purchase an apple. This behavior is noticed upon many subsequent days. At long last, the researcher approaches the buyer and enquires as the reason for the purchase. The consumer replies, “I was hungry,” and departs hastily. The researcher decides to continue watching the behavior of the consumer and to enquire each day as to the reason for the purchase. However, that consumer never returns. What should the researcher conclude? Perhaps the fellow was no longer hungry? Or could it be the consumer was never hungry, that he had only been stopping to meet someone with whom he was having an extra-marital affair and failed to ever return for fear the scientist was a private investigator hired by his wife? The point is this contrived set-up is that where leaves, thus far in history, have never objected to being observed, collected, and subjected to various sorts of analysis, human beings have the capability to change their behavior when they perceive that they are being observed.

Owing to the difficulty outlined as regards trying to explain human behavior, the community of academics has typically divided science into two fields, natural science and social science. To seek to explain why leaves change color is a natural science. To seek to explain the purchasing behavior of people is a social science. Because of the author’s prior knowledge, experience, and development, the scope of this paper will be limited broadly to social science and specifically economics. (Unless, of course, it helps prove a point by appealing to some field outside social science or economics.) One should not assume that the author is an expert in
economics; rather the author has been exposed to a great deal formal social science (especially economic) thought and very little of the formal thought within the natural sciences.

Before setting upon the path to become an economist, the author, upon observing the driver stopping at a roadside stand to purchase an apple, would have come to the conclusion that that person was probably hungry. That is not an explanation, rather it was a supposition based on the author’s prior cultural, social, and educational background, and does not qualify as a scientific endeavor. With descriptions of observations tainted by the framework the observer brings to bear, the question becomes one of determining what constitutes a valid explanation. At his point, it might be that many would suggest that, given similar cultural, social, and educational backgrounds, then observations would be similar, and subsequent explanations derived with little difficulty.

If only things were so simple.

THE BEGINNING OF THE CONFUSION

Someone buys an apple at a roadside stand on the way home from work. Explain.

What the economist (as a social scientist) will seek to explain is a behavior. Depending on the background of the economist, the explanation of the behavior may not only differ, the description or definition of the behavior will differ. Did that someone simply purchase an apple?

- The majority of economists in the western world today would conditionally say yes, but then go on to explain that that person traveling home from work did not simply “buy an apple,” rather that the economic agent was on the consumer side of an act of exchange. Further, this act of exchange was determined at the beginning of the agent’s time horizon with full and perfect knowledge of all other possible purchases, past, present, and future. The decision to exchange at that time for that good was completely independent of the decisions of all other economic agents. Most importantly, that act of exchange was engaged in by the agent because any other exchange possible at any time and place would have diminished that agent’s satisfaction, not only at that moment, but throughout the agent’s entire time horizon. Opposed to this outlook, there are now a growing number who see those acts of exchange occurring in an environment where there is limited and imperfect knowledge. There are also a few who see the act of exchange taking place in a temporal dimension rather than being determined at the beginning of the agent’s time horizon, albeit a temporal dimension where the actions and results of all other points in
time are known and a part of the exchange calculation. These are the economic positivists. They are the dominant group in the field of economic science.

- Another much smaller group of social scientists (the positivists refuse to call these economists) also see the act of buying an apple, but with qualifications. What they observe is a text, a series of events written on the fabric of existence which must be understood rather than explained. The understanding of the text/event is inter-subjective; understanding is arrived at in a process of interaction between the agent and the economist and the larger economic community. These are the economic hermeneuticists.

- An emerging group of economists sees the purchase of an apple at a roadside stand but seek to develop a deeper, stratified explanation of that observation. They seek to explain what structural environment existed that facilitated the interaction of agents, what causal mechanism brought motivated the agent to purchase of the apple, and how the interaction of the buying agent and the selling agent may have affected the structure of “roadside stands.”

**ECONOMIC POSITIVISTS**

Economic positivism is an outgrowth of the philosophical notion of positivism. Logical positivism, as developed by the group of philosophers known as the Vienna Circle, may be thought of as the foundation of the differing strands of positivism that guides social science thinking. The goal of the Vienna Circle was to develop a unified science where the emphasis was on what could be grasped intersubjectively. For them, science had no ‘depths’ and no appeals to any metaphysical concept are allowed. Their emphasis was on experience, or the surface of events. Strict empiricism could make explanations difficult and logical analysis was seen to be the basis of empirical science and meaning was found through a reduction to the simplest statements about the empirically observed. Science was a way of knowing, epistemology was primary. Ruling out any metaphysical statements left ontology, or the question of being, out of science. Ontology was non-existent and only that which could be observed, only the empirical mattered. Knowledge came only from experience and logical analysis was the method of science. Causality was stripped of any idea of influence or necessary connection and redefined as a relation among conditions [Neurath 1973]. As such, science for the Vienna Circle became an activity where logical analysis was applied to observation; the more observations, the better. Observations became a way to verify the analysis.

Problems arise from the verification of observations. How many observations does it take to declare something for certain? Karl Popper, aware that the next observation could undo the
entire framework of analysis, proposed the idea of refutation or falsification as a better criterion for explanation. Popper maintained that no scientific theory was ever final, but if it was framed in such a way as to be potentially falsifiable and survived attempts at same, it was a good explanation [Chalmers 1999, chap. 5]

In addition to the problems of theory-laden observations, the positivists’ program of falsificationism encounters another problem – the Duhme-Quine thesis. Simply stated, theories/explanations are complex, composed of several premises [Chalmers 1999, 89]. A theory that has been falsified may be salvaged by claiming that some small part of the initial conditions was either mis-specified or missing. While attempts are thus made to falsify, any cherished theory may always be salvaged by the researcher. Consider the purchase of the apple at the roadside stand. In attempting to test the theory that the demand for apples is an inverse function of the price of the apples, the economist may track the number of purchases at the roadside stand, noting what the price is at each purchase. Upon running a regression analysis, the economist finds a direct relationship with a correlation coefficient near zero. Rather that scrapping the theory that apple purchases are an inverse function of their own price, the economist will add variables in an ad hoc manner, re-running the regression until the coefficient on price is negative. A relation between price and quantity purchased, more specifically an inverse relationship, is one of the most cherished premises of current economic thought. If no relation can be found, the theory is not wrong; rather the complex web of assumptions which has been built to test the theory is wrong. The economics profession has taken the Duhme-Quine thesis as a road map for survival rather than a criticism of falsificationism. While the problems of the theory-ladenness of observations and of the Duhme-Quine thesis have been highlighted by the post-positivistic movement in the theory of science, positivism is far from dead. Garrison (1986) in a very clever rhetorical exercise pointed out all the problems of positivism and came to the conclusion that if the scientific community is comfortable with the inconsistencies of positivism, then positivism is, indeed, the voice and method of wisdom.

There is no group of scientists more willing to overlook the faults and problems of Popper’s falsificationism than orthodox economists. This is where the majority of currently practicing economists now dwell. As all this relates to economics, Neurath pointed out that “the attempt of behaviorist psychology to grasp the psychic through the behavior of bodies, which is at a level accessible to perception, is, in its principled attitude, close to the scientific world-conception” [Neurath 1973, 315]. Early on in economics, in an attempt to be “scientific,” theorists latched onto behaviorist psychology. By taking the behavioristic stance, methodological individualism became the foundation of economic analysis. Carver (1918) argued that behaviorism fit well into economic theorizing and was necessary if economics was to be called a science. From Carver on, behavioristic thinking transformed a living human being capable of choice into *homo economicus*, an artificial representation of an agent, which engaged in exchange motivated by a deterministic calculation of benefits and constraints [Meador 2002]. Axiomatic reasoning as
developed by Carnap (1958 as a good primer) provided a description for homo economicus. This axiomatic foundation was offered as the explanation, or theory, of economic behavior. Events in the real world were then compared to the predictions which flowed from the construct of the artificially constructed economic agent. When they matched those predictions, economists declared a theory had failed to be falsified and thus represented reality.

Note that economic positivists make no claim to explain anything other than surface events. The purchase of the apple is observed. The explanation of the purchase of the apple is wrapped up in a logically constructed axiomatic system. There have been few claims that the axiomatic foundation of homo economicus represents the real world, but there have been many claims that that foundation is logically tight. Milton Friedman goes so far as to argue that representation of the real world is not a valid requirement for the assumptions upon which theories are based [Friedman 1953, 14]. Is economic positivism troubled? Larry Boland, one of the most fervent proponents of economic positivism, writes: “scientists offering explanations of economic phenomena will be pleased to find that adherence to positivism only requires assurances that the assumptions of one’s model are falsifiable” [Boland 1991].

Was there a purchase of an apple? Yes, but it must be understood as an economic agent, with a completely ordered axiomatic set of preferences and full knowledge of all possible goods and services and their respective prices that were to be offered across the agent’s relevant time horizon, engaged in an act of exchange which had been predetermined according to a strictly behavioristic model.

