

THE NEW INSTITUTIONAL ECONOMICS

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The New Institutional Economics provides a framework for understanding the interaction of government structures, firm organization, and individual decisions, emphasizing transaction costs as a central component of economic activity. This article briefly reviews the Old Institutional Economics and its decline and then describes the New Institutional Economics which incorporate some of the earlier institutional concerns into a framework more closely connected to mainstream economics. It concludes with some implications for Christian economists.

The Old Institutional Economics

The Old Institutional Economics (OIE) emerged as an alternative to deductive neoclassical economics in the Marshallian tradition through the work of Thorstein Veblen, John R. Commons (student of AEA founder and deductive theory critic Richard Ely), and Wesley C. Mitchell (student of Veblen). All three attempted a close examination of the actual economy of their time with little reliance on theoretical structures. Commons established the University of Wisconsin as a center of institutional economics and devoted particular attention to labor relations and to advising on specific welfare and labor legislation. Mitchell focused on quantifying business cycles and combined Veblen's general categories with an empirical approach. Mitchell directed the National Bureau of Economic Research from 1920 to 1945 and made it into a major source of economic studies with an empirical and institutional flavor (Yonay 1998, pp. 50–52). Yonay notes that Commons and Mitchell used quite different approaches but describes the common aspects of their institutional economics as: “empirical research, suspicion toward deductive theory; emphasis on the changing nature of economic institutions, habits, and norms, special attention to the divergence of market values (prices) from social values, and the belief in the ability of informed concerted action to improve human welfare” (1998, p. 52). Institutional economics flourished alongside neoclassical

economics until World War II. The separate approaches often dominated separate departments. For example, Columbia and Wisconsin emphasized institutional economics while Harvard emphasized neoclassical economics. Institutional economists were particularly active in providing policy advice because of their close attention to actual conditions, but were generally less influential than neoclassical economists on the academic development of economics.

The prewar institutional approach declined rapidly in the postwar period with the rise of mathematical economics and econometrics. Mathematical economics provided a way of formalizing and clarifying much-debated propositions of the earlier neoclassical approach and provided a renewed scope for theory. Rapid progress in theoretical developments by Samuelson, Arrow, Debreu and many others created a revolution in economic theory. The neoclassical emphasis on the firm as a production function, on consumers as rational utility maximizers, and on equilibrium conditions made an elegant edifice amenable to elaboration through formal means. Standard assumptions in mathematical neoclassical theory included zero transaction costs and costless markets in general. The actual size and operation of firms was irrelevant; only technology and factors of production mattered for output. Mutually beneficial trades were always made. The success of Arrow, Debreu and Hahn at using fixed point theorems and other advanced mathematical constructions to elucidate very general formulations of competitive equilibrium and welfare (Arrow and Hahn 1971) made the institutional criticisms of deductive economic theory seem misplaced. The debates were not so much settled as suspended: old institutional complaints about the barrenness of theory were ignored in the rush to restructure theory in the new rigorous fashion. The institutional economists' emphasis on empirical research using case studies and description was replaced by the new emphasis on rigorous econometric studies structured by neoclassical economic theory.

While mainstream economics in the postwar period pursued an agenda of increasingly sophisticated mathematical theory and econometrics, practical policy-relevant economics continued to require detailed knowledge of the

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entire range of issues (economic, political, legal) which affected the problem in a way that was reminiscent of the earlier institutional approaches. Policy-oriented economists with academic aspirations and abilities solved that problem by doing both: publishing “serious” work with mathematical and statistical sophistication in their academic role and preparing case study consultant reports for particular policy controversies in which they became involved. Many government staff economists continued to do work similar to the old institutional approaches, but generally could not use that work as a basis for a high level academic appointment.

The field of industrial organization in particular remained a mixture of neoclassical and institutionalist methods. While many researchers utilized theoretical insights and econometric methods, the case study and detailed descriptive analysis remained important methods of investigation. Just as early institutionalists found the detailed understanding of particular conditions was relevant for making policy suggestions, the applied nature of industrial organization continued to require detailed understanding of technology, law, and other factors in order to be relevant to antitrust and regulatory policy. Industrial Organization eventually moved into the theoretical mainstream, but retained a flavor of the older methods long after they had ceased to be an important influence in the profession as a whole.

The New Institutional Economics

The New Institutional Economics (NIE) revived some of the issues treated by the OIE but ignored in neoclassical economics. The essential idea of the NIE is that the success of a market system is dependent upon the institutions that facilitate efficient private transactions. While neoclassical economics assumes that all mutually beneficial transactions will occur, the NIE observes that conducting a transaction requires numerous elements other than the possibility of mutual gain: information about the potential traders, ability to conduct the bargaining, and confidence that the agreement will be carried out once reached. Those conditions are dependent upon information exchange, commercial law, and enforcement mechanisms.

Economic Growth and Development: Douglass North

Two separate lines of reasoning led to the creation of the NIE. The first was the failure of neoclassical development economics. Under the neoclassical production function approach, output is a determinate function of the inputs. Poor countries had a low ratio of capital to labor and therefore they generated a low marginal product of labor with corresponding low wages. The obvious solution to poverty was to add capital. It was difficult for people living at the margin of existence to save. Extensive effort during

the 1960s went into the development of ever more complex mathematical models of the optimal path of development, beginning with Robert Solow’s 1956 model. In the original Solow model, production is determined entirely by capital and labor while labor grows at an exogenous rate and capital grows according to the savings rate. Analysis of the one-sector Solow model yields a prescription that the highest consumption comes from setting the savings rate at the “Golden Rule saving ratio” determined as the “growth path on which the saving rate equals the share of profit in national income” (Burmeister and Dobell 1970, p. 50).

The Solow model and its variants received extensive elaboration into “turnpike” models of balanced growth and optimal control models with finite and infinite horizons and led to complex prescriptions for a combination of markets and planning such as the following:

A decentralized system may be expected to [choose output to maximize net national product] . . . through the actions of suppliers and to equalize asset yields . . . through arbitrage. It remains for the planning agency to assign initial asset prices that will satisfy transversality conditions and to force the common yield on assets into equality with the social rate of time preference (Burmeister and Dobell 1970, p. 404).

