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# Outstanding Female Economists in the Analysis and Practice of Development Economics

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**Summary.** — This article examines the contributions of five eminent economists, all women, to the analysis and practice of development economics. Irma Adelman, Frances Stewart, and Nancy Birdsall are leading advocates of alternative development strategies that focus on poverty alleviation and investment in human capital. Anne Krueger and Alice Amsden stand at the forefront of two opposing camps in a lively and long-lasting debate on the appropriate role of government in trade and industrialization. We use the storied careers of these economists as a vehicle to convey the big picture of how development economics has evolved and which topics have proved durable. © 1999 Elsevier Science Ltd. All rights reserved.

## 1. INTRODUCTION

By the early to mid-1960s, development scholars and practitioners had begun to turn away from a paradigm in which the goal of development policies was economic growth, with the benefits of growth automatically trickling down to the poor. Mounting empirical evidence of increasing poverty despite positive economic growth in a number of developing countries made the need for alternative development strategies and goals painfully clear. This scholarly work on using direct means to alleviate poverty and reduce income inequality made a visible impact on the lending activities and policy work of the multilateral agencies. Although trade and debt problems held the spotlight during the debt crisis years, by the early 1990s the international agencies had again changed their emphasis to raising the productivity of the poor through investments in basic education and health. An intriguing argument has emerged that greater income equality can actually stimulate, rather than dampen, long-term growth. Three female economists—Irma Adelman, Frances Stewart, and Nancy Birdsall—have played leading roles in centering academic and policy dialogues on poverty alleviation and investment in human capital.

The development field has undergone a second paradigm shift in the past three to four decades, from an emphasis on strong government intervention and import-substitution policies in promoting economic growth, to the belief that free markets and an outward-oriented strategy play crucial roles in improving economic performance. This paradigm shift has entailed a lively debate about whether growth should be guided by the government or facilitated by free markets. In its most recent form, the debate has taken place between two camps: the neoclassicists, who argue that developing countries are better off with outward-oriented economies and minimal policy distortions, and the structuralists, who claim that selective government intervention can stimulate growth. Two female economists—Anne Krueger and Alice Amsden—stand at the forefront of these camps.

To better understand the scope of these paradigm shifts and to reflect on which topics have proved durable over the past few decades,

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this paper analyzes the contributions of five eminent members of the profession, all women: Irma Adelman, Frances Stewart, Nancy Birdsall, Anne Krueger, and Alice Amsden[1]. We concentrate on this cohort because their work stands apart from other prominent female economists in terms of their impact on subsequent scholarship and policy making[2]. This small sample exhibits a remarkable degree of regional and ideological diversity in their scholarly and policy work. Collectively, these women have field experience in every developing region of the world, adding a sharp edge of realism to their research. Their ideological perspectives range from neoclassical to structural, and their approaches from theoretical to empirical or both. Their research topics span a range of issues far beyond those, such as women in development, traditionally considered to be in the female realm. This wide range of academic and practical interests belies the existence of a distinctly "female" development economics. Because development economics is ultimately an applied field, the crucial question we address is the impact that these women have made on the practice of development. Hence we discuss their consulting work, positions of authority in the international agencies, and overall influence in national and multinational institutions engaged in development activities.

## 2. NEW QUANTITATIVE APPROACHES TO DEVELOPMENT

Irma Adelman has made major advances in shaping the ways in which economists approach economic development. Her impact has been profound and wide-ranging, as author, consultant to a number of international agencies, advisor to the Korean government, and professor. She began publishing in 1956, but her first articles were on topics such as the dynamic properties of the Klein-Goldberger model, rather than on development. She is a leading contributor to the design of practical techniques that have provided economists and policy makers with a more comprehensive way to model and analyze critical development issues. These techniques include the computable general equilibrium model for testing hypotheses about policy impacts within a general equilibrium framework. She also utilized an analytical tool hitherto ignored by most economists, "factor analysis," to study the interactions between political, social, and economic aspects of development. Adelman's innovations in the quantitative approach to development also include estimating the relationship between inequality and economic growth. These works combine ingenuity with a serious compassion for poor people in developing countries.

Adelman obtained her first professional position in 1955 as a Teaching Associate at the University of California at Berkeley. The status of this position as a one-year non-tenure-track appointment reflects the gender discrimination that Adelman felt she faced in US academia at the time (Adelman, 1988). After a string of such appointments at a number of schools (despite the fact that she had already published a book and eight articles in top-ranked journals), Adelman secured a tenure-track position at the Johns Hopkins University in 1962. Four years later, she moved to Northwestern University, where she became a full professor. In 1979, after some additional moves, Adelman became Professor of Agricultural and Resource Economics and Professor of Economics at the University of California at Berkeley, where she remains to this day. Although she never relinquished her academic anchor, Adelman did work as a Senior Economist at the World Bank during 1971–72. She has held numerous consultancies in international agencies, ranging from the US Agency for International Development (US AID) to the International Labor Organization (ILO) throughout the years.

In 1961, Irma Adelman published her first of 15 books, *Theories of Economic Growth and Development* (Adelman, 1961). In it, she studies the evolution of growth theory and translates some of the most significant ideas into a single quantitative model of economic development. The following year, Adelman began a long-lasting collaboration with Cynthia Taft Morris that resulted in several important publications. At a time when there were no convenient sources for crosscountry data sources on even such basic indicators as per capita income, Adelman and Morris combed through a large set of annual US AID country reports to gather information on various measures of development and a wide range of economic, social, and political variables for 43 developing countries. Their work resulted in *Society, Politics, and Economic Development—A Quantitative Approach* (Adelman and Morris, 1967), a statistical analysis of the mutually-dependent relations between the social, political, and institutional features of development. The book features the innovative application of factor analysis, a technique from the psychology literature, that categorizes a large volume of information into a more useful and usable number of factors. Adelman and Morris identified a number of forces responsible for economic growth, including financial market development and political stability, that today are standard fare in empirical growth analysis. Their research on the multidimensional forces of development continued throughout the 1980s, culminating in *Comparative Patterns of Economic Development, 1850–1914* (Morris and Adelman, 1988). This book compares the development experience of 23 countries during the Industrial Revolution and argues that domestic institutional change played a crucial role in how countries responded to the opportunities created by the Industrial Revolution. This book, despite the subsequent critiques that some of the bold claims could not be substantiated by the statistical techniques and the quality of the data (e.g., North, 1989), made a big forward step in understanding how institutions affect economic growth.