ECONOMIC HERMENEUTICISTS

If a tree falls in the forest and no one is there to hear it, does it produce any sound? Hermeneuticists are likely to respond, “why do you ask, what meaning would it have to you if the tree did or did not fall, if falling whether there was or was not sound?” Hermeneutics requires first the ability to speak in terms of coherence, of making sense or nonsense with respect to the event. Second, the ability to make a distinction between meaning and how meaning is expressed is of great importance. Last, the identification of a subject for whom meaning is intended is required. As Taylor summarizes, “The object of a science of interpretation must thus have: sense, distinguishable from its expression, which is for or by a subject” [Taylor 1985, 17]. Problems do arise in that interpretive approaches to social science are difficult to assess in a systematic fashion. Generality grows from the subtle nuances of expression rather than abstraction. Unlike positivism with its deterministic foundations, hermeneutic interpretations do not set up conditions for predictions [Geertz 1973, 26]. Don Lavoie, an economic hermeneutist, recognizes the critics charge that hermeneutics denies the philosophic foundations to support substantive studies of the
Madison begins to address some of the problems of economic hermeneutics by inquiring about the nature of economic understanding. Economics has not to do with the natural, but with the human, and “what is human cannot be understood in terms of mere physical, objective processes” [Madison 1991, 39]. The goal of economic inquiry should be intelligibility rather than causal (in a positivistic sense) explanation. Where the goal of social science writ large is the attempt to discern meaningful patterns of relations in human endeavors and action, economics focuses its concentration on meaningful modes of behavior having to do with the production and exchange of goods and services. For the economic hermeneutist, knowledge and understanding is intersubjective. Meaningful patterns of human action cannot be understood within the methodological individualism of positivism [Madison 1991, 41]. In Madison’s own words, the case is best put:

‘Economic reality’, does not exist, in any purely objective sense of the term (if it did there would be no need or place for entrepreneurship). It is dependent on, is the expression of, is the way in which a community of human agents interpret and arrange their collective being – in the same way that what counts as an economic ‘good’ is dependent upon how people interpret their lives and the priorities they set for themselves. Different cultures do this differently, and thus it would not be surprising if the ‘laws’ of economics were to vary from culture to culture [Madison 1991, 51].

Asking again, did the consumer buy an apple at the roadside stand? That would take awhile to determine. The economist would undertake a “deep” study, living among the driver/consumer and the person selling the apples. Gaining their trust and thus becoming an observer/participant, the economist would seek to understand the transaction in a broader cultural context. The structure of the roadside market would be explored and the meaning it held for both the driver/consumer and seller/producer would be uncovered. The final understanding of the transaction would include an explanation of how the various needs were both for both parties; that of the satisfaction of hunger for the consumer and the need for income for the producer. Additionally, it might be uncovered that the presence of the seller helped affirm the consumers sense of security (an adequate food supply), self-esteem (the presence of the seller assures the consumer that someone is below in the social strata), and happiness (the apple tasted good and costs less than those sold at the grocery store). As important, the sellers sense of security was enhanced (income was gained), self-esteem rose (the ability to produce assures the seller’s standing in society as being better than the unemployed), and happiness gained (it was great to earn a living in the great outdoors instead of a stuffy office). In short, while an apple was purchased, it must be understood as an interaction which took place between two humans within a complex setting that allowed both to find meaning to their existence.
ECONOMISTS WITHIN CRITICAL REALISM

Where economic positivists completely deny the admission of any metaphysical statements into analysis and admit only that which can be observed into the realm explanation and economic hermeneutists search only for meaning, a task that requires that someone be present for whom meaning has relevance, economic critical realists insist that things happen. Objective reality exists independent of human observers. Reality consists of three domains: the empirical consists of what is experience, either directly or indirectly; the actual, where events happen whether they are experienced or not; and the real where that which produces events resides [Danermark 2002, 20]. There are two dimensions of reality, the intransitive and transitive. The intransitive is that which exists independently of observation while the transitive dimension is the attempt of science to explain, to theorize. Because science always builds on previous science, the transitive is never permanent; there is no ultimate knowledge [Danermark 2002, 22-23]. When applied to social science, the positivists are left behind as there are some who come to “believe in the power of reason to grasp approximately the essence and the profound significance of things; these ‘essentialists’ adhere as a rule to an organic conception of man and society, whereby both are considered complex entities. [Bortis 1997, 62; emphasis added] The idea of “complex entities” as a description of man and society is how Bortis admits the multi-domain and dimensionality of critical realism to economic science. Prediction is impossible, but trends may be identified.

Where positivists and hermeneutics are concerned only with epistemology, critical realists place ontology as the foundation of analysis – the determination of being establishes all subsequent analysis. How one knows is subsequent to what exists. Positivists look to falsify theories built up from axiomatic logic by looking only to that which can be observed; knowing replaces any need to explain being. Hermeneuticists look to make sense of the interaction of subjects; knowing is possible because being exists. Critical realists look to find that which exists and upon finding the nature of being then proceed to develop abstractions which explain that which exists; being, reality determines how knowledge develops.

True agency, the ability to do, enters analysis and theory only in the realm of critical realism. Positivists admit only deterministic responses from a behavioristic framework. Hermeneuticists admit interactions only within the context of meaningfulness. Critical realism places an agent empowered with the ability to choose in a framework where things happen. Did the consumer buy the apple? Yes, when the consumer is seen as a biological entity who required food to continue existence (causal mechanism). The consumer had many different food products to choose from, the apple was chosen due to a complex but explainable (in a transitive sense) web of behavior conditioned by the consumer’s life up to the time of the purchase. The consumer was in a production economy where a producer was allowed by a system of property rights to own an orchard. The legal system of the economy was such that the producer was able to dispose of production as the producer saw fit. The roadside stand, a place where producers are able to offer
their apples for sale and consumers are able to purchase, is a structure which conditions economic agents (it gives them a place to get and apple) and which is reproduced by the interaction of those agents.

WHAT WORKS?

Where does this take the field of economics? Of the social sciences, economics is perhaps the one with the strongest teleological foundation. Economics as a science is pursued not solely to understand how humans interact with respect to material possessions; rather it is a science whose ultimate aim is prescriptive. The development of economics was from a need to guide the policies of governments as they strove to create, maintain, and expand the material environment of its citizenry.

If that teleological basis is correct, the denial of causal mechanisms and the absolute dominance of the positivist’s axiomatic reasoning and methodological individualism within orthodox economics have served their purpose. The axiomatic foundations of economic positivism do create the ability to predict. The growing replacement of people by machines, as described by Josef Steindl [Lee 1998, chap. 10], is completely justified by economic positivism, despite the widespread alienation and disenfranchisement of thousands of people. However, critical realism raises the possibility that the flat ontology of positivism (deal with that which is observable) may miss some important causal factors operating in society. But the cost of critical realism, with its open system thinking, is the inability to predict. Those who make policy, that is the politicians, may not wish to surrender that ability. Critical realists would argue that without a return to a search for realism and the causal mechanism underlying the economy, despite the impossibility of prediction, the economy may collapse due to policies which contribute to problems rather than solve them.

It would seem that proponents of both camps, positivists and critical realists, each have something to contribute. The positivists are attuned to the needs of policy makers and are good at discovering relationships among economic variables. Critical realists, while still a very young and developing group, seem to be developing a methodology that can uncover causal mechanisms. A future direction for economic methodology should be closer cooperation between those who have the tools to discover causality and those who have the tools to falsify it.
Douglas M. Meador

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A Public Policymaker’s Dilemma:
Economic Development Meets Complexity Theory

By Dan Melton*

Abstract: Conventional economics falls short in addressing complex social issues. By examining the cost-benefit analysis framework, this paper analyzes the theoretical underpinnings of mainstream economic development and its problematic assumptions of diminishing returns and optimal market equilibrium. After shedding light on the pitfalls of cost-benefit analysis, and subsequently economic development, the author offers implications that policymakers should be aware of when faced with economic issues characteristic of complexity in the form of increasing returns, multiple equilibria and potential path dependence.

All around the United States, public policymakers rely on economic studies to decide on alternative development paths. Do we choose plan A or plan B? At the crux of such works is the process of cost-benefit analysis (CBA) or its manifestations, including cost-effectiveness, regulatory impact analyses, and project or benefit evaluation. Every USA federally funded economic development initiative over $100 million must conduct a cost-benefit analysis in compliance with the Office of Management and Budget. Judges often require a CBA study before authorizing new projects that disrupt the environment. While this technique is pervasive in applied economics, it has poor theoretical foundations and is unable to deal with the emerging science of complexity theory. Regardless, this technique is mainstream and used by the economic development profession suggesting that policymakers ought to be cautious in its application. In the spirit of this dilemma, the following examines economic decision-making in the face of complexity theory. CBA is used as an example of how conventional economic theory falls short when seeking solutions for complex issues. The paper finishes with implications for public policymakers faced with the dilemma of using a tool that may not prescribe appropriate courses of action to spur economic development.

Overview of Cost-Benefit Analysis

Cost-benefit analysis, and economic development, traces its roots into the 17th century and emerged as a technique in the early 20th century with the passing of the Flood Control Act of 1934. In this field’s seminal work, D. W. Pearce laid the foundation for CBA as a procedure for measuring the gains and losses to individuals in terms of money and then aggregating those money valuations to find net social gains or losses [Pearce 1984, 3]. Kornai identifies three major axioms underlying cost-benefit analysis. These are the existence of a social welfare function, the objective to maximize the social profit function and finally, the assumptions of convexity of production possibility sets along with the concavity of social welfare functions [Chakravarty 1987, 687]. In other words, CBA rests on the existence of consumer surplus; that surplus can be measured in terms of money; and one can determine overall costs and benefits in markets consistent with

* The author would like to thank an anonymous referee for helpful suggestions.
diminishing returns. Finally, the goal of the CBA process should be maximization of societal benefits.¹

The social welfare function includes consumer surplus and utility, both of which constitute the heart of mainstream applied microeconomics. A social welfare function implies that a rational consumer's goal is to maximize his or her own well-being given budget constraints. That consumer then only purchases those goods that increase his or her own overall well-being. If all consumers have a social welfare function, then cost-benefit analysis states that a societal net benefit can be determined by adding all the rational choices of consumers. The government then can make Pareto efficient assumption when consumer preferences and production technologies are convex and closed in a decentralized environment [Dasgupta 1987]. With this assumption, the leap to Willingness to Pay can occur, as consumers will know their own rational interests and hence what they are willing to pay; the government official need only to ask those consumers what they would be willing to pay in terms of the social issue solution at hand.² Pearce uses the market for blue whales as an example of an environment benefit determination:

We can leave the issue 'unvalued' and say that we have no conceptual technique for working out the WTP for blue whales, or we can invent a market. To do this we can hypothesize a situation in which individuals vote for preservation of the blue whale and ask them what they would be willing to pay if there was a market in whales, which was as open to them as it was to whalers. [Pearce 1984, 11]

Prices determine value; the price that people are willing to pay for blue whales determines their worth to society.