William Easterly describes the application of neoclassical growth theory to developing countries as follows:

All countries are assumed to have access to the same technology and the same rate of technological progress. . . . Then the only reason some countries are poorer than others is that they have started with very little machinery. Poor tropical countries will have higher returns to machines than will the rich temperate countries. Poor tropical countries will have strong incentives to grow more rapidly than the mature temperate economies that are growing at the rate of technical progress. Eventually the poor tropics will catch up to the rich temperate zone, and all will grow at the rate of technical progress (2001, p. 56).

The neoclassical growth models appeared to represent the best of the postwar approach to economics, using sophisticated mathematical models to solve a problem of literal life and death importance – salvation by optimal control theory. The problem was that the elaborate models had very little relevance to the actual development problem. Poor countries showed little interest in adopting the optimal growth path as indicated by the models in order to lift themselves out of poverty. When external capital was made available (either gifts or loans), it failed to have the beneficial effects on wage rates predicted by the economic models and often was squandered in wasteful projects or recycled into foreign bank accounts for the benefit of the ruling class.

Development economists and economic historians be-

gan focusing more closely on factors that created the disparity between theoretical predictions and observation. Much of the corrective work could be carried on as it was in other applied fields: using the theory as a guideline but adding extensive knowledge of the local conditions and common sense to formulate reasonable policies. However, some economists began attempting to formulate a more comprehensive framework for analyzing the process of development. Economic historian Douglass North put the focus on institutions. North defines institutions as “the rules of the game in a society” or alternatively as “the humanly devised constraints that shape human interaction” (North 1990, p. 3). North finds that the institutions developed by a society (including regulatory rules) are a crucial factor in determining economic success. Poor institutions create incentives for the parties to engage in redistributive activities, expending substantial resources in privately beneficial activity that transfers income from one party to another with no net increase in society’s resources. North classifies pure redistributive activities as piracy and contrasts institutions that promote redistribution with those that promote production:

To be a successful pirate one needs to know a great deal about naval warfare; the trade routes of commercial shipping; the armament, rigging, and crew size of the potential victims; and the market for booty. . . . To be a successful chemical manufacturer in early twentieth-century United States required knowledge of chemistry, potential uses of chemicals in different intermediate and final products, markets, and problems of large-scale organization. . . . If the basic institutional framework makes income redistribution (piracy) the preferred (most profitable) economic opportunity, we can expect a very different development of knowledge and skills than a productivity-increasing (the twentieth-century chemical manufacturer) economic opportunity would entail (1990, pp. 77–78).

Desirable institutions promote a long-term path of productive activity rather than redistributive activity. North illustrates his approach with the contrasting economic paths of Spain and England during the seventeenth century. At the beginning of the century, Spain was economically dominant over England and appeared to have far brighter prospects with its extensive fleet, its vast colonies, and the great influx of wealth from the New World. Both Spain and England sought ways to increase government revenue during the century in order to finance extensive military operations. England increased government revenue by ceding more power to Parliament, strengthening private property rights, and establishing the Bank of England, creating institutions that provided security for private investment and facilitated private enterprise and economic growth. Spain increased government revenue by arbitrary taxation

and confiscation of wealth, creating insecurity over private property and disincentives for private investment. Spain’s economic position declined precipitously while England rose to the world’s leading economic power.

Early versions of North’s approach assumed that institutions would gradually converge toward efficient ones. The claim was based on an evolutionary approach, that efficient institutions would gradually drive out inefficient ones. Later versions have abandoned that claim and noted that the evolution of institutions is not driven by rational planning or an evolutionary search for optimality. Instead, the evolution of institutions depends upon the political process and the ability of those who gain from the existing institutions to block changes advocated by others. Inefficient institutions may survive over a long period of time, even to the detriment of the country maintaining them. Spain’s inefficient institutions compared to Britain’s caused the relative position of the countries to change, but did not cause Spain to adopt efficient institutions. Thus actual historical time is important in the NIE in contrast to neoclassical economics which only considers logical time. NIE processes are “path-dependent” while neoclassical processes are not. As North describes the process of institutional evolution:

Institutions, together with the standard constraints of economic theory, determine the opportunities in a society. Organizations are created to take advantage of those opportunities, and, as the organizations evolve, they alter the institutions. The resultant path of institutional change is shaped by (1) the lock-in that comes from the symbiotic relationship between institutions and the organizations that have evolved as a consequence of the incentive structure provided by those institutions and (2) the feedback process by which human beings perceive and react to changes in the opportunity set. . . . Transaction costs in political and economic markets make for inefficient property rights, but the imperfect subjective models of the players as they attempt to understand the complexities of the problems they confront can lead to the persistence of such property rights (1990, pp. 7–8).

Transaction Costs: Ronald Coase and Oliver Williamson

A second distinct line of NIE development came from the elaboration of transaction cost economics, especially by Ronald Coase and Oliver Williamson. Coase’s 1937 article made transaction costs the determining structure of a firm: firms exist and choose their boundaries according to the benefits of organizing transactions administratively versus through the market. That article focused on why an employee would serve under a loosely-defined long term contract under the direction of others, not on opportunism and asset specificity as in the later Williamson formulation.

Coase noted that “it is profitable to establish a firm . . . [because] there is a cost of using the price mechanism” and noted the costs as “discovering what the relevant prices are,” and “negotiating and concluding a separate contract for each exchange transaction which takes place on a market” while an employment contract is a single simple contract (Coase 1937, reprinted in 1988, pp. 38–39). In his 1960 article, Coase extended the transactions cost analysis to a consideration of the overall market effects, including the explanation of what later has been named the Coase theorem. However, Coase himself believed that the emphasis on the Coase theorem was misplaced and that his analysis of a situation of zero transaction cost was only meant to set the stage for an analysis of the importance of real world situations in which transaction costs matter.