The ability to overcome serious data limitations and to adopt unconventional techniques in order to address important development concerns has become a defining trademark of Adelman's work. Her efforts to quantify the effect of foreign aid on economic growth provide an additional example of this resourcefulness. During the mid-1900s, few developing countries had relied on external aid for a long enough period of time to allow for an accurate assessment of the effectiveness of foreign aid. This dearth of statistical evidence raised the value of Adelman's empirical analysis of foreign aid in Greece, a developing country at the time which relied heavily on foreign assistance (Adelman and Chenery, 1966). The authors discovered that foreign aid was quite effective, but substantial structural changes were needed to reduce Greece's reliance on aid.

With their best-known work, *Economic Growth and Social Equity in Developing Countries* (Adelman and Morris, 1973), Irma Adelman and Cynthia Taft Morris contributed valuable new evidence to support an ongoing paradigm shift away from economic growth as the primary goal of development policy. This book contains the first major empirical study of income distribution in developing countries and the first empirical test of the Kuznets U-Curve hypothesis. The authors find that as countries begin to develop, inequality worsens rapidly at first, then more slowly. Only when countries reach an intermediate level of development does inequality either level off (supporting their own J-Curve hypothesis) or improve (supporting Kuznets's U-Curve hypothesis). Adelman and Morris maintain that the "trickle down" of GDP growth does not effectively alleviate poverty in an acceptable time frame, and that special kinds of poverty-oriented projects are necessary to aid the poor. The book's findings were used as background material for a key speech by World Bank President Robert McNamara marking a shift in lending objectives toward poverty reduction.

Adelman emphasized the implications of these results in two provocative journal articles. First, Adelman (1974), the lead article in the first issue of the *Journal of Development Economics*, advocates a change in the methodology used to approach development problems. This piece claims that development economists had done precious little to address the growing problems of poverty and inequality, largely because their analyses were too one-dimensional and their policy prescriptions too simple. Second, Adelman (1975) argues that the goal of development policy should change from economic growth to the universal fulfillment of human potential. Adelman has also examined the role of specific policies in achieving this development goal. Adelman and Sherman Robinson constructed one of the first large-scale computable general equilibrium (CGE) models, which they applied to the South Korean economy to investigate the distributional effects of various policy interventions. In *Income Distribution Policy in Developing Countries: A Case Study of Korea* (Adelman and Robinson, 1978), they find that most policy changes affect the incidence of poverty among different categories of poor people without reducing the magnitude of poverty. The authors contend that major changes in development strategies, such as an emphasis on labor-intensive growth, and institutional reforms, such as land reform and universal access to education, are needed to lower the number of people in poverty. Adelman has written a number of subsequent journal articles on the feasibility of poverty-reduction approaches to development. For example, Adelman (1984) examines agricultural-demand-led industrialization (the ADLI strategy) as an instrument for improving income equality and accelerating industrialization during periods of slow world growth. A potential weakness of this work is its basis on another CGE modeling exercise which assumes that TFP growth is higher in agriculture than in manufacturing.

Adelman's first exposure to policy work occurred in 1963, when US AID recruited her to design a rural income-expenditure survey in Vietnam. Based on the survey results, Adelman argued for a US-supported land reform as a less expensive and more effective way to end the war than fighting. Washington however, was not particularly receptive to her plan. Adelman made a bigger impact in 1965 when she visited Korea on behalf of US AID to help the government design its Second Five Year Plan. She made an export-oriented, labor-intensive development strategy the central thrust of the plan design. The plan, implemented in 1967, changed the direction of policy making and started Korea on its accelerated growth with equity path. In 1972, Korea's government honored her with a Presidential decoration, the Order of the Bronze Tower. The experience, as Adelman recounted, makes her "one of a few economists who have a satisfied country for a client."[3] This influence with developing country planning agencies waned as her work turned to poverty and inequality. Yet it was precisely her work on equity-oriented approaches to development that achieved popularity in the multilateral institutions, particularly the World Bank and the ILO, during the 1970s. Adelman ended her direct involvement in the policy arena when the agencies changed their focus toward debt and trade issues, and the "Washington Consensus" came to dominate the development agenda. Her work on universal primary education and asset redistribution before growth has however regained its influence as the negative effects of the structural adjustment era have become evident.

## 3. PROTECTING THE POOR

Frances Stewart is also a pioneering and oft-cited advocate of alleviating poverty and reducing income inequality. What began as an intense research agenda on technology and employment in developing countries soon led to the analysis of alternative development strategies. Stewart played a leading role in endorsing the "basic needs" approach and in shaping its later adaptation, the "adjustment with a human face" approach. The first approach added a poverty alleviation aspect to economic growth, much like the second approach added a poverty alleviation aspect to macroeconomic adjustment (Cornia, Jolly and Stewart, 1987, p. 7). Her commitment to improving the well-being of the poor resulted in a concurrent, but more wide-ranging, research track on developing countries in the global economy. Stewart's work on welfare in the developing world has culminated most recently in a series of papers on the economic and social consequences of civil conflict. These specializations in issues of technology, employment, basic needs, and adjustment to crisis have enabled Frances Stewart to address poverty in developing countries from a number of angles.

Just as Stewart has specialized in a variety of research areas, she has also worked in a number of institutional settings. During 1961–67, Stewart held several posts in the UK government. Her career direction then changed markedly with a lecturing position at the University of East Africa in Nairobi. This position partly explains why a number of her subsequent publications include African case studies. By 1970, Stewart had secured an academic post at Queen Elizabeth House, University of Oxford, where she remains to this day. She started as Research Officer and quickly was promoted to Senior Research Officer, with a concurrent position as Fellow of Somerville College, University of Oxford. She is now Director of the International Development Centre at Queen Elizabeth House. Stewart has broadened her professional portfolio with assignments at various international agencies, which include joining the ILO Employment Mission to Kenya in 1971; consulting full-time with the World Bank for a year; and, most famously, participating in UNICEF's project on the impact of macroeconomic stabilization policies on children and other vulnerable groups. From its inception, Stewart has served on a team of key advisors to the UNDP for the annual *Human Development Report* (along with Amartya Sen, Gustav Ranis, Paul Streeten, and Meghnad Desai). These reports embrace the "Human Development" approach, which in turn incorporates and further develops many of the ideas contained in Stewart's work on basic needs and adjustment with a human face.