The strongest advantage of CBA lies in its ability to forecast and weigh future outcomes in terms of benefits and costs. CBA can claim to predict and weigh all possible outcomes because of the assumption of convexity and subsequently diminishing returns. By assuming diminishing returns, economists can presume that any economic action creates a negative feedback loop, which ultimately leads to “a predictable equilibrium for prices and market shares.” This type of feedback tends to stabilize the economy as large unpredictable changes will be offset by countervailing forces generated by the initial action [Arthur 1994, 1]. The Executive Branch and Congress greatly values CBA for this particular property—evidenced by numerous Acts and executive orders—in that, the federal government can rest assured that its negative consequences of its massive intervention will be negated by the market instead of resulting in mass amounts of havoc; weighing all repercussions of the proposed action lulls the disquietude associated with an uncertain future. CBA establishes all potential outcomes and then uses probabilities to weigh their prospective future impact on the project and surrounding constituency. Fuguit and Wilcox assert that economic assessment of uncertainty can be done in two parts:

[First] identifying the nature of any and all uncertainty relevant to a particular analysis and [second] analyzing the implications of the uncertainty for the study's conclusions and for the decision-making process [1999, 161].
Once all potential outcomes are weighted, the outcomes are summed and then discounted to the present using an appropriate investment rate. The economist creates a cost-benefit ratio, and those projects with a ratio higher than one are economically efficient or social profit maximizers; those projects should be chosen by the policymaker.

Using Sassone’s five-step process, the CBA framework can be applied to the Kansas City Life Sciences initiative. First, the desired effects of the policy must be determined. From their website, the grand vision of the Institute is to bring into fruition the goal of making Kansas City one of the country’s top ten areas for life sciences. Next, the Institute should quantify this policy by estimating in physical units the effect of the changes necessary to make the vision happen. During 2000, approximately 100 scientists, economic consultants, politicians, academics and business leaders assessed local capabilities, determining the strengths and weaknesses in order to make recommendations. With the first two steps, the Initiative decided on a single equilibrium consistent with success and the necessary investment to get there. The next and most challenging phase is placing monetary figures on costs and benefits resulting from investment and policy changes. This step estimates the cost of building new structures; implementing new policies; and funding initial research. To generate those estimates, the economist most likely used market data to establish benefits concerning number of lives saved as a result of new research, additional researchers acquired, revenue generated from patents, taxes accrued, and more aesthetic concepts like quality of life in and marketing appeal of this new life sciences hub. To compare the costs and benefits, the economist discounts total costs and benefits to the present value using an ‘appropriate’ discount rate, and then divides the benefits by costs to obtain a ratio. While the exact ratio could not be found, the author assumes that it was greater than one—or massaged until it did—as the life sciences initiative continues to this day. The final step—less frequently used in economic development studies—involves a sensitivity analysis, or establishing potential validity issues. The author could not find evidence of this step in the life sciences process. Overall, CBA allows the Institute to reduce the entire system to a manageable series of steps and consequences, all interrelated and justified by a monetary value.

Complexity Theory and Cost-Benefit Analysis

Arguably, the Kansas City Life Sciences initiative could be classified as a complex adaptive system as long as it meets four tests evinced by Richard Pascale. First and foremost, the system should contain many agents or actors making parallel decisions not controlled by a central source. The initiative consists of researchers, managers, government actors, community representatives and consultants acting in a decentralized manner. Second, the system reinvents or reorganizes its “building blocks and generates multiple levels of organization and structure.” Every new research initiative and technology created, lays the groundwork for new research endeavors, thus reorganizing the foundation of research and researchers in the system. Third, the system exhibits entropy in line with the second law of thermodynamics; “complex adaptive systems are vulnerable to death.” Without continued investment into research and development, Kansas City health research will surely cease, as complex technological inventions require huge amounts of investment. The grants and initial capital will fund research for
Dan Melton

a finite time period, exhibiting entropy in the form of attrition concerning money and researchers. Finally, systems have a “capacity for pattern recognition,” and they use this capacity to recognize and anticipate of seasonal change [Pascale 1999]. The entire health initiative is formed around the patterned ‘ebs and flos’ of health and technological research; when grants, business funding and government initiatives wind down, so to will the overall level of research-backed innovation in Kansas City. Of course, one could argue that any system constitutes a complex system, and thus the challenge for this paper becomes focusing on those systems consistent with increasing returns and thus the inability of conventional economics in the form of cost-benefit analysis to make strong policy recommendations. The following will describe increasing returns and implications of increasing returns on cost-benefit analysis.

Economists of past generations, including Marshall, Weber, Schumpeter and Veblen, have at one time or another conjectured on the existence of markets that exhibit increasing returns. Not possessing the mathematical techniques, these academics could merely theorize about their existence. Brian Arthur, a well-known economist and complexity theorist, has spent the last twenty years researching increasing returns and accompanying implications. The concept of increasing returns is synonymous with a number of different names including self-reinforcing mechanisms, cumulative causation, non-convexity, threshold effects and mutual causation processes; see Arthur [1989] for a brief literature survey of each concept. Arthur gives four general characteristics of a system exhibiting increasing returns:

Large set-up or fixed costs (which give the advantage of falling unit costs to increased output); learning effects (which act to improve products or lower their cost as their prevalence increases)[Arrow 1962; Rosenberg 1982]; coordination effects (which confer advantages to “going along” with other economic agents taking similar actions); and adaptive expectations (where increased prevalence on the market enhances beliefs of further prevalence) [Arthur 1989, 10].

Consider the evolution of the fax machine as an example; the value of having a fax machine increases with each new purchase, and with each new purchase, coordination and adaptive expectations occur. Similarly, the KC initiative hedges on the science community to not only attract innovation, but also to produce inventions; as each new researcher and patent enters the system, then that system will expand and attract more innovative research. Increasing returns has three strong implications for conventional economics, especially cost-benefit analysis in the form of path dependence, multiple equilibrium and inefficiency.

Unlike diminishing returns, small events can lead to big consequences. Pascale uses the example of a butterfly flapping its wings in one region, and a cumulative causation process leads to a hurricane in another [Pascale 1999]. No climatologist could trace the process of hurricane formation to a single butterfly’s wing movement; “in fact, the links between cause and effect disappear entirely in the complexity of interactions” [Parker and Stacey 1994, 13]. If small events, not to mention large events, can affect the system outcome, then the negative feedback assumptions revolving around diminishing returns in cost-benefit analysis simply fail to hold water. Without negative feedback,
there can be many outcomes or multiple equilibria; in diminishing returns, one equilibrium exists and that equilibrium is the efficient or desired one. In increasing returns, multiple ones are possible, and more than one can be ‘efficient’ or ‘desirable.’ The system could become locked into efficient or inefficient paths; Arthur shows how this process occurs:

When two or more increasing-return technologies 'compete' for a 'market' of potential adopters, insignificant events may by chance give one of them an initial advantage in adoptions. Thus a technology that by chance gains an early lead in adoption may eventually 'corner the market' of potential adopters, with the other technologies becoming locked out [Arthur 1989, 119].

While the concept of path dependence is not particularly disturbing, the consequences of choosing an inefficient path may be. Arthur and Garnsey exemplify this point by drawing on several real world scenarios including VHS winning market share over Beta; the government-backed emergence of gas powered engines over that of steam powered; the inefficient water shielding around nuclear power sources; the current monopoly of Windows over Linux; the slower QWERTY keyboard triumph; and the locational decisions of firms to produce high tech hubs like Silicon Valley, Cambridge and Austin.

Path dependence has large implications for economic development issues of complex adaptive systems subject to increasing returns. Unlike small firms making decisions that can be offset by others, government decisions, backed by billions, can cause the system to rapidly exhibit path dependence; if that decision is based upon flawed reasoning, especially when applied to an issue not characteristic of diminishing returns, then that CBA policy recommendation could have disastrous effects. Dasgupta asserts that the raison d’etre of the government engaging in the private sector, especially with a cost-benefit analysis, is when increasing-returns-to-scale leads to market failures. CBA not only assumes diminishing returns and hence convexity, but also markets unhindered by market failure [Dasgupta 1987, 1028]. How can the government reliably predict costs and benefits, using an analysis that requires assumptions like diminishing returns, and then determine one policy path is superior to another if that path could be completely altered by non-predictable small chance events unaffected by negative feedback? In short, CBA cannot offer public policymakers a strong recommendation to choose one policy path over another when increasing returns are present. By reducing the KC health initiative to a series of monetary values, it seeks to accomplish exactly what CBA cannot, a decision making tool to determine which investment should be made into what area of research, at what time and at what cost.