In a 1988 retrospective, Coase decried the way transaction costs have been ignored and his own work misinterpreted. He wrote:

I showed in “The Nature of the Firm” that, in the absence of transaction costs, there is no economic basis for the existence of the firm. What I showed in “The Problem of Social Cost” was that, in the absence of transaction costs, it does not matter what the law is, since people can always negotiate without cost to acquire, subdivide, and combine rights whenever this would increase the value of production. In such a world the institutions which make up the economic system have neither substance nor purpose. . . . It would not seem worthwhile to spend much time investigating the properties of such a world. What my argument does suggest is the need to introduce positive transaction costs explicitly into economic analysis so that we can study the world that exists. This has not been the effect of my article. The extensive discussion in the journals has concentrated almost entirely on the “Coase Theorem,” a proposition about the world of zero transaction costs. . . . The world of zero transaction costs . . . is the world of modern economic analysis, and economists therefore feel quite comfortable handling the intellectual problems it poses, remote from the real world though they may be (1988, pp. 14–15).

Although Coase’s early emphasis on transaction costs had limited impact on the development of mainstream economic theory, the importance of his pioneering work was increased after Oliver Williamson’s efforts to distinguish why transaction costs varied across markets. Williamson (1975, 1996) developed an operational theory that transformed the general concept of transaction costs into predictions of the kinds of markets that would encounter high transaction costs. Williamson built his theory around two modifications of the standard neoclassical picture of economic agents. While standard theory assumes infinite mental abilities for agents, Williamson assumed

bounded rationality and adopted Herbert Simon’s definition of agents as “intendedly rational, but only limitedly so.” While standard theory assumed honest self-interested behavior by agents, Williamson assumed opportunistic behavior which he defined as “self-interest seeking with guile” and noted that it includes “making false or empty . . . threats and promises in the expectation that individual advantage will thereby be realized,” building on earlier work by I. Goffman (Williamson 1975, p. 26).

Williamson thus replaced the fully rational trustworthy self-interested agents of Arrow’s general equilibrium theory with less capable and less trustworthy economic agents. Arrow’s agents could instantly and costlessly compute their optimal adjustments (labor to be sold, goods to be purchased) in response to changing price vectors and could

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fully understand the implications of complex contingent contracts spread over time of the form “if the state of the world is i in year j , I will pay a particular price for a particular good, and otherwise I will not buy the good.” Furthermore, while Arrow’s agents were self-interested and only made mutually beneficial contracts, they all carried out their contracts without coercion or arguments about what the contract required or what state of the world had occurred. An Arrow agent is one “who keeps his oath even when it hurts” (Psalm 15:4). In contrast, Williamson’s agents attempted to make rational calculating decisions but required real resources to understand and evaluate complex contracts and they would refuse to honor contracts for future services if changing conditions made it in their interest to renege on earlier promises.

Williamson’s adjustment to the standard picture of economic agents created a very different view of the economy. The market is not an ideal mechanism where all mutually beneficial transactions are automatically carried out. Bounded rationality means that not all possible events can be anticipated, assigned probabilities, and taken into account in the contract. Contracts for complex transactions are therefore incomplete and must be interpreted and enforced as events unfold. Firms and other organizations are structured to facilitate transactions and to guard against opportunism. Williamson particularly focused on transaction cost explanations for vertical integration and other practices that were sometimes considered anti-competitive. He examined cases in which one party’s investment to carry out a long term contract creates incentives for the other party to seek to opportunistically modify the contract (difference between *ex ante* and *ex post* incentives) and noted that one

purpose of large firms is to substitute administrative control for potentially opportunistic market interactions.

Williamson's development of transaction costs implied that market exchange was less efficient than assumed under neoclassical conditions and that many transactions that could potentially benefit both parties would not occur because of lack of information or inability of the parties to trust each other. Within the transaction cost framework, an efficient economy could consist of pure market transactions along with large firms and government operations with their "low power incentives" and bureaucratic inefficiencies if they provided service where pure market transaction costs would be particularly high.

Summary Structure of NIE

The insights from the North and Williamson lines of reasoning have been combined into the New Institutional Economics (NIE). The NIE does not assert that neoclassical theory is wrong, but simply that it is incomplete. When institutions work well, they can be largely ignored for economic analysis and the standard neoclassical arguments remain valid. However, when institutions work poorly, they must be considered explicitly. The NIE is not really a separate field or approach, but is a new focus and definition to matters that have been earlier considered under the categories of law and economics, applied industrial organization, public policy studies, and other specialties in which economists combined theoretical economic insights with learning from other fields in order to develop a comprehensive perspective on particular problems.

The NIE sees greater uncertainty in the world than neoclassical economics. In neoclassical economics people either have the same probability distributions on future events (strong form, Arrow-Debreu equilibrium) or have different subjective probability distributions about future events (weak form, Bayesian expectations) but perceive the "state of the world" correctly once it is revealed. In the NIE, people do not even know the possible events of the future in order to construct probability distributions about them and do not necessarily perceive the current or past states of the world in the same way. Economic agents with bounded rationality facing great uncertainty use both ideologies and institutions to structure their world and to focus their decision making on a limited set of alternatives. The world is complex enough that inconsistent ideologies may continue to exist without their proponents perceiving any contradiction between their ideology and their empirical observations. The NIE maintains that people make rational decisions within their own frameworks, but that those decisions may appear irrational to a person with a different understanding of the world.

In Oliver Williamson's description of the NIE, it con-

sists of four different levels of analysis. Each level has a controlling influence on the level below it and there are also some feedback effects from lower levels to higher levels (Williamson 2000). The highest level is called "embeddedness" or "social theory." It includes informal institutions, customs, traditions, norms, and religion. That level changes very slowly and does not have a rational maximizing character, but does significantly affect both the shape and the operation of the lower levels. The second level is the institutional environment or formal rules of the game, including the formal rules of property ownership and judicial recourse for settling disputes. That level includes some explicit maximizing activities but also a large component of power relations and historical effects. It changes more rapidly than the first level but is stable (with changes requiring ten to a hundred years in Williamson's scheme). The third level is governance or play of the game, including transaction costs economics to align governance structures with the nature of transactions. The fourth level is resource allocation and employment or neoclassical economics with its continuous maximizing activities (2000, p. 597).