In her structuralist approach to developing country issues, Stewart regularly sought to broaden standard neoclassical analyses with a wider range of factors that sway economic behavior. This feature characterized even her earliest work on the adoption of appropriate technologies in developing countries. Her 1974 article on technology and employment (Stewart, 1974), as well as her classic book *Technology and Underdevelopment* (Stewart, 1977), assert that technology markets have large imperfections which cause poor countries to be dependent on overpriced, and often inappropriate, technology from rich countries. This dependency results in uneven patterns of growth and the underutilization of human resources. Solutions to these problems include the modification of machines and methods from industrialized countries to better suit a poor country's needs, the adoption of older rather than state-of-the-art technology, and the strengthening of a poor country's own capability for technological development. An innovation Stewart made to the technology literature was the focus on product characteristics as an important element in choice, and the significance of appropriate products as part of appropriate technology. This research helped policy makers to better understand how appropriate technology policies, such as the promotion of labor-intensive production methods, could create more productive jobs and reduce the underutilization of workers in poor countries.

In the now extensive literature on employment problems in developing countries, Stewart's pioneering work on technology andemployment creation is still highly relevant and widely cited. The same is true for her work on the relationship between employment creation and overall economic growth. Well before the compatibility between employment and output objectives became generally accepted in the profession, Stewart was advocating an employment-focused development strategy as a means for achieving income growth. Her 1971 article with Paul Streeten directly challenged the prevailing view that there need be a tradeoff between output and employment, demonstrating that the two could be compatible (Stewart and Streeten, 1971). This employment-oriented approach constituted part of Stewart's flourishing research agenda on broader strategies to promote economic development. As another example, a 1976 article with Paul Streeten examines the implications of adopting development objectives other than economic growth, such as the elimination of poverty, the achievement of more equitable income distribution, and the satisfaction of basic needs (Stewart and Streeten, 1976). Stewart did not pioneer the "basic needs" approach to economic development. But, her publications in this area, culminating in the book *Basic Needs in Developing Countries* (Stewart, 1985a), strongly raised awareness in the development community as to the importance of providing the poor with subsidized basic services. She effectively converted fundamental welfare ideals, such as the realization of nutrition standards and the provision of health and education services, into concrete plans of action.

Although the major international agencies did incorporate basic needs objectives into their lending activities during the 1970s, when economic crisis struck in the early 1980s, the agencies switched their focus to programs of macroeconomic stabilization and adjustment. Critics argued that these programs, which included sharp reductions in government spending on social programs as well as sizable cutbacks in the public-sector workforce, often had a disproportionate and adverse impact on the poor. Stewart brought the basic needs objectives back into the policy arena by helping to lead a UNICEF-sponsored project that documented the impact of stabilization policies on low-income groups, especially children. This analysis, published in the two-volume *Adjustment with a Human Face* (Cornia, Jolly and Stewart, 1987), advocates the protection of vulnerable groups during adjustment periods. The report stresses the importance of developing macroeconomic adjustment strategies that incorporate improved nutrition and health services; the protection of basic education; the fostering of productive employment; and the careful monitoring of the health and nutrition status of poor families. Conceptually, Stewart's main contribution was the identification of the "meso" level of policy-making, in addition to the accepted classification of policies into micro and macro.

In a follow-up article and book, Stewart concludes that while the stabilization and adjustment measures of the 1980s did help some debtor countries to service their debt and resume economic growth, many countries continued to experience high unemployment, severe income inequality, and reduced welfare for the poor (Stewart, 1991, 1995). The International Monetary Fund (IMF) and World Bank had made some attempts to compensate the poor for the negative social effects of macroeconomic adjustment, but these piecemeal measures did not go far enough. Critics counter that Stewart's work with UNICEF fails to address the counterfactual: how much poverty would have occurred in the absence of structural adjustment? If poverty would have been even higher, then the conclusion that structural adjustment hurts the poor is wrong. In addition, implementation and measurement difficulties make it hard to say how much the poor have benefitted from the changes in government spending patterns that Stewart advocates.

Stewart has also studied poverty and adjustment using a wider lens, with a number of publications on developing countries in the international system. She was one of the first economists to recognize formally the potential for trade among developing countries, at a time when South-South trade constituted just 6% of total world trade (Stewart, 1976). Advantages for trade among developing countries include more stable export earnings in the face of industrialized country demand fluctuations, as well as alternative production opportunities that arise from entering new and bigger markets. She also examined North-South relations during the international debt crisis in a 1985 article that analyzed the concept of the "basic transfer" to illustrate the unsustainable nature of international capital flows in some developing countries, and to provide an indication of relative bargaining strength in debt negotiations (Stewart, 1985b).

Most recently, Stewart has again adjusted her lens to examine developing country welfare in the context of civil war. For example, Stewart, Humphreys and Lea (1997) document the enormous economic and social costs of internal civil strife, over and above direct battle deaths, in a number of developing countries in recent decades. Economic costs include lower per capita income, lower per capita food production, a contraction in exports, and higher inflation. Internal conflict also takes a toll on such social indicators as infant mortality and school enrollment. The authors do identify considerable variation within their sample: countries that experienced geographically localized conflict had governments that were better able to collect taxes and deliver public services compared to governments in countries that experienced widespread conflict. Countries with the lowest social costs had governments that maintained or even increased their spending on health, education, and basic services. Hence Stewart returns to one of the most important and consistent themes in her work: the need for concerted government efforts to protect the livelihood of vulnerable groups, especially in times of economic and social crisis. She has clearly succeeded in bringing this theme into the spotlight of academic and political discourse. But, to those who mischaracterize Stewart as an unconditional supporter of government efforts to help the poor, a recent article on the use of food aid during civil conflict (Stewart, 1998) serves as a useful counterweight. This work describes situations in which conflict-related interventions to supply food can actually be fruitless or even counter-productive, depending on the underlying structural and political economy conditions.

## 4. POPULATION, INEQUALITY, AND GROWTH

Nancy Birdsall has a distinguished record of leadership positions in the international agencies and numerous articles in top-flight academic journals and policy venues. Her publications on population growth, public investment in education, and the impact of inequality on economic growth have made a strong mark on scholarship in development, while her positions of authority in the international financial institutions have given her an ideal opportunity to carry this scholarship through to the level of policy implementation. She is one of the development community's foremost advocates of expanding and improving basic education in order to reduce income inequality and stimulate long-term economic growth.