While not the subject of this paper, the author feels obligated to briefly survey the conceptual arguments criticizing cost-benefit analysis. This survey will hopefully convey that beyond diminishing returns, CBA has a number of theoretical defects that question its use in complex social issues.7 Critiques of CBA fall into three main themes, which are briefly presented here. The first surrounds the area of consumer choice, particularly the neoclassical concept of ‘consumer surplus’ [Rafferty 1999; Downey 1910; Lavoie 1994]. In brief, this concept refers to the difference between willingness to pay and actual expense occurred. It is particularly thorny as individual consumer surplus is ordinal, or
non-comparable between consumers, and thus Rafferty asks “How does one undertake the calculation of social costs/benefit unless there is a cardinal measure of each consumer's utility? Such a measure is precisely what orthodox economists deny to be possible” [Rafferty 1999, 154]. A second argument includes the process of discounting where resources (goods or services) that “are available in a given year are worth more than the identical resources available in a later year.” The reasoning is that resources can be invested to return more at a later time and “people tend to be impatient and to prefer earlier consumption over later consumption.” Lavoie [1994] and Campen [1989] question whether this is the case and reject intertemporal substitution of wants. Campen also surveys and questions the ability of CBA to effectively assign a dollar amount to animal life much less human life. A third and final theme pertains to the notion of false consciousness and the divergence of preferences and interests. Conventional theory assumes rationality, such that the consumer’s notion of their best interest will indeed be the case. If those consumers suffer from false consciousness [Mills 1956; Connolly 1960; Parenti 1978], use past conventions to make decisions [Lavoie 1994; Darley and Kauffman 1997] or rely on information from others and thus subject to information contagion [Lavoie 1994; Lane 1997; Arthur and Lane 1994], then that consumer will not make rational decisions that align with their best interests. A final theme, and of particular note for this paper, questions the ability of CBA to be accurate when it requires conventional economic assumptions like diminishing returns, perfect competition and markets in equilibrium. In fact, the government is charged to intervene in those particular situations not consistent with perfect competition—usually when a market failure has occurred. Overall, CBA has many flaws that should raise theoretical questions about it usage by the government, especially in those situations where CBA assumptions are inconsistent with reality.

CBA presents a strong framework to analyze those situations consistent with diminishing returns like the dominant sectors of agriculture and manufacturing. However, it runs into difficulties in the far from equilibrium and increasing returns conditions found in today's service, technology and communications-intensive businesses. Kenneth Arrow endorses Arthur’s work, especially increasing returns, validating “the importance of these variant approaches, particularly in areas where conventional tools simply fail” [Arthur 1994, x]. Public policymakers face a dilemma if they are confronted with situations indicative of far from equilibrium and increase returns conditions. Can one rely on conventional economics in situations where theoretical assumptions fail to align with reality? Rather than saying ‘no,’ and leaving the reader with nothing, the next section presents a literature review that might be helpful to policymakers seeking to make strong steps forward, despite a potentially faulty economic foundation.

Implications of Complexity on CBA as a Viable Decision Making Tool

To the author’s knowledge, there exists no strong alternative to CBA. Rather than bordering on nihilism, the author suggests that any economic development issue based upon cost-benefit analysis be questioned. If that system exhibits increasing returns or could be considered a complex adaptive system, then public policymakers might consider the following issues:
Stabilization Policy Can Lead to Chaos
If the goal of a proposed policy path is to seek stabilization, Dwyer writes and mathematically proves that even these policies can lead to chaotic outcomes [Dwyer 1992]. Large government spending packages and system stabilization mechanisms in increasing returns and far from equilibrium conditions can and do lead to path dependence as well as unpredictable behaviors. Economic assumptions should be questioned heavily, and all policies with a stabilization goal, which rely on cost-benefit analysis, must be analyzed in full.

Government Impact through CBA Leads to the Status Quo
Path dependence, as noted earlier, can lead to inefficient outcomes when one inferior technology gets ahead of another by chance. Rafferty asserts that the process of cost-benefit analysis is inherently path dependent as “consumer costs and benefits are measured by what consumers are prepared to pay for a product or to avoid potential hazards, the valuations will reflect ability to pay and hence the distribution of income. The result is an implicit distributional bias toward the status quo” [Rafferty 160]. Policymakers must be aware of potential path dependence involved in the policy choice at hand, especially if it has the undesirable potential to reinforce the status quo.

Reductionism and Synergy
This paper began with the work of Elizabeth Garnsey. She suggests that policymakers realize the key influence of individuals, but not in a reductionist way. “The challenge is to understand how collective influences come into play at the different levels of aggregation at which systems operate” [Garnsey 1999, 364]. In addition to analyzing the interaction of micro-components in a complex system, it would be helpful for policymakers to understand the synergistic properties of increasing returns and far from equilibrium systems. Richard Florida [2001] exemplifies this point in his work on the creative class, and the synergistic qualities of urban cores with cultural, diverse and creative outlets. These outlets cannot be necessarily connected to the CBA nor measured in terms of monetary benefits, but can have a tremendous impact on the creative capacity of that cities’ innovative employees. Finally, questions should be asked on how the economic analyses examine the overall system; is it a part-by-part basis with a summation mentality; or is it a part-by-part basis with a sum is greater-than-the-parts mentality?

Requisite Variety
When the future is unknown and path dependence is highly likely, Arthur suggests that public policymakers try to maintain a “multiple-equilibrium market” by retaining requisite variety as a “hedge against future shifts in the economic environment” [Arthur 1989, 27]. Policymakers should analyze the economic recommendations for possible path dependence on a single technology, and how multiple technologies might be pursued until a clear superior emerges.

Uncertainty and Double-Loop Learning
Complexity suggests it is rarely worth the effort trying to find the perfect plan or reach the perfect decision. It simply will not happen—there are too many interconnected
variables. If we accept that multiple equilibria exist and that one cannot possibly predict with any certainty which possibility will occur, then long-term strategic planning “becomes an irrelevance, if not a hindrance” [Rosenhead 1998]. An absence of any reliable long-term plan makes double-loop learning crucial to the success of any policy implementation in a complex environment. Policy makers confronted with potential path dependent policies cannot control those outcomes “through monitoring their performance against some [rigid] standard…Instead, such systems evolve through a process of self-organization from which their futures emerge…none of it can be controlled” [Parker and Stacey 1994, 14]. This all points to an evolutionary economic analysis, and one that policymakers should be especially aware of; how will this policy path react and change if those economic assumptions do not pan out?

**CBA Augments the Political Process**

Hopefully, the above has shed light on the ineffectiveness of economic policy encountering complexity, especially in the form of increasing returns. With that in mind, the author encourages policymakers to remember that economic analysis, including CBA, should only augment the political process, not substitute for it, because of its image of scientific objectivity and technical superiority. An OECD report [1983, 77] stresses that cost-benefit analysis "should be considered as only an input to the decision making process" and "certainly there will be situations where a policy decision may be taken contrary to cost-benefit recommendations" [Rafferty 1999].

**Conclusion**

This work argues that conventional economics falls short in adequately addressing complex issues like market failures, path dependence and multiple equilibria. The strength of CBA rests in its ability to reduce multifaceted problems to something less complex and more manageable. Unfortunately, this approach assumes (1) problems are well-defined; (2) one equilibrium exists—in KC’s case, that equilibrium is success; (3) policy alternatives are clear and easy to distinguish; and (4) analysts can easily measure all benefits and costs in terms of money. However, as Waldrop asserts, the real world is not that simply:

> The real world is almost never that well defined—particularly when it comes to environmental issues. All too often the apparent objectivity of cost-benefit analyses is the result of slapping arbitrary numbers on subjective judgments, and then assigning the value of zero to the things that nobody knows how to evaluate [Waldrop 1992, 331].

A dilemma exists—both voluntary and imposed by federal regulations—for public policymakers in using a tool that may not prescribe appropriate courses of action to spur economic development. When complexity emerges as a property of the economic issue at hand, this paper urges policymakers to use economic development recommendations, cautiously, if at all.

**Notes**
1. Consumer surplus refers to the difference between what one pays and the actual amount one pays. The surplus is also a synonym for social welfare, in that the consumer determines how much they are willing to pay and then their actual payment determines their total welfare as a consumer.

2. For a detailed description of WTP analysis, turn to Fuguitt and Wilcox (1999), Campen (1989) and Schmid (1989); for an analysis of Shadow prices, or shadow markets, turn to Dasgupta (1987) and Kanbur (1987).

3. Due to paper length, I did not properly setup this example. Visit the website for more information about the research initiative. http://www.kclifesciences.org

4. Pulled from the Kansas City Life Sciences website, http://www.kclifesciences.org

5. At the time of this work, the author did not have privileges awarded to access actual documents regarding the cost-benefit analysis behind this initiative.

6. Market data establishes willingness to pay criteria for the probability of one’s life being saved; living in Kansas City; researcher willingness to move, etc


8. An ordinal number refers, in its most basic meaning, to a property of a set that is applicable only to that set. Cardinal numbers refer to the ranking of entire sets; since utility is different for each person, one cannot measure interpersonal utility or consumer surplus--hence the problem of aggregating consumer surplus.


10. Lavoie rejects marginal utility and consumer surplus as the sole basis for decision making, asserting that consumers make decisions based on procedural rationality, not utility.

11. The major types of market failure include: externality, natural monopoly, market power, and inadequate or asymmetric information.

