Development with and beyond the market: in search of economically rational alternatives to neo-liberalism

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Chapter 3

Mainstream Economics

Introduction

This chapter undertakes a detailed examination of the theoretical case presented by neoclassical economists in support of economic liberalism. Some broader epistemological concerns relating to the knowledge formation process within economics are also explored. One general aim of the following discussion is to demonstrate that markets often function in ways that are significantly different to the way they are characterised in the mainstream economic literature. Other aims are to identify some areas which would potentially benefit from greater state intervention and some reasons why the views of public choice theorists and other neoclassical political economists on the appropriate role for the state should often be treated with a good deal of scepticism.

Outline of Chapter

Section 1 contains an overview of the evolution of neoclassical theory, as well as a brief discussion on Keynesian economic perspectives. Apart from providing some background on developments within economics, the intention of the discussion in this section is to identify some of the value judgements and poorly-defined concepts underpinning much of mainstream economic analysis. Some deficiencies in the conventional account of the decline of Keynesianism are also identified. In section 2, the main assumptions made by neoclassical theorists about human motivation, behaviour, and rationality are identified and explored. This is followed in section 3 by a discussion on the inadequate way orthodox economic models deal with issues such as technological change and innovation, which have an important bearing on the evolution of economies. In section 4 the work of neoclassical revisionists such as Paul Krugman and Paul Romer is reviewed. Section 5 then identifies several reasons why these and other so-called neoclassical revisionists do not go far enough in their revision of neoclassical theory. It also explores some concerns relating to the dominant role that mathematical modelling plays within economics and examines why so many economists took so long to acknowledge the more obvious limitations of their
1. The Evolution of Neoclassical Theory

1.1 The Marginalist Revolution

Classical economists such as Adam Smith (1723-1790), David Ricardo (1772-1823), and Karl Marx (1818-1883) concentrated on exploring the wealth of nations, including the forces that increased wealth over time and led to the evolution of industrial economies, and the effect this had on income distribution.¹ In contrast, neoclassical economists view the economy from a far more short-term and static frame of reference. They assume that producers strive to maximise profits while consumers strive to maximise utility, and that this results in prices achieving a state of equilibrium - the level being determined by the factors available at any given time.²

This change of emphasis is generally associated with the authors whose work resulted in the so-called Marginalist Revolution - the three most influential early authors of the Marginalist school being Leon Walras (1834-1910), William Stanley Jevons (1835-1882), and Carl Menger (1840-1921).³ Several notable characteristics separated their work from that of classical economists, including a lack of concern in economic growth as a major theme and the focus instead on the allocation of given resources.⁴ Also, the economy was seen as made up of individual actors making rational decisions in the pursuit of the maximisation of their individual goals. Households and firms were simply treated as representing minimum social aggregates of these factors. This contrasted with the approach taken by mercantilists,


³ For a review of the work of this school see Pribram, *op. cit.*, ch. 18-22; Negishi, *op. cit.*, ch. 7-9; Stayley, *op. cit.*, ch. 12-15; Screpanti and Zamagni, *op. cit.*, ch. 5.

⁴ Screpanti and Zamagni, *op. cit.*, p. 147.
classical economists and Marxists who placed much emphasis on the role of collective actors (social classes and political bodies, etc.). The most important factor, however, was the Marginalist school's acceptance and reformulation of the utilitarian approach. As E. Screpanti and S. Zamagni point out:

Their marginalism gave credit to a special version of utilitarian philosophy, one for which human behaviour is exclusively reducible to rational calculations aimed at the maximisation of utility. They considered this principle to be universally valid: alone, it would have allowed the understanding of the whole economic reality. In this, above all, lies the revolutionary aspects of the new economic theories and not so much, as some people still maintain, in the argument that the prices of goods are determined by utility.

The Marginalist revolution also resulted in certain economic perspectives (or so-called laws) starting to take on a similar absolute and objective status to that associated with natural laws. The goal of turning economics into an ostensible 'hard science' had been given a major boost by Ricardo. Unlike Adam Smith, who also dealt with history, philosophy, current affairs, and legal issues, Ricardo had concentrated on developing the 'technique of economics' of which he is generally credited with being the inventor. Like Smith and his mercantilist predecessors, Ricardo was convinced that behind the 'veil of money' existed a real system of exchange values incorporated into the goods. These values generated self-regulating forces in the economy which would return it to a state of equilibrium, even after shocks such as wars and currency mismanagement. One conclusion that Ricardians drew from this view was that the economy had to be analysed in isolation from any moral, sociological or political considerations.

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5 Ibid.
6 Ibid., p. 148.
7 Stayley, op. cit., p. 66.
8 Pribram, op. cit., p. 161.
9 The concept of equilibrium stems from Adam Smith's view that under the rules of free competition, market prices will oscillate around natural prices. These are the prices determined by the natural prices of the factors of production. The concept of equilibrium was initially used by Richard Cantillon who suggested that market prices tend to adjust themselves to the costs of production. On this see Pribram, op. cit., p. 150.
10 Ibid., pp. 146-175.
11 Ibid., pp. 169-170.
Equilibrium models eventually came of age in the 1870s. In this period, Jevons and Walras, independently of each other, utilised mathematical systems of analysis founded on principles used in subjects such as engineering, to study the economy. Of the two authors, Walras became the more famous. According to the inscription on the bronze commemoration medal to him in the corridors of the University of Lausanne, this is because he was able 'to establish for the first time the general conditions of the economic equilibrium'.

1.2 Welfare Economics

While the work of Walras offered significant insights into the nature of economic relationships, he had not managed to demonstrate the optimality of a competitive equilibrium. This issue was addressed by 'welfare economics.' Initially, the welfare economic criterion was the simple utilitarian one of judging the degree of economic success by the size of the sum total of utility created - with nothing else taken to be of intrinsic value. From the 1930s onwards this already very narrow definition of welfare came under attack from Lord Robbins and other economists who criticised the validity of making interpersonal comparisons of utility. Because no objective way could be found of comparing the satisfactions of different people (as the motivation for individual choices vary), it was regarded as invalid to question whether a poor man would obtain more utility from an extra dollar of income than a rich man. As Amartya Sen points out, this conclusion is illogical, as the fact that no objective way can be found of formulating a policy is not in itself a sufficient reason not to do so, given that a subjective decision is often better than no decision at all. For example, there is no objective way of determining

12 For a review of the work of these two authors see Pribram, op. cit., ch. 18; Negishi, op. cit., ch. 7 and 9; Stayley, op. cit., ch. 14-15; Screpanti and Zamagni, op. cit., pp. 155-69.

13 Negishi, op. cit., p. 251.


at what age individuals should be deemed capable of consenting to marriage, engaging in full-time employment, going to war or voting. Yet, there is a need to draw the line somewhere.

The marginalisation of interpersonal utility comparisons within welfare economics ensured that the dominant criterion became that of 'pareto optima'. This concept is named after Vilfredo Pareto, the successor to Walras in the chair of Political Economy at Lausanne in Switzerland. A social state is regarded as being in pareto optima (that is, having reached an optimum balance) if an individual's or a firm's utility cannot be raised without reducing the utility of another. However, as the economic literature has subsequently shown, a 'pareto optimum' state can exist with some people living in extreme poverty and others living in extreme luxury, as long as the former cannot be made better off without negatively affecting the latter. It has also demonstrated that a multitude of potential 'pareto optima' states can exist.

The social welfare function developed primarily by Paul Samuelson offers a way out of this dilemma by requiring that decision-makers state their preferences in order to enable a choice to be made between competing options. In practice, most decision-makers have been unwilling to state their preferences on issues such as income distribution in a way that would allow the construction of a social welfare function. This leaves economists with two choices. They can avoid making policy recommendations and stick to identifying the likely consequences of the various options proposed (positive economics), or they can declare their own preferences (normative economics), choose an appropriate welfare function, and derive policy recommendations from it. As John Quiggin suggests, the approach taken by most economists in Australia and many other countries has been to undertake analysis

17 Ibid., pp. 31-32.
18 Ibid., pp. 31-32.
20 Ibid.
21 Ibid.
primarily in terms of the concept of efficiency which, despite being poorly defined, is often viewed as if it were an objective technical measure. This approach is sometimes supplemented with vague discussions on equity.\textsuperscript{22}

The way in which many economists examine the consequences of microeconomic reform provides a good illustration of the insufficiency of this approach. While many advocates stress that efficiency is not an end in itself but a way of achieving a more productive and more equitable society, in practice they tend to assume that equity will be addressed by someone else.\textsuperscript{23} Even when equity is addressed, the outcome is still often unsatisfactory, as the use of the tax-transfer system to compensate for any inequitable outcome inevitably involves dead-weight losses in administrative and incentive costs. This can ensure that either the losers are not sufficiently compensated, or the cost of compensation outweighs the benefit of the efficiency gains obtained.\textsuperscript{24}

In fact, as Quiggin has shown in a more formal way, from an efficiency perspective a 'pareto optimum' state cannot possibly be obtained by taking into account equity considerations, as a 'pareto superior' state can be obtained by not doing this.\textsuperscript{25} In other words, a more rigorous form of cost-benefit analysis, which takes into account a wider range of factors such as the full cost\textsuperscript{26} of any increase in unemployment resulting from microeconomic reforms, or from any decrease in well-being of those still employed who are forced to work harder, might, on occasion, find in favour of an alternative set of options, including maintaining the status quo.