Birdsall started her professional career in 1969 as a research assistant with the American Council on Education. She has worked directly in the policy arena ever since. By 1979, the year she received her Ph.D., she had secured an economist position with the World Bank. In the ensuing years Birdsall worked in numerous leadership capacities, culminating in the position of Director of the Policy Research Department, the Bank's main source of research output and policy analysis. Her work at the Bank was not confined to any one particular activity or area. She developed and managed lending operations, conducted policy analysis, and supervised staff activities, all the while maintaining her own prolific research agenda. Her areas of focus ranged from such microeconomic issues as health, nutrition, and education to more macroeconomic topics, such as growth and fiscal policy. One of Birdsall's many achievements at the World Bank includes serving as principal author of the 1984 *World Development Report* on population and development. She also initiated the Bank's Policy Research Report series, policy-oriented research documents that have had a big influence on Bank operations and its policy dialogue with member governments. In 1993, Birdsall left the World Bank to work at the Inter-American Development Bank (IDB), where she held the position of Executive Vice President until late 1998. Under her leadership, the IDB increased lending for health and education as human capital investments, and it injected a strong emphasis on the financial and management reforms necessary to ensure that public spending in those sectors generates equitable growth. She is currently a senior associate and director of economics programs at the Carnegie Endowment for International Peace.

Birdsall is well-known for her long-lasting work on demographic issues and their interactions with economic development. Many of her earliest articles, including Birdsall (1977), examined issues in fertility, population growth, and population policy. Additional work she did in the 1984 *World Development Report* argues that rapid population growth has serious consequences for productivity and per capita income growth because a large share of national income must go toward accumulating enough capital simply to maintain capital-labor ratios (World Bank, 1984). Birdsall's extensive work on population growth led to an invitation to write a chapter on population and economic interactions in the inaugural volume of the *Handbook of Development Economics* (Birdsall, 1988). This chapter is generally considered one of the best contemporary survey articles on the relationship between population and economic development. It provides strong empirical support for the modern microeconomic theories of fertility that have come to replace the Malthusian macroeconomic theory of human reproduction and economic development. In particular, Birdsall's empirical analysis counters the Malthusian hypothesis that fertility rises with per capita income. Birdsall documents demographic changes in a broad spectrum of developing countries and contends that the total fertility rate is much more a function of decisions at the household level—affected by parents' education, access to basic services, and the extent to which capital and other markets have evolved—than of such economy-wide measures as average per-capita income. Birdsall recommends a number of specific policies that governments can use to target fertility reduction in the short run, rather than wait for the long-term benefits of economic development to translate into slower population growth.

Another influential article on demographic and economic relationships is Behrman and Birdsall (1988b), in which the authors measure the interactions between cohort sizes and labor market success. They find that membership in a large cohort hurts workers, reducing their wages, if they have little education. Workers with more education do not experience this negative cohort effect. These results are consistent with the argument that a rapidly increasing labor force, and hence successively larger cohorts, creates growing demand for skilled workers relative to unskilled workers. Birdsall still publishes on demographic issues, with the more recent example of a 1995 article (Behrman, Birdsall and Deolalikar, 1995). This work identifies a positive relationship between unobserved characteristics that affect success in marriage and in labor markets. They use data from poor rural areas in India to demonstrate that unobserved human capital, instead of schooling and experience, is the most important determinant of wages and wage growth. By adding marriage market information to a standard set of labor market variables, the authors obtain a richer description of the human capital determinants of wages and paid employment than do previous studies.

Birdsall has a series of studies dealing with the political economy of social spending, particularly on education. Probably the most influential of these is Behrman and Birdsall (1983), which casts considerable doubt on previous schooling returns estimates that ignore the number of students. The authors observe that public investment in education involves a tradeoff between equity (expanding school systems) and productivity (upgrading the quality of school systems). They assert that social returns to school *quality* are significantly higher than social returns to school *quantity*, implying that governments should allocate more resources toward improving those schools already in place rather than increasing the number of classes and schools. Their finding is reinforced in Behrman and Birdsall (1988a), which estimates the parameters in the implicit social welfare function that Brazilian authorities use to allocate schooling resources across localities. This work points to a significant tradeoff between equity and productivity in that welfare function, with greater weight on productivity concerns than on distributional concerns. Their study is the first attempt to quantify the extent of this tradeoff in the allocation of social spending on education across geographical areas.

Some of Birdsall's most recent work, and also most influential with policy makers, examines whether inequality has a positive or negative impact on economic growth. A well-known paper (Birdsall, Ross and Sabot, 1995) contests the traditional view that greater income inequality and income growth necessarily go hand in hand. In fact, the authors find that low inequality has a positive effect on economic growth. This effect is both direct and indirect. The direct effect occurs through increased savings of the poor, greater political and macroeconomic stability, and higher overall efficiency in the workforce. The indirect effect occurs through a set of mutually-reinforcing "virtuous circles" in which economic growth and reduced income inequality lead to and result from increased education. Work in Birdsall, Ross and Sabot (1997) provides additional evidence of a negative relationship between inequality and economic growth. The authors argue that relative to East Asia, Latin America's poor record of investment in human capital contributed to the region's lackluster economic growth and high income inequality. These articles have done much to popularize the idea of shared growth policies, particularly investment in basic education and health, that allow the simultaneous achievement of equity and growth objectives.

In the case of the World Bank, an almost 30-year focus on poverty reduction in its research and lending operations has made almost no dent in the number of people living in poverty (Birdsall and Londoño, 1997). An important reason is the Bank's long-standing emphasis on income inequality and social inequities as results rather than causes of growth performance. The Bank's emphasis during the 1990s on building human capital and raising the productivity of the poor through investments in basic education and health is a big step in the right direction. According to Birdsall, however this approach must be bolstered by paying closer attention to the unequal distribution of assets, particularly education. In a recent book (*Beyond Tradeoffs: Market Reform and Equitable Growth in Latin America*), Birdsall and her co-editors make the point that no necessary tradeoff exists between efficiency and equity objectives in market economies (Birdsall, Graham and Sabot, 1998). They reason that institutional reforms in the area of property rights, legal systems, and universal access to credit will all provide new opportunities for those individuals at the bottom tail of the income distribution to contribute to, and benefit from, long-term economic growth. Birdsall's work on income distribution and growth has helped to center current policy dialogues on income inequality as a possible constraint on growth, with the implication that greater equality may actually be a prerequisite for sustained income growth. This work is quite controversial (as is the field), and there is no consensus on whether income distribution hurts or helps growth.

## 5. TRADE POLICY AND ECONOMIC DEVELOPMENT

For over 30 years, Anne Krueger has emphasized the importance of open and free markets in promoting economic growth. Her research serves as a mainstay for those seeking to better understand trade policy in developing countries, the appropriate role of government in economic development, and the political economy of policy formulation. Krueger's life-long commitment to studying trade policy revolves around her strong belief that the overall design of development policies hinges on trade policy (Krueger, 1997). Together with Bela Balassa and T. N. Srinivasan (among others), Krueger has led the neoclassical resurgence in development economics. She has completed a battery of empirical studies claiming that outward-oriented strategies result in less waste and better economic performance compared to inward-oriented strategies.