References


HIV/AIDS in Heavily Indebted Poor Countries and Global Finance

By Zdravka K. Todorova*

The paper puts an issue of public health into the context of global finance with a particular reference to Highly Indebted Poor Countries (HIPC) Debt Initiative. The discussion focuses on HIPC’s with an adult prevalence rate of HIV above 4%. Thus, emergent case of public health issue is situated in a global finance perspective. The purpose is to show that even with such a devastating problem the international commitment to address global public health problems is not yet adequate. The paper emphasizes the importance of the international organizational and procedural framework for dealing with a global public problem like HIV/AIDS.

The HIPC Initiative

The HIPC Initiative was launched by the World Bank and the IMF in 1996 as the first attempt for a comprehensive effort to eliminate unsustainable debt in the world's financially poor and most heavily indebted countries. The goal of the HIPC Debt Initiative was “to reduce HIPC debt burdens to levels that can be serviced without recourse to further rescheduling, in the context of a sound growth and development program” [World Bank 2000, 62]. The World Bank coordinates 20 multilateral institutions in operating this program. The International Monetary Fund (IMF) coordinates with the bilateral creditors.

To qualify for HIPC assistance, a country must be eligible to borrow from the IMF’s Poverty Reduction and Growth Facility (PRGF), formerly known as the Enhanced Structural Adjustment Facility (ESAF). PRGF loans carry an interest rate of 0.5 % per year, and are repayable over 10 years with 5.5 years of grace period on principal payments. Each country must have established a track record of adjustment and reform supported by the IMF and the World Bank. Eligible countries are those who face an unsustainable debt load after full application of existing debt relief mechanisms [World Bank 2000, 56].

Sustainable debt level means “a country is able in all likelihood to meet its current and future external obligations in full without resorting to rescheduling in the future or accumulation of arrears” [World Bank 2000, 55]. Sustainability in this case is a pecuniary category and does not refer to elements of livelihood. For example, Angola and Kenya were announced to be sustainable cases, although both countries are among the 28 countries with a HIV prevalence rate above 4 %, and have a need to dedicate adequate financial resources to public health.

Countries are considered eligible for HIPC assistance after maintaining a three yearlong track record of macroeconomic, structural, and social policy reforms, monitored by the World Bank and the IMF. A country’s eligibility for assistance is determined by

* The author would like to thank an anonymous referee for helpful suggestions.
the Boards of the Bank and the IMF on the basis of debt sustainability analysis undertaken by the country’s government and Bank and IMF staff. Toward the end of the three-year performance period required for a country to be considered for a stock-of-debt operation *(the decision point)*, an analysis is made of whether this operation, together with comparable action by other non-multilateral creditors, would be enough to achieve debt sustainability after another three years *(the completion point, noted in following tables as CP)*. Only 4 out of 41 HIPC countries have reached the completion point as of 2002 – Bolivia, Mozambique, Tanzania, and Uganda. Countries for which existing debt relief mechanism would not achieve sustainability in the three years following the decision point would receive enhanced relief under the initiative, adequate to achieve debt sustainability by the end of that period. In addition, continued compliance with the austere policy reform is expected [World Bank 2000, 58].

Thus, eligible countries qualify for debt relief in two stages. In the first stage, the debtor country needs to “demonstrate the capacity to use prudently the assistance granted by establishing a satisfactory track record, normally three years, under the International Development Association (IDA) - and IMF-supported programs” (World Bank, 2001). The World Bank is concerned about a potential “moral hazard” in the international payment system.

The performance period addresses the potential moral hazard problem that could arise if debt relief were seen as a reward for poor economic policy performance. The requirement of track record also provides some assurance that debt relief will be provided in a context in which the resources released as a result will be used for sound development purpose [World Bank 1998, 56].

In the second stage, after reaching the decision point under the Initiative, the country “will implement a full-fledged poverty reduction strategy, which has been prepared with broad participation of civil society, and an agreed set of measures aimed at enhancing economic growth.” During this stage, IDA (which is a lending institution, part of the World Bank Group) and the IMF grant *interim relief*, provided that the country stays on track with its IDA - and IMF-supported program. In addition, creditors “are expected to grant debt relief on highly concessional terms” [World Bank 2001].

At the end of the second stage, when the floating completion point has been reached, IDA and the IMF will provide the remainder of the committed debt relief, while Paris Club creditors will enter into a highly concessional stock-of-debt operation with the country involved. World Bank recognizes that, “…multilateral and bilateral creditors will need to contribute to the debt relief on comparable terms” [World Bank 2001].

An initiative that is seen by the international organizations as a complementary to HIPC is the Poverty Reduction Strategy Paper (PRSP) initiative. PRSP is also is seen to be a tool that can be used to mainstream the fight against HIV/AIDS [Hecht 2002]. The PRSP is simply an initiative that sets out a country's approach to poverty reduction in the form of documents in which low-income countries describe the policies and programs they *expect* to put in place and the associated external financing needs. The hope is that
PRSP documents can be used by the donor community as a framework for technical and financial support.

To qualify for debt relief under the HIPC Initiative, 40 low-income countries took the first steps toward elaborating a full PRSP during 2000-01 by preparing an interim PRSP in which they began to analyze the extent and causes of poverty and the main actions needed to combat it. By the end of 2001, 8 countries had completed and published full PRSPs.

The UNAIDS (a UN Agency focused on AIDS) Secretariat reviewed the first 25 full and interim PRSPs prepared by Sub-Saharan African countries in order to see how they are dealing with HIV/AIDS [Hecht et al. 2002]. The review was based on four criteria: (1) analysis of the relationship between AIDS and poverty; (2) inclusion of the main strategies from the country's national AIDS plan; (3) use of medium-term AIDS prevention and care goals and indicators for monitoring poverty; and (4) incorporation of monitorable short-term actions [Hecht et al. 2002]. According to these criteria PRSP is a responsibility of each country, i.e. in the evaluation of the PRSPs there are not criteria for international commitment for dealing with HIV/AIDS, and hence they do not reflect public health issues as global problems, which the international community will have to address.

Trends in HIV/AIDS and Decline in Official Development Aid

ODA declined despite high incidence of poverty and public health problems like increased infections with AIDS. Table 1 shows the trends in official flows (loans and grants from government agencies and multilateral institutions) to LDCs (Least Developed Countries). There are currently 40 million people with HIV, and about 95% of them are in developing countries. Seventy percent of all adults living with HIV are in Africa. Just 0.1% of the 28.5 million of people living with HIV/AIDS in Africa have access to HIV/AIDS drugs. Of all the 760,000 people worldwide who have access to antiretrovirals, 500,000 live in high-income countries. Of all new infections in 2001, 68% were in Sub-Saharan Africa. In the past two decades average life expectancy for all Africans has fallen by 15 years as a direct result of HIV/AIDS (UNDP 2001). During the 1990s, 11 LDCs experienced reversals in their life expectancy trends. The HIPC countries among them which have a HIV Adult Prevalence Rate larger than 4% were: Zambia, Malawi, Central African Republic, Burundi, United Republic of Tanzania, Burkina Faso, Ethiopia, Togo, Uganda Democratic Republic of Congo (Table 1). The AIDS epidemic was a major contributor in these reversals [UNCTAD 2001, 9].
### Table 1. Countries Participating in the HIPC Initiative, with > 4% HIV Adult Prevalence Rate

<table>
<thead>
<tr>
<th>Country</th>
<th>Adult Rate %</th>
<th>Adults and Children</th>
<th>Adults (15-49)</th>
<th>HIPC Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>21.52</td>
<td>1 200 000</td>
<td>1 000 000</td>
<td>DP reached</td>
</tr>
<tr>
<td>Kenya</td>
<td>15.01</td>
<td>2 500 000</td>
<td>2 300 000</td>
<td>Sustainable</td>
</tr>
<tr>
<td>Malawi</td>
<td>15.00</td>
<td>850 000</td>
<td>780 000</td>
<td>DP reached</td>
</tr>
<tr>
<td>Mozambique</td>
<td>13.00</td>
<td>1 100 000</td>
<td>1 000 000</td>
<td>Completion</td>
</tr>
<tr>
<td>Central African Republic</td>
<td>12.90</td>
<td>250 000</td>
<td>220 000</td>
<td>DP not yet</td>
</tr>
<tr>
<td>Cameroon</td>
<td>11.83</td>
<td>920 000</td>
<td>860 000</td>
<td>DP reached</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>9.65</td>
<td>770 000</td>
<td>690 000</td>
<td>DP not yet</td>
</tr>
<tr>
<td>Rwanda</td>
<td>8.88</td>
<td>500 000</td>
<td>430 000</td>
<td>DP reached</td>
</tr>
<tr>
<td>Burundi</td>
<td>8.30</td>
<td>390 000</td>
<td>330 000</td>
<td>DP not yet</td>
</tr>
<tr>
<td>Tanzania</td>
<td>7.83</td>
<td>1 500 000</td>
<td>1 300 000</td>
<td>Completion</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>7.00</td>
<td>170 000</td>
<td>150 000</td>
<td>DP reached</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>6.50</td>
<td>440 000</td>
<td>380 000</td>
<td>DP reached</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>6.41</td>
<td>2 100 000</td>
<td>1 900 000</td>
<td>DP reached</td>
</tr>
<tr>
<td>Togo</td>
<td>6.00</td>
<td>150 000</td>
<td>130 000</td>
<td>DP not yet</td>
</tr>
<tr>
<td>Angola</td>
<td>5.50</td>
<td>350 000</td>
<td>320 000</td>
<td>Sustainable</td>
</tr>
<tr>
<td>Uganda</td>
<td>5.00</td>
<td>600 000</td>
<td>510 000</td>
<td>Completion</td>
</tr>
<tr>
<td>Democratic Republic of Congo</td>
<td>4.90</td>
<td>1 300 000</td>
<td>1 100 000</td>
<td>DP not yet</td>
</tr>
</tbody>
</table>

DP: Decision Point 
CP: Completion Point

HIV/AIDS is devastating not only in enormous human suffering, but also in terms of threatening food security and access to education and employment. These conditions of deepening human poverty further spread the epidemic, which is already a threat to global public health.