\textit{1.3 Keynesian Economics}

The poor economic performances of western economies between the first and second world

\textsuperscript{22} \textit{Ibid.}, pp. 38-46.

\textsuperscript{23} \textit{Ibid}.

\textsuperscript{24} \textit{Ibid}.


\textsuperscript{26} The costs associated with family breakdown and an increase in crime, etc.
wars resulted in economists becoming increasingly dissatisfied with conventional economic theory. The most well known dissident was John Maynard Keynes. Following the publication in 1936 of Keynes' famous book *The General Theory of Employment, Interest and Money*, the focus within economics shifted away from how marginal utilities and costs interact to determine prices in individual markets to how the level of output and employment is determined by the interaction of flows of national savings and investment.\(^{27}\)

According to Keynesians, the main cause of economic malfunction is insufficient effective demand, and the appropriate response of governments when faced with increasing levels of unemployment and decreasing levels of economic growth is to pursue expansionary economic policies with the aim of increasing both investment and consumption.\(^{28}\)

An important tool in the armoury of many Keynesian economists has been the Phillips Curve. Analysing the historical data, A. W. Phillips found what appeared to be a strong relationship between the rate of unemployment and the rate of inflation. That is, rising inflation appeared to go hand in hand with decreasing unemployment and vice versa. In fact, this relationship appeared to be sufficiently robust to indicate that price stability could be achieved by allowing the unemployment rate to rise to approximately 7 percent. The price that needed to be paid to achieve and maintain an unemployment rate of 4 percent or lower was an inflation rate of approximately 4 or 5 percent. To many economists in the 1960s, this seemed to be a small price to pay for low unemployment.\(^{29}\)

During the 1970s, Keynesian economics fell out of favour and a more economically orthodox view of the state’s role in economic development once again asserted itself. The theoretical justification in support of this renewed faith in the market was provided initially by monetarism and subsequently by ‘rational expectations analysis’ and (see chapter 1 and below) a number of theoretical perspectives that highlighted the causes of 'state failure'.\(^{30}\)


\(^{28}\) Heilbroner and Milberg, *op. cit.*, pp. 25-47.


\(^{30}\) For a review of these developments see Heilbroner and Milberg, *op. cit.*, pp. 68-96; Quiggin.
The conventional explanation for why this shift in emphasis occurred is that it was a response to the economic difficulties that western economies faced in this period, and more specifically, the perceived inability of Keynesians to explain stagflation (the simultaneous occurrence of high levels of inflation and unemployment). The fact that Milton Friedman had predicted as early as 1968 (in his presidential address to the American Economic Association) that this would occur was also viewed as providing strong evidence in support of the superiority of more orthodox approaches to economic management.

The Neglect of Political and Institutional Considerations

The conventional account of the fall of Keynesianism is seriously flawed in that it is based on a narrow economistic interpretation of Keynesian economic thought which neglects the political dimensions of inflation. From the 1950s onwards, neoclassical economists such as Samuelson sought to integrate certain Keynesian concepts into mainstream economic analysis. The outcome is often referred to as the ‘neoclassical-Keynesian synthesis’. In essence, Samuelson argued that Keynesian demand management techniques were useful to establish full employment but from then onwards orthodox neoclassical economics could take over:

If modern economics does its task well so that unemployment and inflation are substantially banished from democratic societies, then its importance will wither away and the traditional economics (whose concern is wise allocation of fully employed resources) will really come into its own - almost for the first time.

As Tim Battin points out, the notion underpinning this view is that unemployment and inflation are essentially matters of a techno-economic nature and have little to do with

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31 See, for example, Krugman, Peddling Prosperity, op. cit., pp. 26-54.

32 On this see ibid., pp. 43-47.

33 Because the term ‘neoclassical-Keynesian synthesis’ implies a more extensive role for Keynesianism than was the case, many theories prefer the terms ‘neoclassical synthesis’ or ‘neoclassical synthesis of Keynesianism’. On this see Battin, T. 1997. Abandoning Keynes: Australia’s Capital Mistake. Basingstoke, Macmillan, p. 62.

34 Cited in ibid., p. 65.
politics. This approach also meant, as Battin further suggests, that Keynesian economics became almost solely associated with 'Phillips Curve Keynesianism' and, more specifically, with the discredited view that the coexistence of high levels of unemployment and inflation was an impossibility. The reality is that well before Friedman's and Phillips' entry into the unemployment/inflation debate, left-Keynesians, post-Keynesians and Kaleckians had warned that a society moving towards full employment was likely to experience strong inflationary pressures. With varying emphasis, their solution to keeping inflation in check, while maintaining low unemployment and ensuring a more equitable distribution of the benefits of economic growth, has been to both emphasise the importance of investment and to view inflation as a symptom of the struggle over the share of income.

The Role of Investment and Incomes Policies

During the 1930s, both Keynes and Polish political economist Michal Kalecki independently came to the belief that the key to avoiding the boom/bust cycles which are a feature of capitalist economies was investment. They also shared the view that the private sector could not be relied upon to invest to a sufficient level to avoid a recession, and that extensive state intervention was required. In relation to Australia, post-Keynesians such as Battin argue that the importance of this is supported by an analysis of the country's recent economic history in which governments from Chifley to Menzies to Whitlam, with varying degrees of success, presided over full and near-full employment using high levels of investment in physical and social infrastructure - roads, rails, ports, communication, housing, hospitals and medical care, education. Mistakes were made but the record of these

35 Ibid.
36 Ibid., pp. 123-127.
37 Ibid., p. 123.
38 For an extensive review of the literature see ibid., CHs. 3 & 6.
governments on unemployment, as in many other areas of the economy, is clearly superior to the record of governments of the past two decades.41

Keynes, Kalecki and their followers also realised as far back as the early to mid-1930s that employment-generating policies were likely to result in strong inflationary pressures as unions used the increased bargaining power that low unemployment brought them to demand higher wages. Like more conservative Keynesians, they favoured an incomes policy to keep wages in check. However, unlike their more conservative colleagues, they were more inclined 'towards seeking incomes policies that make wages the subject of political arrangements over and above what is perceived to be the immediate imperative of capital'.42 They also generally viewed such arrangements as part of the broader package aimed at more equitably distributing the benefits of technological change and trade. This broader package included progressive tax reform and enhancements to the social wage such as increased spending on health, education and public housing.43

2. Some Heroic Assumptions

This section examines some of the general assumptions incorporated into neoclassical models. These include those relating to behaviour and rationality. Such assumptions have strongly influenced economists’ conclusions on issues such as the effectiveness of expansionary macroeconomic policies and the causes of unemployment (see section 5). They also form the basis of the economic theories of politics developed by public choice theorists and other neoclassical political economists. These theories have been used to support the view that, even if market failure is more pervasive than economists generally assume, states should still play only a relatively minor role in the management of economies.

2.1 The Pursuit of Self-Interest

One assumption at the basis of neoclassical theory is that individual actors (individuals or

41 Ibid.

42 Battin, Abandoning Keynes, op. cit., p. 128.

43 Ibid., CHs. 3, 6 & 8.
firms) seek to maximise their utility function - that is, they pursue their own goals and maximise their welfare. This behaviour is considered as related totally to the individual's own consumption, and is not seen as involving concern for the welfare of others or antipathy towards others, or as being restrained or influenced by the recognition of other actors' goals. The reality is that individuals are often not as selfish as neoclassical economic theory assumes. For example, neoclassical theory cannot explain why the significant proportion of the population who live long lives and die at a fairly predictable time leave assets (houses, etc.) which they could have consumed during their lifetime; or why, when there is little chance of being caught, most people do not engage in crime, black marketeering or tax evasion; or why affluent people vote for political parties which promise to redistribute income; why people work for charities or causes for low or no pay; or why nurses have traditionally been reluctant to go on strike, and why many owners of firms continue to work when they could sell up and live out the rest of their lives in comfort.