Williamson describes the gradual acceptance of the NIE as the result of incremental empirical advances rather than a single dominating theoretical contribution:

Initial skepticism [regarding NIE] has gradually given way to respect—it being the case that economists are very pragmatic people. Tell them something different and consequential about phenomena that are of interest to them and demonstrate that the data are corroborative: that will get their attention. The NIE has progressed not by advancing an overarching theory but by uncovering and explicating the microanalytic features . . . and by piling block upon block until the cumulative value added cannot be denied (2000, p. 596).

Relationship to Public Choice Economics and Conflict Economics

The topics examined by the NIE are closely related to the topics examined by public choice economics (reviewed by P. J. Hill, 1999) and to conflict economics (reviewed by Charles Anderton, 2001). Both public choice and NIE emphasize the inefficiency that comes from rent-seeking behavior, but the NIE tends to see rent-seeking in a broader context than public choice. Public choice uses rent-seeking as a reference "to efforts to capture monopoly or contrived rents through attempts to influence government" (Hill 1999, p. 3) and notes that rent-seeking is inefficient because it "involves the use of real resources to capture a pure transfer." Public choice generally views rent-seeking as a problem created by a large public sector and sees the solution to rent-seeking inefficiency as reducing the role of government. The NIE observes that real resources are routinely

used to accomplish or block a pure transfer in both the private and the public sectors. The essential feature of good institutions is that they focus individual incentives on productive activities rather than redistributive activities.

The NIE agrees with public choice economics that large income transfers made through the public sector are likely to lead to rent-seeking behavior, but the NIE also recognizes that an inadequate public sector may lead to pure income redistribution activities in the private sector. The latter insight is also a fundamental point of conflict economics. Conflict economics notes that a market transaction must be an “improvement for each economic agent relative to appropriation possibilities” (Anderton 2001, p. 4), a stronger condition than the standard requirement for mutual benefits. Conflict economics notes that transactions may fail to occur because of the risk of appropriation (if I show my money or goods you may steal them rather than trading with me), and that actual consumption is below the theoretical possible level because of the resources utilized in appropriating and guarding against appropriation. The NIE analysis of the efficiency losses from redistribution contests is similar to that of conflict economics, but the NIE has a more optimistic perspective that those inefficiencies can be overcome through the creation of institutions (legal property rights enforced by police and court powers) that allow trades to occur without regard to the “contest success function” of conflict economics. The NIE would see the results of conflict economics as relevant to the struggle among states for resources, to transactions in illegal activities such as drugs, and to general transactions in societies with inadequate or poorly functioning institutions, but not to routine exchange in an economy with well-functioning institutions.

Public choice emphasizes the formation and operation of governmental structures, including constitutional political economy, voting, and bureaucracy, using the self-interested rational actor model of neoclassical economics. It struggles to explain why people vote (because there is an opportunity cost of voting and very little change of influencing the outcome) and generally finds bureaucracies inefficient and overly large. The NIE is more concerned with the effect of the institutions on the market sector than the creation and operation of them. As with public choice, it expects public sector participants to be self-interested and to be inefficient, but it sees the sector as necessary to provide a framework for market transactions.

The NIE sees transaction costs as a central theme of all economic transactions, whether in the public or private sector. A pure private sector with no controlling institutions will have high transaction costs that may lead to absence of transactions as individual participants dissipate resources in protecting themselves from theft—a perspective similar

to that of conflict economics. Thus a bureaucracy that is inefficient and appropriates wealth for itself may be wealth enhancing if it provides a stable enough property rights structure to facilitate private market transactions. The NIE transaction cost approach assumes that there is both private and public effort to facilitate transactions. Private efforts include administrative resource allocation in large corporations with its accompanying private bureaucracies and reduced efficiency incentives in order to avoid hazards created by asset specificity and opportunism that would make market transactions expensive or risky. Thus there is no perfectly efficient market mechanism to be used as the standard for judging large corporations or government entities.

Examples of Institutional Analysis

Example 1: Solomon as an Institutional Economist

The early Israelite period in Palestine was characterized by subsistence farming and grazing, a relatively egalitarian distribution of a low income, and by virtual anarchy in government: “In those days Israel had no king; everyone did as he saw fit” (Judges 21:25). Internal disputes were referred to tribal elders or judges, but continual conflict with Canaanites, Philistines, and various desert invaders prevented trade or secure property rights. There was neither a large central government to extract wealth from the people nor an expensive standing army, but many resources were dissipated in income redistribution efforts as various parties sought to appropriate the assets of others. Archaeological remains of the early Israelite settlements indicate roughly constructed buildings with no evidence of the luxury goods or international trade enjoyed by the Canaanites prior to the Israelite invasion (Bright 1981).

The Israelite economy advanced dramatically during the long reigns of David and Solomon (1000–961 for David; 961–922 for Solomon in the chronology of Bright 1981). David established a strong army that eliminated the continual warfare with Philistines and Canaanites west of the Jordan and established vassal kingdoms east of the Jordan, reducing the ability of desert tribes to raid the settled agricultural lands. Solomon followed up David’s military victories by establishing a strong central government and extensive trade and specialization. The elimination of internal warfare allowed a focus on productive activities rather than redistributive activities and eliminated the previous loss of crops and incentives from uncertainty over whether the crop would be confiscated.

Solomon also established mutually beneficial trading relations with Phoenicia, then ruled by Hiram I. Israel had an abundance of agricultural land while the Phoenicians had more advanced technical skills than the Israelites for seafaring, fine building, and metalwork, as well as vast forests of

prized cedars in the mountains of Lebanon. The first trade agreement called for Israel to provide 125,000 bushels of wheat and 115,000 gallons of olive oil per year to Phoenicia in return for Phoenicia providing timber, shipping services, and skilled artisans to assist the Israelites in building projects (I Kings 5; I Chronicles 2). Israel had no seafaring experience but did control the port of Ezion-geber at the north end of the Gulf of Aqabah. Solomon and Hiram established a joint venture to combine Israel's port with Phoenicia's expertise and created a Red Sea fleet which gathered gold, silver, ivory, fine woods, and apes and baboons (I Kings 9, 10). Solomon fully integrated Israel into the commercial international economy of the day while also expanding trade in ways not possible while the region was made up of small warring states.