Since 1992, the United Nations (UN) have set targets (called The Millennium Goals) with regards to improving indicators of hunger, schooling, gender disparity, and child mortality. Despite the increasing danger of spreading HIV/AIDS and the UN commitment to Millennium Goals for reduction of poverty, since 1992, ODA flows to the 28 countries with the highest adult HIV prevalence rates have fallen by one third, from $12.8 to $8.4 billion in the period from 1995-2000 [UNDP 2001]. For example, net ODA
or Official Aid per capita to Zambia fell from US $226 in 1995 to US $79 in 2000 (Table 2). This happens although Zambia ranks sixth among the 28 countries with HIV adult prevalence rates larger than 4% (21.52%). Zambia lost 1,300 teachers due to AIDS in the first ten months of 1998 - the equivalent of two thirds of all new teachers trained annually. Two thirds of urban households in Zambia that have lost their main breadwinner to AIDS experienced a loss of income of 80%. In addition, 61% of these households moved to cheaper housing, 39% lost piped water, and 21% of girls and 17% of boys dropped out of school [UNDP 2001]. In 14 out of 17 HIPC countries with HIV adult prevalence rate above 4% the net ODA fell from the period of 1995 to 2000. This happened in the period when these countries became eligible to participate in the HIPC program. It can be suggested that HIPC initiative has been seen as “financial flows,” going or projected to be going to countries when they reach the final stages of the procedure. Hence, there has been a compensatory decrease in ODE financing going to these countries.

Table 2. HIPC Countries with > 4% HIV Adult Prevalence Rate: Net ODA or Official Aid per capita for 1995 and 2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>DP reached</td>
<td>226</td>
<td>79</td>
<td>537</td>
</tr>
<tr>
<td>Kenya</td>
<td>Sustainable</td>
<td>28</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td>Malawi</td>
<td>DP reached</td>
<td>47</td>
<td>43</td>
<td>314</td>
</tr>
<tr>
<td>Mozambique</td>
<td>Completion</td>
<td>67</td>
<td>50</td>
<td>187</td>
</tr>
<tr>
<td>Central African Republic</td>
<td>DP not yet</td>
<td>50</td>
<td>20</td>
<td>356</td>
</tr>
<tr>
<td>Cameroon</td>
<td>DP reached</td>
<td>33</td>
<td>26</td>
<td>-</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>DP not yet</td>
<td>87</td>
<td>22</td>
<td>-</td>
</tr>
<tr>
<td>Rwanda</td>
<td>DP reached</td>
<td>110</td>
<td>38</td>
<td>628</td>
</tr>
<tr>
<td>Burundi</td>
<td>DP not yet</td>
<td>47</td>
<td>14</td>
<td>985</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Completion</td>
<td>30</td>
<td>31</td>
<td>395</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>DP reached</td>
<td>46</td>
<td>36</td>
<td>800</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>DP reached</td>
<td>49</td>
<td>30</td>
<td>210</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>DP reached</td>
<td>39</td>
<td>47</td>
<td>343</td>
</tr>
<tr>
<td>Togo</td>
<td>DP not yet</td>
<td>49</td>
<td>15</td>
<td>199</td>
</tr>
<tr>
<td>Angola</td>
<td>Sustainable</td>
<td>37</td>
<td>23</td>
<td>170</td>
</tr>
<tr>
<td>Uganda</td>
<td>Completion</td>
<td>43</td>
<td>37</td>
<td>138</td>
</tr>
<tr>
<td>Democratic Republic of Congo</td>
<td>DP not yet</td>
<td>4</td>
<td>4</td>
<td>797</td>
</tr>
</tbody>
</table>

Table 3 shows the percentage of children at or below the malnutrition weight for children less than 5 years of age and the mortality rate per 1000 live births before the age of 5. The improvement of these indicators among the HIPCs with HIV adult prevalence rate above 4 is not by much, which may be a result of increasing incidence of orphanage and unemployment due to AIDS.

Table 3. HIPC Countries with > 4 % HIV Adult Prevalence Rate: Some Millennium Goals Indicators, years 1990 and 2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>25</td>
<td>24</td>
<td>194</td>
<td>186</td>
</tr>
<tr>
<td>Kenya</td>
<td>-</td>
<td>22</td>
<td>97</td>
<td>120</td>
</tr>
<tr>
<td>Malawi</td>
<td>28</td>
<td>30</td>
<td>234</td>
<td>193</td>
</tr>
<tr>
<td>Mozambique</td>
<td>-</td>
<td>26</td>
<td>238</td>
<td>200</td>
</tr>
<tr>
<td>Central African Republic</td>
<td>-</td>
<td>23</td>
<td>-</td>
<td>152</td>
</tr>
<tr>
<td>Cameroon</td>
<td>15</td>
<td>22</td>
<td>141</td>
<td>155</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>-</td>
<td>24</td>
<td>150</td>
<td>180</td>
</tr>
<tr>
<td>Rwanda</td>
<td>29</td>
<td>27</td>
<td>-</td>
<td>203</td>
</tr>
<tr>
<td>Burundi</td>
<td>-</td>
<td>-</td>
<td>180</td>
<td>176</td>
</tr>
<tr>
<td>Tanzania</td>
<td>29</td>
<td>29</td>
<td>178</td>
<td>149</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>29</td>
<td>-</td>
<td>323</td>
<td>267</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>-</td>
<td>34</td>
<td>229</td>
<td>206</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>48</td>
<td>49</td>
<td>211</td>
<td>179</td>
</tr>
<tr>
<td>Togo</td>
<td>25</td>
<td>25</td>
<td>142</td>
<td>142</td>
</tr>
<tr>
<td>Angola</td>
<td>20</td>
<td>41</td>
<td>-</td>
<td>208</td>
</tr>
<tr>
<td>Uganda</td>
<td>23</td>
<td>26</td>
<td>165</td>
<td>161</td>
</tr>
<tr>
<td>Democratic Republic of Congo</td>
<td>-</td>
<td>34</td>
<td>155</td>
<td>163</td>
</tr>
</tbody>
</table>

Table 4 shows that the projected trajectory, which is required to reduce the death of infants by two thirds by 2015 is not met for all of the HIPCs with prevalence HIV rate above 4%, which coincides with the general decrease in ODA despite the launching of the HIPC Debt Initiative in 1996.
Table 4. HIPC Countries with > 4% HIV Adult Prevalence Rate, in which Infant Mortality Millennium Goals have not been Met

<table>
<thead>
<tr>
<th>Country</th>
<th>Infant Mortality per 1000 live births Actual Trajectory 1990</th>
<th>Infant Mortality per 1000 live births Actual Trajectory 1998</th>
<th>Infant Mortality per 1000 live births Projected Trajectory* 1998</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>107.3</td>
<td>113.7</td>
<td>84.4</td>
</tr>
<tr>
<td>Malawi</td>
<td>135.4</td>
<td>133.8</td>
<td>106.5</td>
</tr>
<tr>
<td>Mozambique</td>
<td>150.4</td>
<td>134.5</td>
<td>118.3</td>
</tr>
<tr>
<td>Central African Republic</td>
<td>102.2</td>
<td>98.4</td>
<td>80.4</td>
</tr>
<tr>
<td>Rwanda</td>
<td>132.4</td>
<td>123.1</td>
<td>104.2</td>
</tr>
<tr>
<td>Burundi</td>
<td>118.8</td>
<td>118.8</td>
<td>93.5</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>189.0</td>
<td>169.0</td>
<td>148.7</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>105.4</td>
<td>104.0</td>
<td>82.9</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>124.2</td>
<td>106.8</td>
<td>97.7</td>
</tr>
<tr>
<td>Togo</td>
<td>81.0</td>
<td>78.2</td>
<td>63.7</td>
</tr>
<tr>
<td>Angola</td>
<td>130</td>
<td>123.6</td>
<td>102.4</td>
</tr>
<tr>
<td>Democratic Republic of Congo</td>
<td>95.8</td>
<td>90.3</td>
<td>75.4</td>
</tr>
</tbody>
</table>

* The projected trajectory is the trajectory required to reduce the death of infants by two thirds by 2015.


The decrease in ODA occurred despite the commitments by donors to increase aid to the LDCs. Among the members of the Development Assistance Committee (DAS) of the Organization for Economic Cooperation and Development (OECD), only five countries met the 0.15% target at the United Nations Conference on the Least Developed Countries in 1990.

The World Bank emphasizes the role of the "efforts to improve the effectiveness of aid by allocating a greater share to countries with better policies." for the decline in net concessional flows to developing countries.

Continued improvements in aid effectiveness will be critical to ensure benefits for developing economies and will provide the most convincing argument for
maintaining or increasing concessional assistance in the face of further planned cutbacks by major donors [World Bank 1997, 49].

Along with the concern about moral hazard, the bias toward export-oriented growth is cited as an excuse for declining ODA. For example, in his address the managing director of the International Monetary Fund (IMF) Horst Köhler emphasizes the approach of self-help.