In the real world, individual actors seeking to maximise their utility function are also often restrained by the recognition that others are seeking to maximise their utility function. In addition, many situations exist where the pursuit of narrow self-interest is not only socially dysfunctional but also an inferior means of achieving goals. One way this has been illustrated is through the use of game theory (i.e. variations on the 'prisoner's dilemma' game). In these games the self-maximising choice is rational but does not lead to the best solution, while the co-operative choice is irrational for the person who makes it unless other players also make the decision to co-operate. When these games are repeated, co-operative behaviour often does emerge because factors such as reputation and credibility come into play. In other words, participants in the game learn through experience that if

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44 Sen, op. cit. pp. 80-81.


47 For a discussion on the implications of game theory see Ibid. and Screpanti and Zamagni, op. cit., pp. 391-396.
they co-operate, others will reciprocate.\textsuperscript{48} Co-operative behaviour can also be found in non-repeated games. This suggests that even when people clearly know their own goals and wish to maximise them, they recognise the value of mutual interdependence.\textsuperscript{49}

2.2 Rationality and the Information Environment

Neoclassical theory also assumes that individuals or firms pursue their self-interest in a rational manner and that the information environment in which market agents operate is a rich one.\textsuperscript{50} In relation to technology, for example, the information available to a firm about the options open to it is seen as being restricted in only one or two well-defined ways. Rather than surmise that firms start from a point where they possess little or no information, and acquire information through investment and experience and by developing the appropriate institutions, neoclassical theory assumes that firms are aware of all the technological options open to them, as well as possess complete information about the economic worth of the technologies "induced" by R and D (research and development) expenditures.\textsuperscript{51}

As studies have shown, the reality is that actors frequently operate in environments in which information is far from rich and often expensive or difficult to obtain.\textsuperscript{52} This is one of the

\textsuperscript{48} See Screpanti and Zamagni, \textit{op. cit.}, pp. 391-396; Sen, \textit{On Ethics, op. cit.}, pp. 81-88.

\textsuperscript{49} Sen, \textit{On Ethics, op. cit.}, pp. 81-88.


reasons why labour markets do not operate in ways predicted by neoclassical theory. For example, despite a decline in union power, massive labour market deregulation and high levels of unemployment, many firms in Britain have consistently paid their workers more than the market clearing rate (that is, the amount someone with similar skills could be hired for). In the real world, it is time-consuming and therefore costly to monitor workers’ performances and develop the trust on which co-operative relationships depend. This means that an employee whose performance is known is worth more to an employer than one whose performance is unknown.53

Neoclassical assumptions on rationality have also been strongly challenged. Behavioural studies, including those examining how individuals perceive risk,54 have shown that perceptions are often highly subjective.55 Our recollections of pain and pleasure, for example, often do not correspond with our actual experience, but are influenced by a variety of factors. A painful operation that had an agreeable moment during its course and ended pleasurably with the relief of pain will often be remembered more favourably than a less painful operation that had a peak of pain and ended painfully.56

A large degree of irrationality is often present in decisions involving economic choices. If this were not the case, companies would not be able to make widespread use of brand names to obtain higher prices than those obtained by competitors who produce similar quality goods at lower prices. They would also not bother to seek to entice consumers with


56 Hutton, op. cit., p. 230.
cash back offers. They would simply discount the price in the first place.\textsuperscript{57} Taxpayers are also not being rational when they complain more loudly when governments raise taxes by overt means (e.g. by legislation) rather than covert means (e.g. by relying on bracket creep). Nor is it economically rational for employers to discriminate on racial, sexual, political, religious or nepotistic grounds when hiring or promoting staff, yet they have been known to do so.

Some of the recent neoclassical revisionist literature acknowledges that the way most economists view rationality is problematical, and among other things, there is the recognition that it is often rational for economic agents not to be completely rational and to rely instead on rough guesses about the future. For example, it does not make sense for a restaurateur to gather every bit of information needed in order to change his menu prices daily, and to be bothered to do so even if he was able to.\textsuperscript{58} Contrary to the claims made by many economists influenced by rational expectations analysis (see section 5.4) and the 'Policy Ineffectiveness Proposition' derived from it,\textsuperscript{59} in the real world the vast majority of taxpayers also do not respond rationally to increased spending by governments by raising their level of savings to pay for the higher taxes that will inevitably be levied at a future date. In other words, in the long run, the effects of expansionary fiscal policies are not automatically cancelled out by rational acting taxpayers.\textsuperscript{60}

\textbf{2.3 Revealed Preferences}

One of the most powerful but also one of the simplest ideas in economics is the concept of revealed preferences. Put simply, this is the view that if someone chooses option A rather

\textsuperscript{57} For a discussion on consumer irrationality in such areas see Gittins, R. 'Up $100, Down $80: Why the Net Gain is Irritation.' Sydney Morning Herald, 3/4/99, p. 72; Gittins, R. 'As Economic Thinkers, We Put the Cog into Cognitive.' Sydney Morning Herald, 12/6/99, p. 58; Frank, Microeconomics and Behaviour, \textit{op. cit.}

\textsuperscript{58} For a review of this work see Hutton, W. 'Who's Whistling the Best Tunes Now?' \textit{Guardian Weekly}, 4/2/96, p. 14.

\textsuperscript{59} For a discussion on the 'Policy Ineffectiveness Proposition' and its links to rational expectations analysis see Heilbroner and Milberg, \textit{op. cit.}, pp. 76-78. See also MaCallum, B. 1979. 'The Current State of the Policy Ineffectiveness Proposition.' \textit{American Economic Review} 69: 240-245.

\textsuperscript{60} Heilbroner and Milberg, \textit{op. cit.}, pp. 74-78.
than option B, and option B rather than option C, he/she must prefer A to B and A to C. When this concept is combined with the associated theory of price indexes economists can say a good deal, with the limited amount of data they have available, about the effects on welfare of price and income changes such as those resulting from microeconomic reform. Indeed, as Quiggin indicates, one of the main problems with this concept is that economists do not utilise it sufficiently to examine the consequences of proposed microeconomic reforms. As discussed in section 1, they generally fall back instead on a highly unsatisfactory, imprecise form of cost/benefit analysis based on vague notions of efficiency and equity.

Nevertheless, as Sen points out as part of his attack on utilitarianism, it is not clear why the expressed preferences of individuals should be regarded as the definitive authority when determining welfare, rather than simply as one of a number of influences. The fact that certain individuals have not demanded certain rights does not mean that these rights can be ignored. Examples of this include someone living under a repressive regime who is too scared to express a desire for freedom, a victim of domestic violence who is unwilling or unable to take action to remedy the situation, or a poorly-educated person who has no ambition to obtain an education, read books or travel, but if given the opportunity to do so might find these experiences life-enhancing.

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61 Quiggin, Great Expectations, op. cit., pp. 46-50.

62 Ibid.

63 For description of, and a discussion on, utilitarianism see Sen, On Ethics and Economics, op. cit.; Sen, Choice, Welfare and Measurement, op. cit., ch. 9-13 and 18; Screpanti and Zamagni, op. cit., ch. 5.

64 Sen, Choice, Welfare and Measurement, op. cit., pp. 54-73. See also the discussion on Sen's work in Screpanti and Zamagni, op. cit., pp. 366-368.


66 This line of argument is clearly not without its problems or dangers. If the preferences of individual actors should not necessarily be regarded as the ultimate authority, whose should?
3. Technological Change, Innovation and Long-Run Growth

This section examines mainstream economic perspectives on technological change and innovation as well as some related issues. The intention is to show that economists generally have a poor understanding of some of the factors that have a major influence on the long-term evolution of economies.

3.1 Economists and Technology

In conventional neoclassical economic models the large proportion of economic growth that cannot be accounted for by the growth that has taken place in the inputs of capital or labour (which are assumed to be subject to constant or diminishing returns to scale) is referred to as the 'residual'. This is seen as mainly representing increased productivity from the more efficient use of inputs or Total Factor Productivity (TFP). This, in turn, is generally considered to be largely the result of disembodied technological progress - that is, technological progress that is assumed to be independent of the growth of capital and labour. In conventional economic models, no explanation is provided for why technological progress occurs. However, this progress is assumed to occur at a constant rate each year, allowing both labour and capital to become more productive.

67 In fact, the literature has a tendency to simply refer to the residual as technological change, and ignore the role of other factors such as measurement error, organisational and institutional change, deviation from perfect competition, and the contribution of production inputs other than labour or capital, such as natural resources. On this see Rosenberg, N. 1982. Inside the Black Box: Technology and Economics. Cambridge University Press, Cambridge, pp. 24-25; OECD, 1992. Technology and the Economy: The Key Relationship. OECD, Paris, pp. 168-169.