The final stage in Israel's economic development under Solomon was its emergence as a profitable middleman because of its control of the trade routes. The creation of the empire replaced hostile warring parties with unified control over major trade routes, reducing transaction costs and enabling profitable trades that otherwise would not have occurred because of the risk of confiscation. The camel caravans from southern Arabia which carried spices, gold, and gems traveled through Israelite dependencies on the desert route to Syria and Mesopotamia, through Israelite territory to Phoenicia, or past Solomon's fortress at Ezion-geber on the way to Egypt. Solomon encouraged the trade and charged tolls: he received "revenues from merchants and traders and from all the Arabian kings" (I Kings 10:15). He took a direct role in the arms trade, importing chariots from Egypt and exporting them "to all the kings of the Hittites and of the Arameans" (I Kings 10:29).

Solomon greatly increased Israel's wealth by following the prescriptions of the NIE. The essential economic problem before the Davidic monarchy was insecure property rights internally and prohibitively high transaction costs for external trade. Insecure property rights created extensive crop losses through small-scale warfare and led to inefficient use of labor in order to reduce confiscation such as Gideon "threshing wheat in a winepress to keep it from the Midianites" (Judges 6:11). Raiding (income redistribution rather than production) provided potential high returns and caused substantial resources to be used in confiscating and preventing confiscation of crops. Even though mutually beneficial trades were possible among Israel and its neighbors, the high transaction costs and likelihood of confiscation prevented the trades from occurring, leaving other countries without the benefit of Israelite agricultural production and Israel without the benefit of their expertise, spices, and other goods. David and Solomon solved those problems by establishing a strong central government and standing army, allowing both internal production and exter-

nal trade to proceed without fear of arbitrary confiscation.

While Solomon's economic policy propelled ancient Israel to its most prosperous period, it also created social problems that are representative of modern problems in rapidly advancing economies. The commercial revolution transformed the Israelite society from a poor egalitarian society to a wealthy society with sharp social and economic distinctions. Gone were the simple days when the leaders lived like the common people; when Deborah judged Israel outdoors "under the Palm of Deborah" (Judges 4:5); when Saul returned to his farm after being anointed king until an emergency arose; when there was no standing army but every man took up arms when danger threatened. Instead there was a massive central administration, an expensive professional army, vast government building projects, government control of the economic life of the nation, an

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expensive luxurious court, and at the bottom a heavily taxed and sometimes conscripted Israelite farmer. Solomon divided the country into twelve administrative districts (not corresponding in any precise sense to the old tribal boundaries) to improve the central collection of taxes. Taxes included agricultural produce for Solomon's court, "barley and straw for the chariot horses and the other horses" (I Kings 4:28) and possibly the food sold to Phoenicia and other nations. The heavy taxation administered through royal districts signified the end of the old order of limited government and voluntary tribal cooperation. Israel's old order was united by the invisible rule of God; the new order was united by the very visible rule of Solomon's troops and tax collectors.

The relative economic status of the farmer from the economic revolution is unknown, but estimates that the population doubled between the time of Saul and the time of Solomon (Bright 1981, p. 215) suggest that the common people enjoyed some of the prosperity. However, they were far worse off relative to the glittering luxury of Solomon's privileged class than their fathers had been relative to the wealthiest people of their day and saw that they were not fully sharing in the privileges of the royal family, court officials, merchants and professional soldiers.

Solomon's alliances and trading pacts were sealed by marriages with representatives of the surrounding areas ("seven hundred wives of royal birth") and Solomon showed his respect for their culture and their native areas by providing places for each of his wives to worship the divinities of her people. Solomon's activities reduced Israel's sense of uniqueness and turned it into an open-minded commercial and military power willing to accept any person or divinity

which seemed useful in meeting current goals, creating religious discontent.

A revolt against Solomon began when the prophet Ahijah of Shiloh anointed Jeroboam as king in place of Solomon and culminated after Solomon's death in the stoning of the supervisor of forced labor and the split of kingdom in 922 B.C. The split was an economic disaster for both of the remnant kingdoms and led to a long inconclusive civil war, the loss of the vassal external states, the cessation of international trade, and a resumption of the instability of the pre-Davidic era. Prosperity did not return until a half century later with the dynasty of Omri and Ahab that revived international trade and also earned prophetic condemnation for its religious syncretism.

The failure of Solomon's economic innovations to lead to permanent prosperity illustrates three recurring problems in economic development that can create social instability and undermine further prosperity. The first is that benefits

The essential economic problem before the Davidic monarchy was insecure property rights internally and prohibitively high transaction costs for external trade.

of economic growth are typically spread unevenly across sectors, accentuating inequality of income. Standard economic reasoning says that an increase in the real income of a portion of the population with no decline in the real income for anyone is a Pareto improvement and therefore an uncontroversial benefit. Yet we also know that people compare themselves against each other and may become discontent if they fail to share in the prosperity of others. The second recurring problem is cultural homogenization arising from integration into the world economy with its accompanying sense of a loss of distinctive characteristics. The complaints in Solomon's time about religious accommodation to the practices of people surrounding Israel are echoed in our time by complaints of American cultural imperialism, bowing to the World Bank-International Monetary Fund consensus, and similar assertions in third world newspapers. The third recurring problem is rigid government structures in which those who benefit from the existing structure are able to block socially beneficial changes in the structure. In Solomon's time, a strong central government and army were necessary to create the conditions for economic prosperity, but the next generation of the monarchy saw themselves as the proper beneficiaries of the expanded economy and refused to give up any of their privileges. The specific cause of revolt was Rehoboam's harsh answer to the people's request for relief from taxes and forced labor: "lighten the harsh labor and the heavy yoke (Solomon) put on us" (I Kings 12:4). That request could have reduced the wealth of those associated with the

royal family. In the context of the monarchy, there was no way to modify the government except to revolt. In modern economies with some form of democracy, there is more opportunity to modify the government, but it is often very difficult to overcome special privileges even when a change would enhance overall efficiency.