Krueger has worked in academia during most of her career. Upon completion of her doctorate in 1958, Krueger became Instructor of Economics at the University of Wisconsin. Shortly thereafter, she moved to the University of Minnesota, where she received tenure in 1963. This academic promotion roughly coincides with the start of her extensive consulting activities, particularly with the US AID and the Harvard Institute for International Development. Consultancies in Turkey, India, Brazil, and Korea have allowed Krueger to bring analytic techniques from her scholarly work directly to the policy arena, just as this field work has helped to define her research agenda. She has also advised the government of Papua New Guinea on exchange rate policy, and she has headed up various studies on behalf of the National Bureau of Economic Research. Intermittent consulting work turned into a full-time position at the World Bank during 1982–86, as Vice President of Economics and Research. Although the position allowed Krueger to play a direct role in the formulation and analysis of structural adjustment policies, the Bank had already made the shift toward the "market-friendly" approach before she arrived. At the Bank she made her largest impact on the research department, which went through a major transformation, possibly at the expense of driving away those who were not fully committed to the market-friendly approach. Krueger returned to academia in 1987 with a position at Duke University. She is currently chaired Professor of Humanities and Science, and Director of the Center for Research on Economic Development and Policy Reform, at Stanford University.

Krueger began her in-depth analysis of trade policy and development when she went to Turkey in 1965 under the auspices of USAID. This experience led to several influential works, including Krueger (1966), an early study to criticize the prevailing belief in import-substitution-based industrialization and heavy government intervention. This study presents a framework for identifying the large variance in protection provided for different import-competing industries. Krueger reaches the surprising conclusion that Turkey could have doubled its output if the government had liberalized the trade regime and devalued the exchange rate. The field work in Turkey and the subsequent USAID-commissioned work in India resulted in her first two books (out of more than 40) on economic development: *Foreign Trade Regimes and Economic Development: Turkey* (Krueger, 1974a) on Turkey's import substitution regime and stabilization policies; and *The Benefits and Costs of Import Substitution in India: A Microeconomic Study* (Krueger, 1975) on the performance of Indian industries under a web of controls.

Anne Krueger has written extensively on the evaluation of protectionist trade policies. Krueger (1972) is among the first to compare two fairly new measures of trade barriers. She contends that in most cases, the domestic resource cost is better than the effective rate of protection for estimating the economic costs of trade restrictions and for evaluating different investment projects. Effective protection however is often a superior indicator of the resource pulls associated with trade restrictions. Another influential article is Krueger and Tuncer (1982), the first empirical study to test whether the infant industry argument can justify import substitution in developing countries. The authors examine TFP growth rates across industries in Turkey and find that heavily protected industries have no discernible difference in their TFP growth compared to less protected industries. This sectoral analysis set a precedent for other crossindustry studies on import protection, despite the difficulty of constructing a true test of the infant industry argument. Such a test would compare actual and counterfactual TFP patterns in protected industries (Rodrik, 1995).

In building the case for market-oriented policy reform, Krueger has assembled a large body of evidence on the shortcomings of import substitution policies. Her best-known book, *Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences* (Krueger, 1978), has frequently been used to bolster the argument for trade policy reform. This book, which resulted from an NBER project on trade policy regimes in 10 developing countries, estimates differences in income growth caused by a policy shift from import substitution to export promotion. Krueger uses "bias" estimation in evaluating the extent to which domestic prices of importables and exportables diverge from those which would prevail under free trade. She asserts that inward-oriented regimes are characterized by pronounced resource misallocation and sheer waste, leading to high inefficiency costs. Krueger concludes that liberalization leads to a substantial bias reduction, which in turn stimulates exports and economic growth.

By the early 1980s, the development literature had already begun to stress the positive growth impact of export-oriented strategies, yet there was little agreement that export promotion would necessarily result in improved employment opportunities and income distribution. The NBER responded to this challenge with one of the first systematic attempts to examine the effects of alternative trade strategies on developing country labor markets. This project, which Krueger led, collected detailed evidence on labor market characteristics for 12 developing countries with differing trade regimes. As Krueger writes in the synthesis volume, *Trade and Employment in Developing Countries* (Krueger, 1983), most of these countries' export goods were more labor intensive than their import-competing goods. Hence Krueger advises that if improving employment opportunities is the objective, then labor-abundant developing countries should specialize in labor-intensive exports. The study also finds substantial price distortions in protected sectors of the economy relative to sectors without protection. Labor costs in protected sectors rose by 20% or more in Brazil, the Ivory Coast, and Tunisia during periods of inward-oriented growth strategies.

Another important argument for economic liberalization stems from the wastefulness of the rent-seeking associated with protectionist policies. Krueger had observed this wastefulness first-hand during her field work, when she noted the exorbitant amount of effort that entrepreneurs and employers devoted to circumnavigating government regulations and controls. Krueger tackled this concern head on with her 1974 article on the political economy of rent-seeking behavior (Krueger, 1974b). This classic article contends that the competitive rent-seeking behavior associated with quantitative trade restrictions will cause even more deadweight loss than the traditional welfare loss diagram depicts. The diversion of resources away from innovative and competitive activities toward directly unproductive activities magnifies the costs associated with import substitution and places a severe constraint on economic growth. Work by Bhagwati and Srinivasan (1980) however, contests Krueger's claim that rent seeking is unambiguously welfare-reducing. They also challenge her conclusion that quantitative restrictions always involve a lower welfare outcome than tariffs.

Much of Krueger's political economy work centers on the extensive government involvement in economic activities that the private sector can do better and more efficiently. In a 1990 article, Krueger discusses when government involvement in the economy can be justified (Krueger, 1990). The government does have a comparative advantage in large-scale activities such as the enforcement of laws and contracts, the provision of information services, and the building of infrastructure. But, the incentives facing political actors and the organizational structure of bureaucracies cause the state to have a comparative disadvantage in the micromanagement aspects of credit regulations, exchange controls, trade restrictions, and investment licensing. The state should not use such policies to favor selected industries and firms with financial perks and protection. So why did developing countries turn toward these interventionist policies to begin with? Krueger addresses this question in *Political Economy of Policy Reform in Developing Countries* (Krueger, 1993). She highlights the negative results of government intervention and explores the underlying political economy of such ill-conceived policies, particularly in agricultural pricing and regulation in trade and industry.