While many neoclassical economists acknowledge that the way they view the residual is open to criticism, they also hold the opinion that the standard model generates a number of long-term predictions which are approximately consistent with known stylised facts. The close relationship between real wage rises and the rate of technological change is a case in point. However, as Steve Dowrick points out, because conventional economic theory has no explanation for the residual other than labelling it 'technological progress' and treating it as an exogenous factor, it is unable to say much about the policies that influence long-run growth. While strong growth in the 1950s and 1960s appeared to make such concerns redundant, the subsequent economic slowdown that occurred meant that an over-reliance on economic models with time horizons limited to a single five or six-year business cycle became increasingly difficult to defend.

Neoclassical economists' views on technology also ensure that, in practice, the great bulk of their writings on technological change proceed as if such change is solely cost-reducing in nature, and responding to the dynamics occurring in the economy rather than generating them. Yet, as Nathan Rosenberg comments, unless we take the view that the populations of western countries enjoy higher standards of living today than at the time of the Napoleonic Wars simply because they consume more goods per capita, it is reasonable to assume that neoclassical models are missing some crucial elements of modern society. In fact, in addition to the desire for knowledge, or for the prestige or satisfaction that comes with inventing something new, technologies are developed for a variety of reasons which are often unrelated or only partly related to price signals. Significant technological developments can also occur as a result of other endeavours including shocks such as wars, oil price rises, strikes, and environmental problems and regulations. Many key

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71 Ibid.
73 See Rosenberg, Inside the Black Box, op. cit., pp. 4-5.
74 Ibid.
75 For an analysis of the factors that have driven technological change see Rosenberg, Inside
technologies were often seen initially as simply being an adjunct to existing technologies. This was even true of the telephone, which was initially regarded as a poor substitute for the telegraph. Many similar examples exist of an invention's potential not being appreciated at the time; these include the radio and the computer.

3.2 'Creative destruction' and 'Cumulative change'

Joseph Schumpeter was the first leading economist to place technological change at the centre of his analysis. Traditionally, economists had tended to view economic development as the result of competition, one example given being price-cutting among harness makers. Schumpeter argued that what really mattered was innovation - in this particular case by car manufacturers, which made harness makers obsolete. His belief in the primacy of 'creative destruction' is challenged by evidence which shows that new and old technologies have often coexisted for several decades, and that the cumulative effects of minor technological and organisational changes are often far greater than major technological breakthroughs.

Much of the knowledge required for cumulative technological change to occur is non-

the Black Box, op. cit. and Rosenberg, Exploring the Black Box, op. cit.

76 In fact, when the telegraph company Western Union was given the option (by Bell's financial backers) of purchasing the patent for the telephone for a sum of $100,000 in 1887 they refused it. On this see Rosenberg, Exploring the Black Box, op. cit. p. 219.

77 Ibid. pp. 219-226.


codified know-how and expertise, and needs to be created within the firm.  

This can involve several stages. Initially the technology adapted or acquired may be improved or modified to fit the specific situation. Following the initial phase there is often a post-adaptation one in which initial efficiency is improved and the technology modified to conform to changes in both the input and product markets. This may be followed by further stages in which more significant technological changes take place, substitutes are developed, diversification occurs in the production of inputs or equipment, and technologies used by supplier industries are enhanced.

The role played by 'cumulative change' is not captured by the standard R and D model, in which a strong distinction is made between research and development. According to Rosenberg, the conventional model has remained popular for two main reasons. The first is that it provides a justification for the type of research undertaken at universities (and therefore a rationalisation for more funding). Secondly, it fits in with the views of neoclassical economists. As noted, in most of the economic literature technology is largely regarded as 'codifiable' knowledge, which is normally easy to access and reproduce from a general stock of technological knowledge.

In reality, firms frequently have to put more effort into acquiring the information and knowledge needed to select new technologies and utilise them to anywhere near their full potential. While this can mean that innovating firms are often able to obtain a greater degree of 'first mover' advantage than neoclassical theory allows, non-innovating firms (or


81 Bell and Pavitt, Accumulating Technological Capability in Developing Countries, op. cit.

82 Ibid.


countries) are also able to appropriate relatively cheaply (via the movement of personnel, etc.) skills and knowledge that were developed elsewhere at great expense. When this occurs, governments might need to intervene to support knowledge and skill acquisition, for while the total benefit to the economy of the knowledge and skills obtained might well outweigh the total cost, it might also be too expensive for a first mover to start the process going. Many economists concede that because the social returns to investment are often higher than the private returns, markets left to themselves will often invest too little in basic research. For this reason, they support some government intervention to compensate, but only to the extent of funding basic research.

This level of government intervention might be inadequate for several reasons; one is simply the magnitude of the spillover effect. In fact, according to Bradford De Long and Lawrence Summers, the social returns to investment in equipment are about 30 percent a year, much of which is not captured by the initial investors. Because of this, investment levels can fall well below the optimal from the perspective of the long-term growth of economies. De Long and Summers argue that to compensate for this, governments should encourage greater investment in equipment through tax concessions and other incentives.

Critics of this conclusion accept that a strong association exists between the level of

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85 As discussed in chapter 8 such movement of personnel was crucial to the success of the Bangladesh garment industry. On this see also Yung Whee Rhee. 1990. 'The Catalyst Model of Development: Lessons from Bangladesh's Success with Garment Exports.' World Development 18 (2): 333-346.

86 On this issue see Lall, S. 1991. 'Explaining Industrial Success in the Developing World.' In Balasubramanyam and Lall, S. (eds.). Current Issues in Development Economics. Macmillan, Basingstoke, pp. 118-155; Lall, S. 1993. 'Understanding Technology Development.' Development and Change 24: 719-753. See also the related discussion in this chapter on Romer's views on the role of ideas. In his model a country that becomes more open to the world economy will also often obtain (depending on the other circumstances at work) additional benefits not allowed for in traditional neoclassical models in the form of the ideas that new investors bring with them.

87 Lall, Explaining Industrial Success, op. cit.

88 Ibid.

investment in equipment and machinery and the level of economic growth. However, unlike De Long and Summers, they are of the opinion that causality runs in the reverse direction and that strong-growing economies attract high levels of investment.\footnote{Whitelaw, R. 1994. 'Investment and Economic Growth: A Critique of De Long and Summers.' In EPAC, Investment for Growth - Background Paper No. 39: Papers presented at an Office of EPAC seminar held in Canberra on 23 November 1993, AGPS, Canberra, pp. 39-57.} In response, Dowrick points out that if the relationship between growth and investment was demand driven, it should have induced higher relative prices for equipment, which it has not.

Their (De Long and Summers) strongest evidence on the direction of causality is the observation that fast growing countries with high equipment investment tend to have relatively low equipment prices. If the association between growth and investment were demand driven, we would expect growth to induce higher prices for equipment by shifting the demand curve for equipment to the right and moving the economy up the supply curve. The evidence suggests instead that the association is supply driven, with low equipment prices stimulating investment and growth. Moreover, if causality ran from growth to investment, we would expect the estimated coefficient on non-equipment investment to be equally biased upwards. The fact that the estimated coefficient on equipment is constantly at least double that on structures lends strong weight to their argument.\footnote{Dowrick, S. 1994. 'Impact of Investment on Growth: Externalities and Increasing Returns.' In EPAC, Investment for Growth, op. cit., pp. 11-38.}

Dowrick's reasoning is criticised by Richard Whitelow, who points to a supposedly even stronger association between construction investment and growth in GNP. The net effect of this would be to put upward pressure on the relative price of construction goods, which would mean that equipment goods are relatively cheaper.\footnote{Whitelaw, op. cit.}

One problem with this debate identified by John Neville is that both protagonists take a too narrow view of the relationship between investment and growth. For, while spillovers are the critical issue in the economic textbook world of perfect competition, in the real world another reason for encouraging investment is that a large part of technical change is embodied.\footnote{Neville, op. cit.} This view is supported by the above discussion which, among other things, has revealed that a good deal of technological progress and innovation is a cumulative, in-house process which, via such factors as 'learning by doing', results in the development of non-
codified acumen and expertise within the enterprise. In other words, while the task of model building within economics is far easier when technology is treated as an exogenous variable which is independent of the growth of capital (physical and human), these factors are actually complementary. Technology is often capital-augmenting and, in turn, technological innovation is often encouraged by high rates of capital formation (both physical and human). If this is the case, then the rate of investment must inevitably be far more important than economists working within a conventional framework have assumed.

### 3.3 Macro Spillovers and Multiple Equilibria

While the concept of "spillovers" among industries and technologies 'has long been an important part of microeconomic analysis of technological change,' the 'potential implications of such interactions at the macroeconomic level' have received far less attention. In neoclassical theory modern industrial economies are conceptualised as collections of firms and consumers which, operating in a situation where prices are flexible and markets compete, seek to maximise both profits and utility. The modern variants of this perspective are the real business cycle models (see section 6.4) which argue that, particularly over the long term, the major source of economic fluctuations are productivity innovations. By altering the equilibrium levels of production and investment these innovations generate both business cycles and growth. As S. N. Durlauf points out:

> These models imply that the demand side of the economy should have little effect on real variables, which results in a form of the classical dichotomy for 1980s macroeconomics where supply side factors determine the level of output and monetary policy determines the price level. A corollary of this perspective is that there is little role for government policy in affecting long-term growth. Long-term growth is a function of the rate of technological change. Demand side policies are therefore irrelevant.