But I also want to be very clear: while more aid is needed, we need to work first and foremost on trade. Providing better opportunities for African countries to expand and diversify their exports is the best form of help for self-help [May 3, 2002].

However as Julio Marcelino Bessa, a spokesman of Africa Group I Constituency, points out, African countries are primarily commodity exporters and have problems with market access because of agricultural subsidies and restrictive trade practices in developed countries and the fall in commodity prices [September 28, 2002]. Unlike the World Bank spokesmen he states:

…we cannot overcome these challenges alone, NEPAD\(^1\) considers that action undertaken at the domestic level should be complemented by action at the international level with regard to increased ODA, accelerated debt relief and greater market access opportunities for African products [Bessa, September 28, 2002].

While there is a decline in ODA, as discussed above, the outstanding external debt of the LDCs as a share of their GDP grew to 89% [UNCTAD 2001, 55]. Twenty-nine LDCs had an unsustainable external debt in 2000, according to the sustainability criteria of the enhanced HIPC Initiative (the ratio of the net present value of debt stocks to exports of 150%) [UNCTAD 2002, 14].

Indebtedness goes hand in hand with conditionality for loans and grants. In the position of high indebtedness, countries are under pressure by the leveraging ability of international creditors. In countries coping with levels of high indebtedness, policy packages consisting of austere structural adjustment reinforce the inability of the country to cope with public health issues.

The decline in real terms in government expenditure on health means that the quality of sexually transmitted infections (STIs) management is compromised. With the shortage of medication, STIs are either inadequately managed, or not managed at all. STIs being co-factors for HIV means sub-standard management of infections results in increased transmission of HIV. Table 6 shows that the percentage of debt service paid to social expenditures is growing in Zambia (76% to 99%), Malawi (31% to 49%) and Burkina Faso (38% to 40%) – countries classified as HIPCs/LDCs which have HIV adult

\(^{1}\) New Partnership for Africa's Development
prevalence rates respectively 21.52%, 15.00% and 6.50%. In addition, the ratio of debt service paid to social expenditures in 6 out of the 11 of HICPs/LDCs with HIV adult prevalence rates below 4% is also growing. These countries are Mauritania, Senegal, Chad, Guinea Bissau, Niger, and Sao Tome and Principe. This trend is disturbing, because it may contribute to an increase in the HIV prevalence rates in these countries.

Table 5. Ratio of Debt Service Paid to Social Expenditure in Selected HIPC-LDC, (a) 1999 and 2000. (Percentage)

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of decision Point</th>
<th>Debt service paid/ Social exp. (%) 1999 (b)</th>
<th>Debt service paid/ Social exp. (%) 2000 (c)</th>
<th>HIV Adult Prevalence Rate (End 2001)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mauritania</td>
<td>Feb. 00</td>
<td>95</td>
<td>100</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Mozambique</td>
<td>Apr. 00</td>
<td>23</td>
<td>8</td>
<td>13.0</td>
</tr>
<tr>
<td>Senegal</td>
<td>Jun. 00</td>
<td>57</td>
<td>63</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Utd. Rep. Of Tanzania</td>
<td>Apr. 00</td>
<td>67</td>
<td>44</td>
<td>7.83</td>
</tr>
<tr>
<td>Uganda</td>
<td>May 00 (d)</td>
<td>32</td>
<td>22</td>
<td>5.00</td>
</tr>
<tr>
<td>Benin</td>
<td>Jul. 00</td>
<td>57</td>
<td>50</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>Jul. 00</td>
<td>38</td>
<td>40</td>
<td>6.50</td>
</tr>
<tr>
<td>Mali</td>
<td>Sep.00</td>
<td>82</td>
<td>65</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Chad</td>
<td>May 01</td>
<td>16</td>
<td>17</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Nov. 01</td>
<td>47</td>
<td>21</td>
<td>6.41</td>
</tr>
<tr>
<td>Gambia</td>
<td>Dec. 00</td>
<td>83</td>
<td>59</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Guinea</td>
<td>Dec.00</td>
<td>155</td>
<td>167</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>Dec. 00</td>
<td>9</td>
<td>15</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Madagascar</td>
<td>Dec 00</td>
<td>68</td>
<td>46</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Malawi</td>
<td>Dec 00</td>
<td>31</td>
<td>49</td>
<td>15.00</td>
</tr>
<tr>
<td>Niger</td>
<td>Dec.00</td>
<td>18</td>
<td>20</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Rwanda</td>
<td>Dec.00</td>
<td>63</td>
<td>42</td>
<td>8.88</td>
</tr>
<tr>
<td>Sao Tome and Principe</td>
<td>Dec.00</td>
<td>25</td>
<td>63</td>
<td>&lt; 4 %</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>Mar. 02</td>
<td>247</td>
<td>213</td>
<td>7.00</td>
</tr>
<tr>
<td>Zambia</td>
<td>Dec.02</td>
<td>76</td>
<td>99</td>
<td>21.52</td>
</tr>
</tbody>
</table>


(a) The list includes all HIPC-LDCs which had reached decision point/completion point by the end of September 2001.
(b) Debt service paid.
(c) Debt service due after the full use of traditional debt service mechanism and assistance under the Enhanced HIPC Initiative.
(d) Completion point.

On the other hand, there are developing countries who are not qualified for the HIPC Debt Initiative and have a large prevalence rate, such as: Botswana (38.80 % adult prevalence rate), Zimbabwe (33.73 %), Swaziland (33.73 %), Lesotho (31.00 %),
Namibia (22.50 %), South Africa (20.21 %), Congo (7.15) and Haiti (6.10 %). In this sense the IMF suggestion that HIPC is a tool to fight HIV/AIDS is too optimistic. In addition, two cases of adult HIV prevalence above 4 % (Angola – 5.50 and Kenya – 15.01 %) of the 41 HIPC countries in 2000 were declared sustainable cases, which means that these countries are expected to rely just on export oriented growth to deal with their debt payments in a situation when ODA flows are falling.

**Is HIPC Initiative a Realistic Way to “Finance” Public Health Objectives?**

The IMF Staff [Hetch et al. 2002] is optimistic about the HIPC Initiative as a source of new resources in the fight against AIDS, and is expressing concern that according to PRSPs in some HIPCs, no money from debt-relief proceeds has been specifically promised to HIV/AIDS.

On an annual basis, these countries will pay about $0.8 billion less in 2001-03 than they did in 1998-99. How much of these savings are going toward health care—keeping in mind that all eligible HIPCs must prepare PRSPs to ensure that savings go toward poverty reduction? [Hetch et al. 2002.

However, the possibility that HIPC countries may pay $0.8 billion less in 2001-03 in debt service does not mean that they will be able to cope comprehensively with the global pandemic AIDS. What is considered as "savings" is just a cancellation or postponing of an obligation to pay, and does not necessary represent a capability of the country to increase expenditures on public health. So using debt relief to fight AIDS may be necessary in the current international financial settings but is not sufficient.

The United Nations Conference on Trade and Development (UNCTAD) 2001 Trade and Development Report calls the current expectations about the economic impact of the HIPC Initiative on countries, which have reached decision point “unrealistic” [UNCTAD 2001, 55]. First, the additional fiscal resources to be released by HIPC may not be substantial to implement development policies and to secure public health provisioning. Second, the medium-term forecasts of a durable exit from the debt problem assume high rates of economic and export growth, sustained over a long period. However, this presupposes that HIPC countries are going to be able to diversify exports and to move away from being commodity exporters. In addition, this presupposes that they will be able to obtain market access, which means that either agricultural subsidies and restrictive trade practices in developed countries will be eliminated, or that technology and blue prints will be generated in or transferred to the HIPC country. Second, UNCTAD is concerned that with the provision of HIPC assistance, there may be a general reduction in financial resources flows to Less Developed Countries (LDCs). UNCTAD points out that for 14 of the 17 African LDCs in 2000 who have reached decision point, official flows fell considerably between 1996 and 1999 [UNCTAD 2000, 55]. Finally, UNCTAD points out that the underlying economic problems of LDCs are manifold, and debt write-off alone are likely to be insufficient to solve them.
Conclusions

The focus of the paper has been on the HIPCs with HIV adult prevalence rate above 4%. In 14 out of 17 of these countries the net ODA fell from the period of 1995 to 2000. This happened in the period when these countries became eligible to participate in the HIPC program. It can be suggested that HIPC initiative has been seen as a potential for “financial flows,” going or projected to be going to these countries when they reach the final stages of the HIPC procedures. Hence, there has been a compensatory decrease in ODA to these countries.

It can be recommended that there is a need to make a difference between reconstruction and development. Fighting the pandemic of AIDS is an act of reconstruction, which is the basis for development. While the UN has emphasized the reconstruction approach, the international financial institutions’ approach has been one suited for development of already reconstructed economies at full employment.

Since UN has no financial decision-making authority, The UN Millennium Goals for reduction of poverty is an initiative separated from the initiatives and loan conditionalities of the financial institutions. International financial decision powers are concentrated at institutions such as IMF and WB, as well as in private creditors. Hence, UN’s commitment to the Millennium Goals cannot be expected to have a fundamental impact on any global public health issue like HIV/AIDS. National and International financial commitment is necessary especially in dealing with a global pandemic. This presupposes a delegation of financial power to UN.

The response of the international financial system to the AIDS pandemic gives a reason to question the instrumentality of the existing international financial system in facilitating livelihood globally. If international procedures have predominantly pecuniary character and motives and are not oriented toward instrumental solving of public health problems, and in fact are contra active to public health, then one can suggest that there is a need for structural change in the international financial system by giving financial discretion to organizations whose work is directly focused on providing conditions for entitlement to public health. In order for national public health to be approached as a public good, the interrelationships among domestic public health problems should be conducted not only on national but also on global level through delegating financial authority to particularly designed institutions whose goal is provisioning of and entitlement to livelihood through sustaining full employment at the global level.