This focus on agricultural pricing marks a final example of Krueger's research on government involvement in the economy. In the late 1980s, the World Bank recruited Krueger, together with Schiff and Valdes, to lead one of the first comprehensive studies on agricultural pricing across developing countries. The resulting multivolume analysis, *The Political Economy of Agricultural Pricing Policy* (Krueger, Schiff and Valdes, 1991), documents a high degree of indirect discrimination against agriculture by the government, stemming from the economy-wide effects of interventionist industrial policies and overvalued exchange rates. To reduce this discrimination and stimulate overall growth, the authors suggest an overhaul in exchange rate, trade, and industrial policy regimes.

Krueger has strongly influenced discussions of trade policy and the practicality of an outward-oriented approach. She has refined methods to better evaluate the full impact of import substitution policies, and she has applied these methods in a number of case studies and comparative studies, contributing to the mounting evidence on the shortcomings of protectionist trade policies. Policy makers and academics now generally accept that trade liberalization enhances economic performance in developing countries. Krueger's empirical work has become a cornerstone of the neoclassical resurgence, which counts an outward-oriented trade strategy among the central prescriptions for a healthier economy.

## 6. GUIDING DEVELOPMENT

At the forefront of the structuralist camp stands Alice Amsden. She has made her mark with fervent critiques of the orthodox neoclassical approach to development. Her work, alongside that of Robert Wade and Lance Taylor, has introduced valuable new evidence to challenge those who dismiss the potential benefits of an interventionist policy regime. Amsden studied the Kenyan economy at the start of her career, yet it is her subsequent and long-lasting research efforts on East Asia and Eastern Europe that define her major achievements. Her controversial publications have led to a reinterpretation of East Asia's remarkable growth performance and to a better understanding of the problems facing Eastern Europe's transitional economies. By fueling the debate on government coordination and support of industrial development, Amsden has forced mainstream economists to reexamine the assumptions underlying their policy prescriptions.

Amsden began her professional career in 1971 as an economist with the Organization for Economic Cooperation and Development. OECD field work on industrial policy in Poland and Hungary contributed to her superb technical knowledge of production technologies and organization across industrial sectors. This technical expertise, which permeates her work, is exemplified in Amsden (1977), an early article on Taiwan's machine tool industry. The OECD experience also helped to lay the foundation for some of her later academic publications on Eastern Europe. In 1974, Amsden switched to an academic track, with a lecturer position at the University of California in Los Angeles. Her subsequent professional record is as diverse as her writing is nonconformist, with crossdisciplinary positions at the Harvard Business School and the New School for Social Research. At present, Amsden holds a chaired professorship of political economy in MIT's department of urban studies and planning. Although Amsden has concentrated most of her professional activities on academia, she is no stranger to international agencies with her numerous consulting appointments at the World Bank and various United Nations organizations.

Amsden is probably best known for *Asia's Next Giant: South Korea and Late Industrialization* (Amsden, 1989). This much-cited book systematically denounces the conventional wisdom that Korea's rapid growth can be explained by the absence of large price distortions in foreign trade and domestic factor markets. Amsden argues that the Korean government deliberately set prices "wrong," through the extensive use of subsidies, tariffs, quotas, price controls, and restrictions on capital flows, in order to actively guide and promote Korea's large business groups. The policy interventions and government-business ties served as the means through which Korean firms could learn to overcome the institutional and skill disadvantages associated with being a late industrializer. Amsden's detailed documentation of Korea's economic success yields a set of stylized facts in which the government actively shaped the industrial system and closely guided the operations of firms. Her book has contributed substantially to today's widespread recognition that East Asia adopted a range of growth strategies, from a *laissez-faire* approach to pervasive government intervention.

The trademark themes of late industrialization and special business-government relations form the ideological core of much of Amsden's work. For example, Amsden (1990) claims that Korea's record real wage growth can largely be explained by the process of late industrialization, and Amsden (1991) develops a general model of late industrialization that emphasizes the disciplined relationship between market forces and government intervention. More recently, Amsden (1997) argues that any serious analysis of industrialization must build from the micro foundations of investment and production. Such an analysis pays close attention to the resources and supporting institutions that firms and entire industries need to thrive. Firms in late-industrializing countries require active government support to help them compete in markets where firms from industrialized countries have an advantage in creating new products and processes. These articles on the relationship between an entrepreneurial state and the industrial sector have vigorously disputed the conventional wisdom on the role of policy in industrialization.

Amsden applied the lessons from late industrializing countries in East Asia to the reindustrializing economies of Eastern Europe. *The Market Meets its Match: Restructuring the Economies of Eastern Europe* (Amsden, Kochanowicz and Taylor, 1994), contends that the state must play an active role in promoting strong capitalist development in the transition economies. The authors criticize the indiscriminate application of orthodox neoclassical principles to the design of policy reforms that liberalized imports, reduced real wages, and privatized state-owned enterprises. While the authors do not contradict the need for Russia and Eastern Europe to become market-oriented economies, they do dispute the emphasis that reform policies placed on deregulation and privatization. They are particularly critical of World Bank conditionality that penalized even the soundest enterprises. These economies needed not less but more government involvement during the early transition period, particularly to alleviate bottlenecks and maintain sufficient aggregate demand so that restructured enterprises could adjust to free market forces and become profitable. Adopting an East Asian model of government assistance and guidance would have been a more effective transitional strategy.

In her relationship with the international institutions, Alice Amsden wears two hats—that of frequent consultant and that of outspoken critic. For example, her 1994 review of the World Bank's much-touted *The East Asian Miracle* discredits key Bank propositions regarding the determinants of East Asia's successful performance (Amsden, 1994). Many of the Bank's claims about the links between growth and policy rely on partial evidence, and its representation of the structuralist view avoids key contributors and results. Amsden further asserts that its market-friendly approach reflects a poor compromise between Bank economists, with their detailed knowledge of East Asian institutions and growth strategies, and upper managers, with their desire to champion the neoclassical paradigm. In Amsden's eyes, the Bank belittles the effectiveness of industrial policy in raising East Asian productivity and stimulating growth, and it discounts the benefits of adapting elements of the East Asian model to help develop skills and institutions in other poor countries.