Example 2: Price Caps vs. Rate of Return Regulation

While a government economist and manager during the late 1980s, I spent a great deal of time on changing the basic form of federal telecommunication price regulation from a "rate base rate of return" system to a "price caps" system. The essential idea was to improve the efficiency incentives of regulated companies by eliminating their rate of return constraints and allowing them to increase profits by reducing cost, so long as their prices were no higher than a specified level. That effort was part of a general movement toward incentive-compatible regulation. The basic economic design of the system was relatively straightforward. Most of the effort that my colleagues and I put into the system was concerned with the practical difficulties of political, legal, and public relations requirements for implementing a policy change. That included innumerable meetings, political compromises, and extensive efforts to overcome various objections to the program. The simple economic concept generated thousands of pages of formal comments, numerous Congressional hearings, and a 500 page FCC order for initial implementation with many later orders refining and extending the plan (Brock 1994).

At the time, I considered the economic component of that effort to be applied industrial organization with specific insights from the mechanism design literature, and considered the other efforts to be practical politics without any specific academic foundation. I would now describe the entire exercise as part of the NIE. The fundamental goal was to change a portion of the formal rules (Williamson's Level 2 arrangements) in order to increase incentives for improved productivity and to reduce incentives for pure income redistribution. It was undertaken in a context of bounded rationality and much of the effort by both proponents and opponents of the system was concerned with clarifying the effects of the new system compared to the old system on detailed sectors of the industry and various classes of consumers. It was necessary to give detailed attention to who would benefit and who would lose from the change and to estimate the political strength of the various parties within the particular institutional structure for decision making at that time (independent regulatory agency with Congressional oversight by the opposition party) in order to design a system that could neutralize enough opposition for successful implementation.

As this example illustrates, the NIE is a framework for

analyzing the kinds of issues that applied, policy-oriented economists have worked on for a long time. However, many economists have seen the political and educational aspects of implementing a new policy as “not economics” and have bemoaned the difficulty of getting people to recognize the obvious value of their efficiency-enhancing proposals. The NIE takes a broader view of economics and suggests that an effort to increase economic efficiency through changes in policy or rules will always require the same sustained intellectual attention to overcoming bounded rationality, and to powers that benefit from the status quo, as the narrower pure economic proposal.

Example 3: Telecommunication Reform in India

I have recently been concerned with telecommunication reform in India and particularly with the opportunities that telecommunication reform provides for poverty alleviation. India has a comparative advantage in highly skilled technical people, with wages for those people far below the wages of comparably-skilled people in the U.S. or Europe. For a long time, India has exported portions of its technical workforce and in many cases they have done very well for themselves and also sent substantial remittances back to India. However, immigration rules limit free trade in human capital, and there are many other barriers (e.g. family and cultural ties) to physically moving to another country in order to improve the economic situation. Furthermore, there are limited “trickle down” benefits from having a skilled person emigrate. While that person may improve the economic situation of his or her immediate family, the economic stimulation provided by increased spending will go to the new country, not to India. With improved telecommunication, it is now possible to export technical talent virtually, without physically moving. Versions of that have been possible for a long time, but increases in bandwidth and decreases in price make it feasible to utilize talent that requires direct interaction rather than only being incorporated into finished products. That makes it possible for an Indian technical expert to write software in collaboration with a U.S. company, or to provide technical support for companies on a fully interactive basis without the calling customer even being aware that the phone is answered half way around the world.

A critical requirement for economic development within India through virtual exports is improved telecommunication. A neoclassical analysis of the problem would include the following: telecommunication is capital intensive; India has limited capital available; the long-run benefits of improved telecommunication outweigh the costs; therefore loans should be made (or gifts if available) to improve the Indian telecommunication system. In the neoclassical analysis, the critical resource constraint is capital and any

external source of capital (loans, gifts, foreign equity investment) would benefit India’s telecommunication development.

An institutional analysis would agree that extensive capital investment is necessary for an improved telecommunication system, but it would focus on the factors that have limited the incentives to invest in the telecommunication system. It would observe that the Indian telecommunication system has been a part of the government and that the telecommunication enterprise has been used as a method of providing employment security for large numbers of people. It would observe that prices for long distance and international calls have been far above the true cost of service, with the high margins justified by social obligations such as rural service, but that rural service is practically nonexistent (5 phones per thousand persons). The NIE would conclude that an infusion of outside capital with no change in the structure would relieve pressure to become more efficient and would probably increase either the salary level of existing workers or the total number of workers, but would not necessarily lead to improved telecommunication. The Indian telecommunication system (along with many other telecommunication systems around the world) is in the process of privatization. The NIE would conclude that the critical issue in attracting capital into a privatized telecommunication system is the structure of rules, including license requirements, interconnection obligations, and inter-carrier payments for jointly provided service. The institutional analysis would draw on the standard methods of economic reasoning, including close attention to private incentives, but look more closely at the entire range of incentives of people in incumbent companies, competitive companies, and government agencies while attempting to design a politically feasible system that would lead to improved telecommunication services.

Implications for Christian Approaches to Economics
Strategy for Developing Alternatives to Mainstream Economics

Many (but certainly not all) members of the Association of Christian Economists believe that the assumptions of mainstream economics are inconsistent with Christian doctrine and have advocated major changes to the formulation of economic theory. I believe that the decline of the OIE and the rise of the NIE provides insight into how to successfully introduce an innovation into economic theory. The OIE attacked core assumptions of mainstream economics but did not provide a clear theoretical alternative. The OIE emphasis on understanding the entire range of complex factors determining economic actions gave the work a descriptive character with the merit of any particular work dependent upon the judgment and skill of the particular

researcher. Thus it was difficult for one researcher to build on the accomplishments of another and there was no clear sense of cumulative progress. In contrast, mainstream economic theory as formulated by Samuelson, Arrow and numerous others in the early postwar period provided a stable foundation on which others could build, providing attractive well-defined problems for young researchers and giving a sense of cumulative progress. Thus the “progressive” mathematical neoclassical theory seemed much more attractive to technically capable young economists than the “old fashioned” institutional economics.