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John E. King provides students and young scholars with a book that will answer most of their questions concerning the emergence, the strengthening and the spreading of Post Keynesianism all around the world. This innovative work is very valuable for its historical perspective.

The first part of the book mainly presents the impact of the General Theory in England and at the University of Cambridge, and how it spread out all over the world. The author shows what the first reactions to Keynes’s book were and how the misreading of it led several authors (Hicks, Harrod, Meade, etc…) to create separately the IS-LM model. In front of this neoclassical interpretation of the General Theory, several economists, that King considers as the first Post Keynesians, provided another analysis of the General Theory. Robinson, Townsend, Kalecki and Kaldor all together grabbed the essential ideas of the General Theory and set out the foundations of Post Keynesian economics. We also learn that the “poor foreigner, […] with limited, highly-accented English and uncertain prospects” (49), namely Kalecki, developed a close relation with Joan Robinson and had a decisive influence on her by making “her take Marx seriously” (49). What is interesting in this part is not only the theoretical content, but also the narration of the relations between the first Post Keynesians. For students and those not aware of these relations, one of the most entertaining parts of these chapters is when King describes the stormy relation between Robinson and Davidson. This confirms to the reader who did not know Joan Robinson that she must have been a strong, controversial but also attaching personality; constantly struggling with male scholars and herself to develop a new viable framework.

From the reading of these chapters, one can say that Robinson is the hero of this book. One learns how she fought to develop a new framework and to promote it; how she became for a while optimistic about the future of Post Keynesianism and then was disabused by the lack of recognition and close-minded attitude of her colleagues. These chapters also show us how Robinson started to be frustrated by economics; her Accumulation of Capital and Essays being ignored or misread by scholars. Kaldor and her also had a very important role in promoting the General Theory and creating a network that spread out Post Keynesianism all over the world. King takes Australia, Austria, Canada, France, and Italy as an example to make his point. This first part is also very important because it shows that Post Keynesians, via Robinson, have strengthened the notion of equilibrium given by Keynes: equilibrium means that “an economy [is] in a state of tranquility.” This definition of equilibrium is compatible with an historical analysis because it shows that the economic system is path-dependent and contains endogenous sources of disequilibrium.

The second part of the book shows how Post Keynesian economics failed to become a dominant paradigm and how it resisted to marginalization by creating its own institutions and by developing the framework set out by Keynes, Robinson, Kaldor and Kalecki. The 1970s was a period of great hope for Post Keynesianism. They won the capital controversy, Samuelson admitting the doubtfulness of the notion of “capital”. This
optimism was reinforced by the nomination of Galbraith as president of the American Economic Association (AEA) in 1971. He gave Robinson a very good opportunity to present her views at the AEA meetings. However, Robinson’s optimism appeared to have been too great. *Introduction to Modern Economics* never knew success among students; Robinson, Kahn and Kaldor were not replaced; Weintraub, Minsky, Davidson became quite isolated; Major journals progressively closed their doors to Post Keynesian papers; and grants were more and more difficult to get. Contrary to the pessimistic view of King, one can say that this discrimination had a positive aspect because it led to the creation of the main institutions of the Post Keynesian school of thought. In these institutions Post Keynesians have been able to develop safely their own framework of analysis about different topics. Then King presents the historical roots of the two major contemporaneous topics in Post Keynesianism: Money and uncertainty. Overall, these chapters will give a good introduction to students who are not familiar with these two popular topics in current Post Keynesianism. They also will show them that this school of thought have been able to deal with many topics before the mainstream in a different and more coherent ways. For example, the notion of credit rationing can be introduced without using the *ad hoc* and somehow clumsy notion of market imperfection.

One of the main conclusions that a reader can draw after having read this book is that Post Keynesianism is still alive and provides a relatively coherent framework through which the capitalist economic system can be analyzed. More importantly, this book shows that Post Keynesianism did not emerge as a criticism of Neoclassical economics. It emerged from a progressive interpretation of the *General Theory*. Post Keynesianism is not an anti-Neoclassical school of thought: it has *nothing* to do with Neoclassical economics. This anti-Neoclassicism is only true at the level of the political agenda. This is a school that has been able to develop its own tools and methods of analysis, which have no reference to neoclassical analysis: analysis of the monetary system, the production system, consumption, investment decision, the public sector, etc… Of course, major work still needs to be done. The future is thus to use this tool in a progressive way by a constant *positive* criticism of the work of other scholars, whether they be Post Keynesians or others.

Reviewed by Fadhel Kaboub

In 1978, Alfred S. Eichner edited A Guide to Post-Keynesian Economics, a book that essentially intended to provide a good primary source for students and scholars to develop a basic understanding of Post Keynesian economics. Many students and economists never had any exposure to Post Keynesianism, and Eichner’s book was an attempt to address this failure to communicate Post Keynesian (PK) economics to a younger generation of economists.

Two decades later, PK economics is a relatively well-established school of thought thanks to the efforts of Eichner and his fellow Post Keynesians in the early days. In 2001, Richard Holt and Steven Pressman put together a new edited volume in the same spirit as Eichner’s 1978 book. This book is a useful introduction to PK economics that updates and builds upon Eichner’s 1978 volume. The general approach taken by the authors in this book is to lay out PK ideas and to contrast them with orthodox economics views in a manner that is accessible to undergraduate and graduate students as well as policy-makers.

Students who never had the chance to study PK economics often ask: what is Post Keynesianism? What is the PK methodology? What is the PK theory of prices? What is the PK theory of income distribution? What do Post Keynesians think about the role of the state, deficits, money etc…? What is the PK approach to labor markets, inflation, and international finance? And how is the PK approach different from the Neoclassical one? All of these questions are addressed in this volume.

Holt and Pressman did not intend to provide an exhaustive account of PK ideas, but rather they present the readers with a general understanding of the issues at hand and directions as to where to look for more detailed analysis of each topic. Starting from the foundations, Sheila Dow addressed methodological questions within Post Keynesian economics. A topic that was left out of Eichner’s 1978 volume because of lack of concern at the time, and focus on other priorities. Later, rather than sooner, Post Keynesians began to realize the need for methodology, consistency, and coherence. A subject that some senior Post Keynesians today think is not a very fruitful endeavor to pursue. Even Dow’s chapter on methodology fails to go into the philosophical foundations of Post Keynesianism. Her analysis remained on the surface, and dealt only with theoretical aspects of Post Keynesianism as opposed to the deeper philosophical issues that undergird theory and practice.

Marc Lavoie’s chapter provides a decent account of PK price theory, showing that the role of prices is not to allocate resources but rather to cover costs and generate profits. Hence the cost-plus pricing theory that is reflected in Kalecki’s mark-up pricing, Hall and Hitch’s full-cost pricing, Andrew’s normal-cost pricing, and Kaplan’s target-return pricing approach.
James Galbraith presents the PK views on inequality in income distribution, and concludes that today’s advances in measurement techniques could be used to refute the orthodox marginal productivity theory of income distribution and to demonstrate that “major movements in the inequality of wage structures are traceable to macroeconomic events” (p. 40).

Barkley Rosser addresses two of the most important aspects of PK economics; uncertainty and expectations. Economic agents in the PK world make decisions under conditions of uncertainty (not risk). Investment decisions in particular are based on expectations of future (uncertain) economic conditions. The business cycle often appears to be the result of mass psychology driven by waves of optimism and pessimism. Post Keynesians recognize the inevitable interconnection between economic agents and the unpredictable force they create which is then translated into effective demand that fluctuates based on expectations of changes in economic conditions.

L. Randall Wary presents a nice account of the origin and major developments in PK views on money and inflation. Monetary theory is probably one of the strongest and most robust fields in PK economics. Money is not neutral; it has real effects on output and employment. The money supply is endogenous, and the interest rate is exogenous (set by the central bank). Building on Keynes, Knapp, and the neo-Chartalist approach on money, Wray argues that the value of money comes from the willingness of the state to accept it in payment for obligations to itself. The state provides moneyness (or liquidity) to the unit of account that it accepts in tax payments. According to Wray, in a monetary production economy, inflation is more benign than deflation. Inflation tends to redistribute shares towards economically powerful groups; it tends to reduce debt burden and favor low-income households as well as industry over finance. On the other hand, deflation is a much more serious problem. It increases the debt burden, and favors rentiers over debtors.

In chapter 10, Steve Pressman presents the PK view on the role of the state and the state budget. The chapter does not however present the PK theory of the state, an aspect that goes beyond the role of the state and its fiscal and monetary policy. Some would argue that perhaps this aspect is omitted from the book simply because PK economics has yet to develop its theory of the state, without which no consistent and realistic arguments can be made with regards to the role of the state and what could be expected of it.

Overall, this book is an excellent guide to PK economics especially for students looking for answers about general PK views on major economic theory and policy topics. A must read for students, scholars, and policy-makers who are looking for new fresh ideas to refute orthodox economics. The authors also provide several ideas and sources for new and challenging research projects for students to engage in the development of PK economics. Perhaps, in two decades some of the readers of the 2001 Guide will be the writers of the next Guide to PK Economics. This is certainly a challenge for those who believe that PK economics won’t make it, given the dominance of Neoclassical economics; a claim that only students and junior PK scholars can prove wrong.
Books Received


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