If exogenously-given technological innovations are mainly responsible for fluctuations in economic growth, especially over the long-term, national fluctuations should have common

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95 Rosenberg, Landau, and Mowery, *op. cit.*, pp. 1-14

causes, given that neoclassical theory also assumes that different countries possess identical preferences and that technologies are easily accessed. A study by Durlauf found little evidence of cointegration among OECD economies over a 35 year period (1950-85), or even any evidence of interactions across short-term fluctuations.97 Durlauf then goes on to outline a theory of multiple equilibria which he suggests is 'capable of explaining the stylised facts of national autonomy.'98

Durlauf's model maintains the conventional assumption that different countries essentially possess identical preferences and technologies. However, unlike in conventional neoclassical-based models, multiple equilibria in the form of alternative growth paths become possible as the investment decisions of firms in one sector do not take place in isolation, and are influenced by the activity of firms in another sector. Different domestic regimes of institutions and policy generate different outcomes. On a high growth path a situation exists where strong investment in one industry has induced additional investment in other industries, which then generates even higher growth rates and further investment. On a low growth path the reverse is the case.99

R. Landau and Rosenberg's study of the evolution of the international chemicals industry provides some support for Durlauf's conclusions. Strong path-dependent elements were found to be at work in the evolution of this sector, the exact nature of which was strongly influenced by institutions and resource constraints that existed in individual countries.100 Work by Krugman and other 'neoclassical revisionists' has also identified the existence of 'path dependant' processes at work in areas such as the evolution of the cotton textile industry in Manchester during the industrial revolution, and the development of the computer industry in Silicon Valley.101

97 Ibid.
98 Ibid.
99 Ibid.
101 For a discussion on these and other examples of path-dependency in action see Krugman, Peddling Prosperity, op. cit., ch. 9.
Durlauf argues that the potential for certain policies to have a more beneficial effect on long-term growth than conventionally assumed because of the large dynamic flow-on effects that are often generated, should introduce a bias in favour of a proposed policy. This includes policies such as the revision of a tax law to encourage investment and innovation. In other words, when the state is unclear about whether the potential benefits of a particular policy will be sufficiently realised to make it worthwhile, it should generally make a positive decision. This is because 'the payoffs to the policy if efficacious will far outweigh the costs if ineffective, for a wide range of probabilities attached to the two outcomes.'

However, as Rosenberg, Landau and D. C. Mowery caution, many of the policies which are needed to encourage a movement from a lower growth cycle to a higher one, such as those that decrease the cost of capital by reducing their risk premia and tax policies that encourage capital formation, are not necessarily those that get the most support from critics of mainstream economic thinking:

Many of the policies that are most important in affecting the innovative performance of nations lie well outside of the conventional boundaries of 'science and technology policy,' and include macroeconomic, international financial, regulatory, and tax policies. Indeed, the most important policy levers extend well beyond the categories lumped together as 'industry policy' in the era during which this concept had some political cachet. Without serious attention to the effects of these broader areas of policy on innovative performance, 'targeted' technology initiatives, 'strategic' industry policies and the like will have modest positive effects at best, and may instead prove harmful to overall economic performance.

4. Neoclassical Revisionism

Since the 1980s a growing number of economists have started to question certain basic assumptions about the way markets operate. One reason for this is that conventional models cannot satisfactorily explain why western economies had experienced an economic slowdown from the early 1970s onwards. As discussed in section 3.1, because conventional economic theory has no explanation for the residual other than labelling it technological progress and treating it as an exogenous factor, it is unable to say much about the policies that influence long-run growth.

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102 Durlauf, *op. cit.*

Theoretical work on the factors influencing long-run growth (now referred to as either 'new growth theory' or 'endogenous growth theory') was inspired by a 1986 paper by Romer. In Romer's new growth model, technological change, rather than viewed as if it were simply manna from heaven, is treated as a key variable influencing, among other things, the level of capital formation. By doing this, he has been able to show how increasing returns are possible and provide a credible explanation for why economies have failed to converge in ways predicted by conventional theory. Among other things, this is because when technological change is incorporated into economic models, the effects of innovations and disturbances start to compound over time, resulting in significantly different outcomes.

As the 'new trade literature' acknowledges, the complexity of modern trade also poses problems for conventional theory. Traditional trade models are based on the assumption that trade is dominated by independent market agents and mainly involves goods that the importing country does not have a comparative advantage in and cannot produce very efficiently. In recent years, however, there has been a huge growth in intra-industry trade between countries of similar factor endowments (e.g. the trade between Germany and Sweden in BMWs and Volvos). In addition, a growing proportion of world trade is not trade between independent market agents but intra-firm trade between affiliates of the same

104 Romer, P. M. 1986. 'Increasing Returns and Long-Run Growth.' Journal of Political Economy 94: 1002-1037. For a review of this literature and a discussion on its evolution see Dowrick, New Theory and Evidence on Economic Growth and their Implications for Australian Policy, op. cit.

The principal source of renewed empirical interest in growth was the publication by Robert Summers and Alan Heston of a consistent set of national accounting aggregates for more than a hundred countries since 1950. This made it possible for the first time to analyse confidently the economic growth performance of a wide cross-section of countries. On this see Dowrick, 'New Theory and Evidence on Economic Growth and their Implications for Australian Policy,' op. cit. See also Summers, R. and Heston, A. 1991. 'The Penn World Table (Mark 5): An Expanded Set of International Comparisons, 1950-88.' Quarterly Journal of Economics 106 (2): 327-368.

105 Parker, R. 1993. 'Can Economists Save Economics?' The American Prospect 13 (Spring).


The nature of many modern industries is such that often the market can only support a limited number of producers, as in the case of wide-bodied jet aircraft. This means that first movers can obtain certain advantages not recognised in the neoclassical literature, such as the ability to reduce costs by selling large quantities of a product of which the accumulation of knowledge and skills are not easily appropriated by competitors, and the establishment of a brand name. A first mover might also be able to act strategically to prevent potential competitors from developing a similar capacity by, for example, investing in excess capacity which is not immediately required but which functions to deter potential competitors from entering the market.

These factors, plus advances in computer technology, have encouraged many economists to develop more sophisticated models of the economy which have a more 'real world' look about them. Some analysts working with models that focus on the externalities associated with education, training and R and D have concluded that additional government assistance is warranted to compensate for market failure in these areas. Others have developed models that take into account such factors as first mover advantage and the potential for investment in one industry to encourage investment in another, and so on. The conclusions reached in some of this literature open up the possibility of a more extensive role for government, including a rationale for picking winners, and (in the context of developing societies) even a 'big push' strategy. Despite this, most economists are extremely reluctant to countenance a more active role for the state beyond some additional support for education and retraining and R and D, and possibly some additional incentives to encourage investment.

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108 This form of trade accounts for one third or more of total world exports of goods and non-financial services. On this see EPAC, 1995. Globalisation: Issues for Australia - Commission Paper No. 5, Papers and Proceedings from an Economic Planning Advisory Commission Seminar held in Canberra on September 15, 1994, AGPS, Canberra.


One reason for this reluctance is that the more recent work by neoclassical revisionists such as Krugman indicates that the potential economic benefits waiting to be captured by a more interventionist state are likely to be significantly less than initially thought.\textsuperscript{112} The views of economists on the appropriate role for the state have also been increasingly influenced by perspectives expressed in the broader neoclassical political economy literature (see below and chapter 1). This literature generally presents a very pessimistic view of the ability of governments to intervene constructively in their economies.