Amsden's work has set a standard in scholarship on the institutional, political, and organizational aspects of East Asia's industrial transformation. Her influence on the practice of development economics is more difficult to pin down. Amsden represents a minority opinion in an environment where one of the best opportunities to apply development theory occurs through institutions that embrace noninterventionist policies. The success of an interventionist approach to development hinges on an impartial, competent bureaucracy that can wield its considerable discretionary power in an honest fashion. But, many developing country governments have less-disciplined relationships with the private sector, which helps to explain why the same industrial policies that worked so well in East Asia yielded disappointing results in other developing regions. Even Korea's government could not escape the forces of patronage and cronyism, as the financial crisis has made painfully clear. With the crony-style capitalism practiced in East Asia taking some blame for the financial crisis, Amsden faces a large obstacle in convincing development practitioners of the merits of the East Asian model. Her credibility in pushing the industrial policy line may be further weakened by new evidence in Pack and Nelson (forthcoming) that industrial policy cannot explain the East Asian miracle. But, Amsden's prerequisites for the successful implementation of an interventionist strategy, namely the development of skills and a competent bureaucracy, do neatly bolster the international agencies' more recent focus on building institutions.

## 7. CONCLUDING REMARKS

This article has surveyed the innovative ideas and new directions for policy making introduced by outstanding female economists in the development field. We have used the storied careers of Irma Adelman, Frances Stewart, Nancy Birdsall, Anne Krueger, and Alice Amsden as a vehicle to convey the big picture of how the development field has evolved. Irma Adelman identified a number of forces responsible for economic growth, such as financial deepening and political stability, that are standard fare in current growth regressions. She also contributed valuable empirical evidence that self-sustained growth does not automatically result in poverty alleviation and greater equity. Frances Stewart played a key role in the call for "adjustment with a human face" and the incorporation of poverty alleviation into adjustment policies. Nancy Birdsall has been making a real impact with her argument that shared growth policies, especially the expansion and improvement of schooling, allow the simultaneous achievement of equity and growth objectives. Anne Krueger's extensive work on the inefficiency of import substitution and the advantages of an outward-oriented strategy underlie today's general acceptance that trade liberalization enhances economic growth. Alice Amsden's East Asian model of government assistance and guidance contributed significantly to today's widespread recognition that East Asia adopted a range of development strategies, from a free market approach to pervasive government intervention.

Despite their unquestionable contributions, each of these women—just like the outstanding men in the profession—have been criticized for claiming too much, or drawing too strong a set of conclusions from the research. Such criticisms have been applied to Adelman's work on the importance of institutional change in explaining economic growth, Stewart's failure to properly specify a counterfactual, Birdsall's inferences on income distribution and growth, Krueger's work on the welfare costs of rent-seeking behavior, and Amsden's focus on industrial policy as the key to East Asia's success. These women pushed their research agendas very strongly, helping them to gain the spotlight while eliciting resistance from those who sought more compelling evidence. The authors have each tended to be unpersuaded by widely held beliefs and willing to reconsider theory when the empirical record did not support the theory. Such an approach invites controversy.

These women have broken through the glass ceiling in academia with their publications in top general journals, where female authors tend to be underrepresented. They have also broken the thick glass ceiling in the leading economic associations, the American Economic Association (AEA) and the Royal Economic Society (RES). Anne Krueger is the second woman to hold the office of President of the AEA (Alice Rivlin was first) out of 101 Presidents in total, and Irma Adelman has held the position of Vice President. Frances Stewart has served on the similarly male-heavy governing Council of the RES. Three of the five women in this study have broken gender barriers in the male-dominated *Handbook of Economics* series, with invitations to write a chapter in their area of expertise. Most important, all five women have succeeded in achieving tangible results in the governmental and international agencies that largely call the shots in the practice of development. At a minimum, their highly visible publications and active consulting activities have placed considerable pressure on developing country governments and the international financial institutions to change their policy approaches. Krueger and Birdsall have gone quite a bit further and passed through the apparent glass ceiling in policy work. Their influential positions of authority at the World Bank and the Inter-American Development Bank gave them an ideal opportunity to translate their scholarship into actual lending operations and policy reforms.

## NOTES

1. Because each of these authors is highly prolific and active in the policy arena, it is impossible within the scope of this study to discuss every important contribution. We examine a small but representative sample of each author's influential work. Our study is based mostly on published works and information obtained from *curriculum vitae*; we did not interview the authors regarding their own assessments of their careers. We conclude from written correspondence that each person agrees with the content of this article.

2. The development field has no shortage of prominent female scholars. Rosa Luxemburg, Joan Robinson, Margaret Hall, Phyllis Deane, Ester Boserup, Nancy Folbre, Rosemary Thorpe, Judith Heyer, Diane Elson, Irene Tinker and others have also made important contributions. Our selection of Adelman and Krueger is fairly straightforward to justify on an objective basis. They are the two most frequently-cited female economists in the Medoff and Skov (1990) ranking for all fields, not just development. Our selection of Birdsall, Stewart, and Amsden is based on a combination of citations-based criteria and subjective considerations.

3. Personal correspondence, 1998.

## REFERENCES

Adelman, I. (1961) *Theories of Economic Growth and Development*. Stanford University Press, Stanford, CA.

Adelman, I. (1974) On the state of development economics. *Journal of Development Economics* **1** (1), 3–5.

Adelman, I. (1975) Development economics – A reassessment of goals. *American Economic Review* **65** (2), 302–309.

Adelman, I. (1984) Beyond export-led growth. *World Development* **12** (9), 937–949.

Adelman, I. (1988) Confessions of an incurable romantic. *Banca Nazionale del Lavoro Quarterly Review* **166**, 243–262.

Adelman, I. and Chenery, H. (1966) Foreign aid and economic development: The case of Greece. *Review of Economics and Statistics* **48** (1), 1–19.

Adelman, I. and Morris, C. T. (1967) *Society, Politics, and Economic Development – A Quantitative Approach*. Johns Hopkins University Press, Baltimore, MD.

Adelman, I. and Morris, C. T. (1973) *Economic Growth and Social Equity in Developing Countries.* Stanford University Press, Stanford, CA.

Adelman, I. and Robinson, S. (1978) *Income Distribution Policy in Developing Countries: A Case Study of Korea*. Stanford University Press, Stanford, CA.

Amsden, A. (1977) The division of labour is limited by the type of market: The case of the Taiwanese machine tool industry. *World Development* **5** (3), 217–233.

Amsden, A. (1989) *Asia's Next Giant: South Korea and Late Industrialization*. Oxford University Press, New York.

Amsden, A. (1990) South Korea's record wage rates: Labor in late industrialization. *Industrial Relations* **29** (1), 77–93.

Amsden, A. (1991) Diffusion of development: The late-industrializing model and greater East Asia. *American Economic Review* **81** (2), 282–286.

Amsden, A. (1994) Why isn't the whole world experimenting with the East Asian model to develop? Review of *The East Asian Miracle*. *World Development* **22** (4), 627–633.

Amsden, A. (1997) Editorial: Bringing production back in – Understanding government's economic role in late industrialization. *World Development* **25** (4), 469–480.