The new institutional economics gained support by connecting itself much more closely with mainstream theory than the older approaches and by emphasizing the empirical implications of its modifications to mainstream theory. It did not argue that mainstream economics was wrong in a

. . . the NIE provides a structure for examining the relationship of religious belief to the economy without abandoning mainstream economics and attempting to create a new form of economics.

fundamental sense but that it was incomplete and could be improved by a broader approach that took explicit account of institutions and transaction costs. That approach was consistent with many other advances in economic theory that had made modifications to previous assumptions in order to extend the theory to special cases without changing the underlying methodology of economic reasoning.

Many of the efforts so far to develop a Christian approach to economics (presented or reviewed in many previous issues of the *ACE Bulletin* and *Faith & Economics*) have provided criticisms of the assumptions and methodology of mainstream economics and have provided useful insights from Biblical, philosophical, and theological studies. Some of those efforts have utilized a version of the “old” institutional economics, such as Tiemstra (1993, 1994, 1998) and Hoksbergen (1994). Tiemstra classifies himself along with a number of other Christian writers as supporting “classical institutionalism” (1993, p. 239) and he adds perspectives from the Post-Keynesian literature to create a hybrid that he calls Post-Keynesian Institutional economics (PKI). Tiemstra sees neoclassical economics as fundamentally flawed and dismisses the New Institutional Economics as too closely related to neoclassical economics and sharing in its failures (1993, pp. 234, 235).

Tiemstra’s criticism of neoclassical economics contains two major points: an “ethical critique” that “neoclassical welfare economics . . . by taking good to mean self-perceived happiness derived from economic consumption, adopts an ethic that is foreign to biblical Christianity” (1993, p. 232) and a “methodological critique” that “asserts

that a value free positive economics is impossible, so at least the values that are at the foundation of our economics ought to be Christian ones” (1993, pp. 237–238). Tiemstra explains his support for PKI economics as follows:

PKI economics is appealing to many Christian economists . . . PKI approaches allow us to introduce Christian values into our concept of what is normal and right about an economy without always tripping over the Pareto-optimality concept. . . . It allows us instead to focus on full employment, the condition of the poor, the decentralization of economic power, the care that is taken with the natural environment, and the quality of the relationships between buyer and seller. PKI economics also permits us to ask all of those especially important questions about how people’s values and religious commitments affect their economic behavior, and the influence that has on the structure and performance of the economy (1994, pp. 5–6).

Tiemstra does not believe that the issues he is concerned with can be developed as extensions to the neoclassical model because he views “PKI and neoclassical theories as competing and mutually inconsistent rather than complementary” and believes that “we must continue to reject the neoclassical story” (1994, p. 6).

Tiemstra’s work and that of many others who have attempted to develop a specifically Christian approach to economics have provided many useful insights. However, I question the wisdom of the strategy of attacking mainstream economics and emphasizing the need to make a choice between mainstream economics and their preferred version. I see nothing specifically Christian or anti-Christian about neoclassical, old or new institutional economics, or Austrian economics. As David Richardson (1994) has emphasized, mainstream economics includes a wide variety of issues and approaches and is not the narrow creation its detractors sometimes describe. While those who believe that mainstream economics is fundamentally flawed will find it necessary to reject the entire approach and attempt to construct an alternative, I do not have any confidence that they will be successful. Efforts so far at constructing a specifically Christian economics have not provided a coherent alternative theoretical framework on which further work can be built or shown why their alternative formulation provides better empirical understanding of the economy than the mainstream formulations. It is thus easy for skeptics to dismiss that work as “not economics” and difficult for sympathetic readers to make further contributions to a cumulative and progressive understanding of the alternative approach. I think a more promising approach is illustrated by the strategy of the NIE researchers: ignore most methodological controversies, utilize as much as possible

of the mainstream economic approach, provide a clear alternative formulation of the departures from mainstream approaches, and show why the new formulation provides new insight and more accurate empirical predictions than the previous theory. I agree with Oliver Williamson's assertion quoted above that "economists are very pragmatic people" who are willing to accept new approaches that provide useful insights and believe that efforts to develop a Christian approach to economics will make more progress with an emphasis on how the new approaches help us better understand the world around us rather than on why the methodology is theologically or philosophically better than that of mainstream economics.

Concept of Persons as Economic Agents

The neoclassical concept of "economic man" as a fully rational trustworthy selfish utility maximizer has been often criticized for being unrealistic in its portrayal of persons. The standard economist's response to the criticism is that simplified models are necessary to economic theory and that the assumptions of a model need not be realistic if the model provides good predictions. Williamson showed that modest modifications to the assumptions on economic agents (bounded rationality instead of unlimited rationality, opportunism instead of trustworthy selfishness) made major changes to predicted economic behavior and that the predicted economic behavior of his economic agents was consistent with empirical observation.

Few economists would argue that the neoclassical characterization of persons is accurate, but many would argue that it is infeasible to incorporate a more accurate description into economic theory. Opportunism has now been widely accepted, in part because it is feasible to model opportunism in the standard game theory formulations of economic theory. Bounded rationality has even more empirical evidence to support it than opportunism, but has not been incorporated into mainstream economic theory because of the difficulty of formalizing the concept. For example, when David Kreps attempted to formalize Williamson's transaction costs economics, he noted that there are "no generally accepted answers" to how to model bounded rationality and that therefore he was "pushing the theory of transaction cost economics into the domain of individuals who are unboundedly rational and opportunistic" (Kreps 1990).

The significant improvement in understanding parts of the economy obtained by Williamson's modification of neoclassical agents suggests that further improvement could come from a more accurate understanding of persons in economics. The Bible and Christian theology provide a great deal of insight into the nature of human beings. An important task for Christian economists is to make a serious

effort to incorporate that understanding into specific economic implications. For example, can the Christian picture of people as blinded by sin be adequately represented by Williamson's opportunistic agents with bounded rationality or is there a more accurate characterization? The most useful characterization would be one that captures essential points of the Christian understanding of persons and yet is simple enough to be incorporated in a formal way into theoretical models.