Another reason why many economists question the need for greater state intervention is the realisation that a greater openness to the world economy will, in itself, generate large dynamic gains not accounted for in conventional static neoclassical models.\textsuperscript{113} In Romer's model, a country that becomes more open to the world economy will often (depending on the other circumstances at work) obtain large additional benefits beyond those assumed in traditional neoclassical models, in the form of ideas that the investor brings with it.\textsuperscript{114}


One example which Romer gives to illustrate the importance of ideas is the recent economic success of Mauritius, which benefited from the knowledge brought to the country by foreign garment producers. According to Romer, the conventional view that the economic success of this country was the result of an inflow of capital following the setting up of an Export-Processing Zone (EPZ) is problematical for several reasons. These include the facts that a significant proportion of the investment in the EPZ came from domestic savings and that Mauritius 'had long enjoyed a special trade status with the EEC and that sewing machines could always have been purchased on the open market.' In the case of human capital, Romer argues that educational and skill levels of the population could not have changed sufficiently in the short period since independence in 1968 for this to account for the rapid growth that occurred from 1972 onwards. He also makes the point that 'if human capital were all that mattered, why did Mauritius do so much better than Sri Lanka, which had a much better record in education?' According to Romer, the key to the economic success of the country was 'the crucial array of ideas about the textile and garment business' that foreign entrepreneurs brought with them. These include ideas on 'the specific kind of equipment to use, how to manage a small factory, how to manage relations with textile importers in the industrialised countries, how to successfully exploit loopholes in quota limits, and hundreds of other ideas about running a modern garment assembly operation, such as the knowledge of the sequence to use in sewing a shirt (Romer, P. 1993. 'Two Strategies for Economic Development: Using Ideas and Producing Ideas.' In \textit{Proceedings of the World Bank Annual Conference on Development Economics 1992}.
Other models stress the efficiency benefits obtained when firms exposed to increased competition respond by eliminating internal deficiencies and by seeking out opportunities for innovation.\(^{115}\)

### 5. Why a Sceptical Attitude is Still Justified

This section identifies a number of reasons why neoclassical revisionists do not go far enough in their revision of neoclassical theory, as well as, more generally, why the current state of economic theorising is less healthy than the majority of economists care to admit.

#### 5.1 The Continuing Neglect of Hard-to-Model Factors

As the discussion on equipment investment has already illustrated, one reason why the current views of economists on the appropriate role for the state are questionable is that many of these economists are still highly selective in the type of new factors they take into account when examining the potential costs and benefits of interventionist policies. In fact, as Krugman acknowledges, many of the so-called new economic models are also still relatively orthodox in scope. They often ignore, among other things, the reality that 'technological development is normally an increasing returns process carried out in imperfectly competitive industries' which experience dynamic economies of learning and R and D.\(^{116}\) The new economic models also still neglect, or deal with inadequately, a range of hard-to-model factors such as institutions and social values which have an important bearing on the long-term evolution of economies.\(^{117}\)

\(^{115}\) For a review of this literature see Quiggin, Great Expectations, op. cit., pp. 128-130. As Quiggin suggests, this line of argument has often been strongly influenced by Liebenstein's notion of 'X-Efficiency'. Liebenstein, H. 1966. 'Allocative Efficiency vs X-Efficiency.' American Economic Review, 56: 392-45. For a critique of the 'X-Efficiency' notion see Stigler, G. 1976. 'The Xistence of X-Efficiency.' American Economic Review 66 (1): 213-16.

\(^{116}\) Krugman, Rethinking International Trade, op. cit., p. 7.

\(^{117}\) Nelson, What has been the Matter, op. cit.
Institutions

To many scholars, institutional differences between countries are a major reason why their economic performances can vary so greatly in areas such as economic growth, unemployment and inflation. The term ‘institution’ is often used as a synonym for organisations such as a power company or a government department. But ‘institution’ can also mean something more abstract such as social conventions and the 'rules of the game' which influence how economic systems operate. These include formal rules, compliance procedures and moral and ethical norms which constrain the behaviour of individuals.

**Neoclassical Analysis of Institutions**

In neoclassical economic models, the large proportion of economic growth unaccounted for

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118 For example, since the late 1970s (when the impact of the oil price rise shock had been absorbed) many western economies have grown at a similar rate. Yet, as Paul Ormerod points out, they have experienced markedly different rates of unemployment. France, West Germany, Italy, Austria, and Spain have all grown at an average annual rate of some 2 1/4 percent in the past 15 years. Yet, unemployment rates averaged 9 percent in France, 6 percent in West Germany, 9 percent in Italy, only 3 percent in Austria and 16 percent in Spain. Britain, Sweden and Switzerland - countries with governments of quite diverse attitudes to economic policy - all grew at just under 2 percent over the same period. Unemployment averaged 9 percent in Britain, almost 3 percent in Sweden, and less than 1 percent in Switzerland. On this see Ormerod, P. 1997. 'Can Economics Solve the Problem of Unemployment.' In Philpott, J. (ed.). *Working for Full Employment*. New York, London, pp. 151-166.

According to Ormerod *(Ibid.)*, the main reason why countries such as Austria, Norway, Switzerland (and, until recently, Finland and Sweden) have experienced low levels of unemployment for most of the post-war period is that, apart from its other roles, the public sector functioned as 'the employer of last resort' whose function was to 'absorb the shocks which occur from time to time, and more generally make employment available to the less skilled [and] the less qualified.' Ormerod suggests that a similar role has been played in Japan by the domestic service sector (travel, leisure activities, restaurants, etc.), which is far more employment-intensive than in the West.

119 As John Nellis points out, this is normally what donor agencies such as the World Bank have in mind when they speak of institutions - Nellis, J. 1990. 'Comment on "The Role of Institutions in Development,"' by Van Arkadie.' In *Proceedings of the World Bank Annual Conference on Development Economics 1989*. World Bank, Washington, pp. 177-180.

by the growth that has taken place in the inputs of capital or labour is referred to as the ‘residual’. In fact, as noted in section 3, there is a tendency in the literature to simply refer to the residual as technological change and ignore the contribution to growth made by other factors such as institutional change. Where their importance is recognised, the traditional approach has been to assume that institutions are exogenous factors of production which (like technology) respond to the actions of market agents and adapt to changing circumstances.\textsuperscript{121}

In more recent times, neoclassical analysis of institutions has gone beyond this and has developed in a number of different directions. Through the use of ‘rational choice’ analysis and public choice theory, economists have entered into the domain of disciplines such as sociology, political science and anthropology, and attempted to explain institutional behaviour in terms of the maximising pursuit of self interest by individual actors.\textsuperscript{122} Where tariffs are concerned, for example, econometric studies indicate that the impact of such trade restrictions on economic growth should be relatively minor. However, as Gordon Tullock, Anne Kruegar, and other neoclassical political economists\textsuperscript{123} have pointed out, the additional losses that result from trade restrictions also need be taken into account. These losses are mainly incurred when economic agents competing for administratively-allocated import licences use up resources which could be put to more productive use.\textsuperscript{124}

In theory, public choice theorists and other neoclassical political economists could restrict themselves to identifying this and other reasons why interventionist policies often have less

\textsuperscript{121} On this see Arcadia, \textit{op. cit.}; Bardhan, P. 1989. ‘Alternative Approaches to the Theory of Institutions in Economic Development.’ In Bardhan, \textit{op. cit.} pp. 3-17; Nelson, What has been the matter, \textit{op. cit.}

\textsuperscript{122} Arcadia, \textit{op. cit.}


beneficial consequences than intended. Policy analysts could then consider these factors when formulating policies or when seeking to evaluate the potential costs and benefits of proposed policies. In reality, the public choice literature especially has generally favoured a more normative approach and come out strongly in support of a relatively 'minimalist' role for the state. As critics such as Quiggin and Hugh Stretton and Lionel Orchard point out, this is hardly surprising, given that the majority of public choice theorists do make one clear distinction between the public and private sphere. While markets are perceived as providing the means by which the self-interest of individual actors is directed to serve the interests of society, this is not seen to be the case where the political process is concerned. Here outcomes are largely determined by the generally unsatisfactory consequence of the pressure exerted on governments by the various vested interest groups.

Such conclusions ensure that a strong similarity exists between the views of many neoclassical political economists and much of past Marxist analysis of the state. Economic factors dominate, ideas and politics are perceived to have relatively little or even no independent role in influencing how societies evolve, and anyone holding contrary views is regarded as the servant of vested interests. As Quiggin suggests, the main differences between the two approaches are that the notion of class is replaced by that of an interest group, the repositories of true knowledge are free market economists rather than Marxists, and public opposition to the policies they favour is explained in terms of 'rational ignorance' rather than 'false consciousness'.