Amsden, A., Kochanowicz, J. and Taylor, L. (1994) *The Market Meets its Match: Restructuring the Economies of Eastern Europe*. Harvard University Press, Cambridge, MA.

Behrman, J. and Birdsall, N. (1983) The quality of schooling: Quantity alone is misleading. *American Economic Review* **73** (5), 928–9246.

Behrman, J. and Birdsall, N. (1988a) The equity-productivity tradeoff: Public school resources in Brazil. *European Economic Review* **32** (8), 1585–1601.

Behrman, J. and Birdsall, N. (1988b) The reward for good timing: Cohort effects and earnings functions for Brazilian males. *Review of Economics and Statistics* **70** (1), 129–135.

Behrman, J., Birdsall, N. and Deolalikar, A. (1995) Marriage markets, labor markets, and unobserved human capital: An empirical exploration for South-Central India. *Economic Development and Cultural Change* **43** (3), 585–601.

Bhagwati, J. and Srinivasan, T. N. (1980) Revenue seeking: A generalization of the theory of tariffs. *Journal of Political Economy* **88** (6), 1069–1087.

Birdsall, N. (1977) Analytical approaches to the relationship of population growth and development. *Population and Development Review* **3** (1 & 2), 63–102.

Birdsall, N. (1988) Economic approaches to population growth. In *Handbook of Development Economics Vol. 1*, ed. H. Chenery and T. N. Srinivasan, pp. 477–542. Elsevier, Amsterdam.

Birdsall, N., Graham, C., and Sabot, R., ed. (1998) *Beyond Tradeoffs: Market Reform and Equitable Growth in Latin America*. Inter-American Development Bank and Brookings Institution Press, Washington, DC.

Birdsall, N. and Londoño, J. L. (1997) Asset inequality matters: An assessment of the World Bank's approach to poverty reduction. *American Economic Review* **87** (2), 32–37.

Birdsall, N., Ross, D. and Sabot, R. (1995) Inequality and growth reconsidered: Lessons from East Asia. *World Bank Economic Review* **9** (3), 477–508.

Birdsall, N., Ross, D. and Sabot, R. (1997) Education, growth and inequality. In *Pathways to Growth: Comparing East Asia and Latin America*, ed. N. Birdsall and F. Jaspersen, pp. 93–127. John Hopkins University Press, Baltimore, MD.

Cornia, G., Jolly, R. and Stewart, F., ed. (1987) *Adjustment with a Human Face*. Clarendon Press, Oxford.

Krueger, A. (1966) Some economic costs of exchange control: The Turkish case. *Journal of Political Economy* **74** (5), 466–80.

Krueger, A. (1972) Evaluating restrictionist trade regimes: Theory and measurement. *Journal of Political Economy* **80** (1), 48–62.

Krueger, A. (1974a) *Foreign Trade Regimes and Economic Development: Turkey*. Columbia University Press, New York.

Krueger, A. (1974b) The political economy of the rent-seeking society. *American Economic Review* **64** (3), 291–303.

Krueger, A. (1975) *The Benefits and Costs of Import Substitution in India: A Microeconomic Study*. University of Minnesota Press, Minneapolis.

Krueger, A. (1978) *Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences*. Ballinger, Cambridge, MA.

Krueger, A. (1983) *Trade and Employment in Developing Countries, Vol. 3: Synthesis and Conclusions*. Chicago University Press, Chicago.

Krueger, A. (1990) Government failures in development. *Journal of Economic Perspectives*, **4** (3), 9–23.

Krueger, A. (1993) *Political Economy of Policy Reform in Developing Countries, The Ohlin Lectures, No. 4*. MIT Press, Cambridge, MA.

Krueger, A. (1997) Trade policy and economic development: How we learn. *American Economic Review* **87** (1), 1–22.

Krueger, A., Schiff, M. and Valdes, A., eds. (1991) *The Political Economy of Agricultural Pricing Policy*. Johns Hopkins University Press, Baltimore, MD.

Krueger, A. and Tuncer, B. (1982) An empirical test of the infant industry argument. *American Economic Review* **72** (5), 1142–52.

Medoff, M. and Skov, I. L. (1990) Ratings of women economists by citations. *Journal of Economics and Business* **42** (1), 81–8.

Morris, C. T. and Adelman, I. (1988) *Comparative Patterns of Economic Development, 1850–1914*. Johns Hopkins University Press, Baltimore, MD.
North, D. (1989) Review of *Comparative Patterns of Economic Development, 1850–1914*. *Journal of Economic Literature* **27** (1), 89–90.
Pack, H. and Nelson, R. (forthcoming) The Asian growth miracle and modern growth theory. *Economic Journal*.
Rodrik, D. (1995) Trade and industrial policy reform. In *Handbook of Development Economics Vol. 3B*, ed. J. Behrman and T. N. Srinivasan, pp. 2925–2982. Elsevier, Amsterdam.
Stewart, F. (1974) Technology and employment in LDCs. In *Employment in Developing Nations*, ed. E. Edwards, pp. 83–132. Columbia University Press, New York.
Stewart, F. (1976) The direction of international trade: Gains and losses for the Third World. In *A World Divided: The Less Developed Countries in the International Economy*, ed. G. Helleiner. Cambridge University Press, Cambridge.
Stewart, F. (1977) *Technology and Underdevelopment.* Westview Press, Boulder, CO.
Stewart, F. (1985a) *Basic Needs in Developing Countries.* Johns Hopkins University Press, Baltimore, MD.
Stewart, F. (1985b) The international debt situation and North-South relations. *World Development* **13** (2), 191–204.
Stewart, F. (1991) The many faces of adjustment. *World Development* **19** (12), 1847–64.
Stewart, F. (1995) *Adjustment and Poverty: Options and Choices*. Routledge, London.
Stewart, F. (1998) Food aid during conflict: Can one reconcile its humanitarian, economic, and political economy effects? *American Journal of Agricultural Economics* **80** (3), 560–5.
Stewart, F., Humphreys, F. and Lea, N. (1997) Civil conflict in developing countries over the last quarter of a century: An empirical overview of economic and social consequences. *Oxford Development Studies* **25** (1), 11–41.
Stewart, F. and Streeten, P. (1971) Conflicts between output and employment objectives in developing countries. *Oxford Economic Papers* **23** (2), 145–68.
Stewart, F. and Streeten, P. (1976) New strategies for development: Poverty, income distribution, and growth. *Oxford Economic Papers* **28** (3), 381–405.
World Bank (1984) *World Development Report.* Oxford University Press, New York.