Role of Religious Belief in the Economy

Economists have studied "the economics of religion" using the standard individualistic utility-maximizing framework (reviewed by Iannaccone and Hull, 1991) and have sometimes examined religious institutions as an application of public choice economics (Ekelund et al. 1996; Hill 1999). Those approaches make religious practices and institutions an ordinary part of the economy subject to the same kinds of substitution effects as ordinary consumer goods. Individual preferences are the fundamental building block and there is no room for the radical commitment demanded by Jesus. The standard approaches see religious practices and institutions as an end result of the operation of economic forces rather than as a controlling influence.

The NIE provides a much more fundamental place for religion than the standard economic approaches. Religion is included in Williamson's "Level 1" category as a fundamental characteristic of a society that influences the institutions that are created and the operation of those institutions in controlling economic activity. While it is correct to place religion in the controlling rather than derived role, the difficulty with the current formulation is that there is very little specific content to the category. Because there is little information on exactly how religious belief affects the rest of the economy, it is generally ignored and treated as background noise or general cultural factors to be dealt with outside of the formal analysis.

It would be useful to clarify specific connections between religious beliefs and the operation of the economy. Can we distinguish economic institutions that are created by Christian political jurisdictions from those that are created by non-Christian ones? What about narrower categories: Protestant versus Catholic; evangelical versus liberal; reformed versus Arminian? More generally, exactly how do religious beliefs and other basic cultural traits flow down into the operation of the economy? The general scheme asserts that they are relevant but then largely ignores them. Is that because they really aren't relevant or simply because no one has done the hard work of formulating and testing the connections? Does knowledge of religious belief help in predicting the actual operation of any particular institution? Does it help in predicting whether a particular court struc-

ture is likely to operate honestly or corruptly, for example?

To return to the example of telecommunication reform in India, what difference does it make that India is majority Hindu? Will that affect either the particular institutions that are likely to develop in that country or their operation? Or alternatively, can religion be ignored and the analysis developed for the United States and Europe be transferred directly to India? In India more than most countries religious concepts are a critical part of the culture and thinking. Religious influences on the political life of the country have been accentuated with the rise of the BJP (Hindu Nationalist Party) to national leadership and the many complex coalitions of religious, caste, and secular groups in developing political control of the national and state governments. At present most applied economists ignore religious beliefs when analyzing specific problems and possible solutions. Institutions were once ignored as well, but have now taken a central place in the economics of development. Can a better understanding of the role of religious belief clarify the economic analysis and improve our recommendations?

Normative Recommendations and Policy Advice

The failure of neoclassical development economics suggests caution in providing specific advice based on our economic analysis. There is always the danger that someone will follow our advice and be misled by it. There has also been a great deal of wrong advice on how to alleviate third world poverty provided by religious groups and other non-economists, but that has been less dangerous because no one has seriously attempted to follow that advice. Getting the economic analysis right is particularly important in poor countries because they are so close to the margin of survival that an error can result in many needless deaths. As William Easterly puts it, we don't care "about rising gross domestic product for its own sake" but do care about rising incomes in poor countries "because richer people can eat more and buy more medicines for their babies" (2001, p. 3).

The NIE provides specific insight into the factors other than capital and labor that affect the success of the economy and also emphasizes that economic problems are complex and not fully explained by any particular economic model. Bounded rationality applies to economists who provide advice as well as to the economic agents assumed by the NIE. We should not refuse to provide advice because of the risk that following our advice will lead to bad results, but should work diligently to understand the problems as thoroughly as possible before offering advice on how to improve matters and recognize that there may be relevant

factors not included in the standard forms of economic analysis.

Conclusion

I find the NIE useful in my work as an applied economist concerned particularly with telecommunication policy because it provides a way to integrate my understanding of market economies and of government actions. It allows the utilization of the wide range of tools from mainstream economics while also providing a substantial role for the government and other institutions. It allows the development of policy prescriptions and implementation strategy in a more unified framework than the practice of developing the economic analysis in a "pure economic" neoclassical manner and then trying to decide what implications that has for policy.

While I do not view the NIE in itself as any more or less Christian than alternative approaches to economics, I think the NIE does provide a useful framework and some useful lessons for Christian economists. As a framework, the NIE explicitly assumes that religious beliefs and culture affect the economic institutions and the operation of the economy, but the exact form and empirical relevance of those connections has not been fully developed. Thus the NIE provides a structure for examining the relationship of religious belief to the economy without abandoning mainstream economics and attempting to create a new form of economics.

With regard to strategy for improving our understanding of economics and incorporating Christian issues into economics, the NIE approach provides a useful guide. The NIE largely ignored the old methodological controversies between the OIE and neoclassical economics and began developing the empirical implications of transaction costs and alternative institutional structures. The practitioners utilized a variety of methodologies (including formal models and descriptive and historical studies) without arguing about the "right" methodology. They presented their work as an extension to mainstream economics and a complement to it rather than as an alternative that required rejecting mainstream economics, and gradually gained acceptance as many economists found that the extensions provided useful insight.

With regard to the role of the government, the NIE teaches that government has a critical role in a smoothly functioning economy. Adam Smith's invisible hand is not an automatic force that turns self interest into mutually beneficial trades and increased welfare if the government will only stay out of the way. Markets only function well

when embedded in a set of institutions that define and enforce property rights and resolve disputes peacefully. Governments can also be harmful to the economy and create incentives to dissipate resources on redistributive activities. Many conservative Christian writers have emphasized the harm that government can do and advocated minimal government. Alternatively, some Christian writers have advocated a much greater redistributive role for the government with an implicit assumption that the redistribution can be undertaken without cost. The NIE does not provide a specific guide as to the proper size and role of the government, but it does show that the interaction of the government and the economy is complex and provides tools to help in understanding the role of the government in particular cases.

With regard to improving the economic prospects of low income countries, the NIE analysis suggests that there is more room for improvement in many economies than would be expected from neoclassical economics. Neoclassical economics assumes that individual optimizing decisions and mutually beneficial trades occur easily and automatically and that consequently economies are always operating on some kind of a maximum position. The NIE suggests that the combination of bounded rationality, opportunism, and institutional flaws may cause an economy to operate far below its potential. The wide gap between actual and potential performance means that careful economic analysis and advice could create great benefits. Additional capital is neither necessary nor sufficient for improved economic performance. Thus getting the analysis right is very important as well as very difficult.

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