**The Evolution of Public Choice Theory**

It is important to recognise that many neoclassical political economists do not simply argue that governments should not pursue interventionist policies but also have a broader anti-


126 Quiggin, Great Expectations, op. cit., p. 66; Stretton and Orchard, op. cit., CHs. 5 & 6.


state agenda. Following the input of public choice theorists such as William Niskanen, R. E. McCormick, and R. D. Tollison, rational-choice analysis steadily evolved beyond the analysis of issues such as the side-effects of tariffs restrictions into a highly influential and all-encompassing rent-seeking theory of the state.129 As Stretton and Orchard point out in an extensive review of the literature, the aim of these theorists was to document the existence of rent-seeking behaviour wherever

government administers collective marketing or price support schemes; licences people to practise skilled trades and professions; regulates industry; chooses location for public enterprises or public goods; or contracts with private suppliers for goods and services.130

So ambitious did public choice theorists such as Niskanen, McCormick and Tollison become in their endeavours that rent-seeking analysis has eventually come to encompass any gain-seeking from the state, irrespective of how economically productive or socially useful a particular activity might be. This includes competitive private tenders to provide productive public goods such as roads, bridges, schools and offices.131 In fact, according to Tollison, the process of government simply involves a transfer of wealth from some people to other people. Anything useful the state produces as part of this process of ‘organised, legitimate theft’ is simply an unintended and expensive by-product of the competition that exists for wealth transfers.132

The outcome of all this, as Stretton and Orchard claim, is that it becomes extremely difficult to identify any state activity that has not already been deemed by public choice theorists to involve an extremely wasteful and inefficient allocation of resources.133 Indeed, it is fortunate that rent-seeking analysis was not in vogue in the past, as many important


130 Stretton and Orchard, op. cit., p. 135.

131 Ibid.

132 On this see Ibid., pp. 136-37.

133 Ibid., p. 136.
initiatives which have proved beneficial to society would not have been introduced. This includes publicly funded schools, health services and roads. This point is conceded by leading economist Paul Romer, who draws attention to the fact that if rent-seeking theory had been applied to research grants, governments would never have supported research and the peer review process would never have been invented.134

Other Developments within Neoclassical Analysis of Institutions

A second area of research on institutions has been stimulated by a famous 1960 paper by Ronald Coase, which has subsequently resulted in neoclassical economists paying greater attention to property rights and transaction costs.135 These costs include those involved in the enforcement of contracts, negotiation, monitoring co-ordination and the obtaining of information. As societies become further advanced and move beyond the face to face interactions of peasant communities, more complex institutions are needed as additional opportunities open up for opportunistic behaviour such as that involving 'moral hazard' and cheating and shirking.137

Fundamental and persistent changes in relative prices (resulting from population growth, technological change, and changes in the cost of information, etc.) are perceived by many economists to stimulate the search for alternative contractual and institutional arrangements.138 While acknowledging that research in these areas has generated some important insights, analysts such as Pranab Bardhan have expressed concerns about the

134 Romer, Two Strategies for Economic Development, op. cit.


136 The concept of 'moral hazard' refers to situations where there is a temptation to take excessive risks. In these situations both the potential gains and losses are large. However, there are structures in place which ensure that if the latter occurs the costs are not borne by the actor taking these risks. An example, of this is a bank whose deposits are insured by the government and which lends to risky borrowers and charges high interest rates. If this strategy works large profits are made. If it fails the bankers walk, and leave the state to pick up the costs. On this see Krugman, Peddling Prosperity, op. cit., pp. 162-163.

137 Bardhan, Alternative Approaches, op. cit.

138 Ibid.
direction it is taking. Bardhan’s main concern is about the way economists treat ‘persistent institutions’ which can be shown to address some market deficiencies. Because they are assumed to have been generated from some form of evolutionary process in which the fittest survive, many economists have reached the conclusion that, whatever their limitations, these institutions should be left to evolve at their own pace and not be tinkered with.

One example of a persistent institution is sharecropping. A feature of developing societies is the absence of markets (credit markets, etc.), even in situations where their establishment would generate significant benefits. While institutions are developed to compensate for this, they are often inefficient and inequitable, as in the case of sharecropping. Under this system, workers receive less than the value of their marginal product, which appears to indicate an inefficiency, posing the question of how it can have survived for so long. The standard answer of economists has been that sharecropping provides a means of risk sharing. For obvious reasons, workers are more risk-averse than landlords, and in the absence of a complete set of risk markets in which the workers can insure against the many potential hazards they face, the sharecropping system will allow the landlord to absorb more of the risks. As Joseph Stiglitz has shown, this is an inadequate explanation as, from a neoclassical perspective, all the functions of risk sharing that sharecropping offers could be provided by a combination of wage and rental contracts.

Dysfunctional institutions such as sharecropping can continue to exist over a long period for a variety of reasons. Economically irrational or socially unprincipled customs can be maintained by social sanctions which rational individuals conform to out of fear of the consequences. Individuals can be influenced by the justification others give for maintaining

139 Ibid.


142 Stiglitz, Rational Peasants, Efficient Institutions, and a Theory of Rural Organisation, op. cit.
the status quo. Socially inadequate institutions can be constantly reinforced when path-dependent processes evolve; for example, when the profits made by vested interests encourages others to take advantage of existing conditions, making it increasingly difficult for governments to introduce changes. A similar process can ensure that inferior technologies get locked in place. Examples given in the literature of technologies that continued to be used despite the existence of superior options include the QWERTY typewriter keyboard, the narrow gauge of British railways, and the US colour television system.

5.2 Why Did It Take so Long?

A more basic reason why the current views of mainstream economists on how to manage economics are questionable is the length of time they took to acknowledge the deficiencies of conventional neoclassical models. According to some analysts a strong bias exists within the economics profession in favour of 'new right' ideologies, and this is a major reason why economists have generally been so reluctant to acknowledge the limitations of neoclassical theory. This conclusion is not supported by survey findings which show that many economists support 'progressive liberalism' over 'hard liberalism'. More specifically, they reject the view that governments should strive for fiscal balance over the business cycle, and argue that central banks place too much emphasis on fighting inflation rather than on reducing unemployment or meeting other social goals. Supporters of progressive liberal economic policies also dispute the claim that trade deficits are bad for the economy and that supply-side shocks are the major source of macroeconomic disturbances. Many economists are also opposed to 'small government policies' in pursuit of greater economic

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144 Nelson, What has been the matter, op. cit.

145 Ibid. See also Arthur, B. 1988. 'Self-Reinforcing Mechanisms in Economics.' In Anderson, P. W. and Arrow, K. J. (eds). The Economy as an Evolving Complex System. Sante Fe Institute, Sante Fe, pp. 221-244; Krugman, Peddling Prosperity, op. cit., ch. 9.

growth. That is, they disagree with ‘policies which lessen the government’s redistributive role, structurally reduce levels of government spending relative to GDP, lower marginal income tax rates, and lighten the role of business regulation.’

A greater cause of bias within economics is the emphasis placed by the profession on modelling techniques. In fact, success within the profession today is far more dependent on one’s modelling skills than one’s knowledge of the economy. This reality is not lost on would-be economists, as the findings of a survey of graduate economic students in leading universities in the United States clearly illustrates. In sharp contrast to their almost unanimous belief in the importance of developing modelling skills, only three percent of students surveyed believed that a thorough knowledge of the economy was very important to the attainment of success within the economics profession. Sixty-eight percent believed

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Policy formation within national and international bureaucracies has also been increasingly influenced by mathematical modelling. In Australia, 75 percent of the funding of the influential government-run Industry Commission has been spent on the development of models of the economy. On this see Toohey, op. cit., pp. 169-187.

For an evaluation of some of the leading models used in Australia see EPAC (Economic Planning Advisory Commission) 1994. *A Comparison of Economy - Wide Models of Australia: Responses to a Rise in Labour Productivity, Commissions Paper No. 2 - Papers Resulting from an EMBA symposium held in Canberra on the 13/4/94, AGPS, Canberra.*

Prominent economist Paul Krugman acknowledges that so influential has mathematical modelling become within economics that any economic argument or concept which cannot be expressed in a mathematical format tends to be neglected. Krugman concedes that this has also resulted in bias amongst economists in favour of free market policies. The tendency, when modelling, is to follow the line of least mathematical resistance, and it is generally a lot easier to devise models of efficient rather than inefficient economies and to show how markets work rather than to evaluate why they fail.

Such admissions from a prominent economist is potentially damaging for the current credibility of the economics profession, given that economists can reasonably be assumed to be still likely to continue to ignore factors that fall outside their new improved frameworks. In his writings, Krugman attempts to limit the potential damage of his admissions by arguing that such failings have now been largely addressed, thanks to the development of more sophisticated modelling techniques. In fact, from Krugman's perspective, the evolution of economic methodology is similar to that of the history of map-making in Africa. In the 15th century, maps of Africa, despite often being highly inaccurate, contained valuable information about the interior, based on second or third-hand travellers' reports. Over time, the techniques of map-making and the quality of information available significantly improved. By the 18th century, the maps produced of coastal regions were of a quality similar to those of modern maps. However, at the same time, the knowledge of the interior decreased significantly, a situation which was not rectified in many regions of the continent until late in the 19th century. This loss of knowledge of the interior arose because only features of the landscape that had been mapped in a professional manner (e.g.

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154 Krugman, the *Fall and Rise of Development Economics*, op. cit.
with sextants and compasses) were included on more modern maps. Travellers reports along the lines of ‘six days south of the end of the desert you encounter a vast river flowing from east to west’ were no longer thought worthy of inclusion. According to Krugman, a similar blinkered attitude within the economics profession to factors which could not be expressed in a rigorous mathematical fashion ensured that they, too, often failed to make best use of the information that was available at the time. This meant that, until relatively recently with the development of more sophisticated techniques, areas existed where the more discursive approaches favoured by non-economists had a comparative advantage over the approach favoured by mainstream economists.\footnote{155}

In defence of economists, Krugman also argues that, while they were undoubtedly slow off the mark to address issues such as path dependency and increasing returns to scale (which he refers to as the economics of QWERTY\footnote{156}), they were nevertheless still the first to address these issues, which prior to this were neglected by their very critics.

One could...read all of this as a condemnation of the narrow minds of academics. It seems that they were ignoring evidence that was right under their noses, simply because it did not fit neatly into their preferred intellectual structures. Isn’t this a case for preferring generalists, people who are not professors and are prepared to be less than rigorous? In other words, isn’t this a classic lesson why we need policy entrepreneurs? Well, no. If it took a while for the professors to notice the obvious, the policy entrepreneurs didn’t have a clue. One can look in vain at the works of non-economists for an appreciation of the implications of QWERTY for the economy...In fact, the realisation that QWERTY in all its manifestations could make a critical difference came not from the outside but from inside the economics profession.\footnote{157}

In Krugman’s terminology, a ‘professor’ is someone who maintains a professional, non-partisan approach. Krugman suggests that most economists fit into this category. ‘Policy entrepreneurs’, in contrast, are unprofessional peddlers of simplistic solutions. As the above quote from Krugman implies, policy entrepreneurs are, in the context of debates over economic policy, mainly non-economists straying into areas they do not belong. They also

\footnote{155 \textit{Ibid.}}

\footnote{156 Krugman uses this term because of the recognition by Paul David that the continued existence of the sub-optimal QWERTY keyboard layout highlighted deficiencies in conventional economic theory.}

\footnote{157 Krugman, \textit{Peddling Prosperity}, \textit{op. cit.}, pp. 228-229.}
include a small number of economists such as Lester Thurow\textsuperscript{158} who, rather than acting professionally, spend their time pandering to popular prejudice.\textsuperscript{159}

5.3 Several Reasons why Krugman's Analysis Is Misleading

Krugman's analysis is misleading for several reasons. As illustrated at various points in this thesis, supporters of state intervention are not the only ones who engage in 'policy entrepreneurship'. To encourage reform along the lines they favour many economists also often exaggerate their benefits, or resort to other dubious devices such as incorrectly claiming that the policies they favour are necessary if nations are to remain competitive in the new global economy (see chapter 5). Second, while some influential critics of orthodox economic thinking might well have failed to address the issues he refers to before they were taken up in the mainstream economic literature, others certainly did.\textsuperscript{160} In fact, as economist Richard Nelson points out, the so-called new economic theories are essentially nothing more than old concepts expressed in a more formal economic fashion.\textsuperscript{161}

Mainstream economics has also made far less progress in recent years than Krugman's map-making metaphor implies. As already discussed, the new economic theories still deal inadequately with factors such as institutions and firm-based innovation. Furthermore, while the new economic theories do undoubtedly address some of the deficiencies of conventional models, the underlying assumption behind much of recent economic theorising is still the premise that economic processes can best be explained in terms of the


\textsuperscript{159} Krugman, Peddling Prosperity, \textit{op. cit.}, pp. 3-19 and Chs. 3 and 10.

\textsuperscript{160} With varying degrees of sophistication, issues such as first mover advantage and increasing returns to scale have long been explored by empirically-minded economists, other social scientists and management theorists undertaking research on technological change and firm-based innovation. See, for example, Freeman, C. 1982. \textit{The Economics of Industrial Innovation}, Pinter Publishers, London; Freeman, C. and Perez, C. 1986. \textit{Business Cycles, Long Waves, Investment Behaviour and Technological Changes}, SPRU, mimeo; Dosi, G. et al. (ed.). 1990. \textit{Technical Change and Economic Theory}, Pinter, London; Porter, M. 1990. \textit{The Competitive Advantage of Nations}, Macmillan, London, p. 476; Rosenberg, Inside the Black Box, \textit{op. cit.} and Rosenberg, Exploring the Black Box, \textit{op. cit.}; Nelson, What has been the matter, \textit{op. cit.}

\textsuperscript{161} Nelson, What has been the matter, \textit{op. cit.}
optimising behaviour of rational-acting individuals. As discussed below, this can result in some rather dubious lines of inquiry being pursued.

5.4 Rational Expectations Analysis and the New Classical School

During the 1970s and 1980s, rational expectations analysis (REA) replaced monetarism as the dominant orthodoxy within mainstream economics (and the leading opponent of Keynesianism). REA models assume that future market behaviour is determined by individuals acting rationally in response to their current expectations of what will occur in the future. These expectations, when taken in their totality, are also perceived to be an accurate prediction of market outcomes as they, in fact, determine these outcomes, given the rational response of individuals to them. Such an assumption of predictability allowed economists to apply mathematical analysis to a much wider range of issues. As Alan Blinder suggests, it also opened up new career opportunities for aspiring young technicians:

The rational expectations revolution was a godsend for aspiring young technicians. It not only pushed macrotheory in more abstract and mathematical directions, but brought in its wake the new style of econometrics that was far more technically demanding than the old methods it sought to replace.

A major flaw in the rational expectations model is that it is unable to account for variations in output and employment. The New Classical school, which has become the dominant school within mainstream economics, addressed this issue. The central aim of this school is to rebuild macroeconomics on microeconomic foundations. Proponents of new classical economics accept much of the reasoning that lies behind rational expectations analysis. The main difference is that the business cycle is reintroduced as the focal point of economic

162 Heilbroner and Milberg, op. cit., pp. 74-75.


164 Heilbroner and Milberg (op. cit., p. 81) point out that while 'real business cycle' theory (RBC) deals with much shorter time horizons than that of 19th-century classical economists, this approach does, nevertheless, allow for variations in output and employment.

165 On this see Heilbroner and Milberg, op. cit., ch. 5.
analysis in an attempt to explain the observed variations in output and employment. The core assertion of 'Real Business Cycle (RBC) theory' is, as Paul Omerod maintains, that economies are subject to an endless series of random shocks which are external to the economy itself:

Technological innovations are usually invoked as being a plausible economic source of these necessary random shocks. A positive shock means that the economy has the potential, for a period, to grow faster than usual - so individuals will have a stronger than average incentive in such a period to work rather than stay at home, because they can earn money more rapidly. In contrast, when a negative shock occurs, the incentive to choose leisure rather than work increases. People will accordingly adjust the number of hours they choose to work overtime. These adjustments form a key part of the business cycle. When, on average, individuals choose to work less, economic growth is slow, and when they choose to work more it is fast.

RBC theory has remained extremely popular among economists despite what have essentially been some devastating empirical and theoretical criticisms. Some analysts have shown, for example, that when RBC techniques are applied to US economic data they are unable to generate results that coincide with the properties of the actual post-war American business cycle.

RBC theorists have also been unable to offer a credible explanation for why the fluctuations which are observed in total output are much greater than that of the average output per worker per hour worked. The explanation they offer is that people generally respond to an adverse technological shock by choosing to work fewer hours. In other words, rational-acting individuals seek to obtain a superior leisure/income trade-off by taking the most leisure in periods when productivity (and income-generating potential per hour worked) is at its lowest following an adverse shock, and working the most when productivity is at its highest following a positive shock. Krugman points out that if this explanation is valid,

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106 Ibid., pp. 81.
107 Ormerod, Butterfly Economics, op. cit., p. 111.
this would mean that the Great Depression of the 1930s was nothing more than an 'extended voluntary holiday'.

5.5 New Keynesian Economics

The main competitor to New Classical theory within mainstream economics is New Keynesian theory. Like New Classical economics, New Keynesian economics has evolved out of rational expectations analysis, and also bases its interpretation on the assumption that behaviour is strongly influenced by the expectations of rational actors who seek every opportunity to maximise individual welfare. The main difference between the two models is that in New Keynesian theory massive macro dysfunctions along the lines that Keynes described can result even when Walrasian behaviour is the norm.

Initially, when seeking to identify the source of such dysfunctions, New Keynesians focused on market imperfections created by labour contracts. In more recent times, the focus of attention has widened to take into account such factors as market imperfections created by information asymmetries, the lack of job readiness of the long-term unemployed, and the need for employers to pay above market wages to optimise the

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170 Krugman, Peddling Prosperity, op. cit., p. 204.


172 That is, maximising behaviour will not be sufficient to produce an optimum outcome if market imperfections resulting from institutional rigidities are such as to prevent market clearing. On this see Heilbroner and Milberg, op. cit., p. 88.

173 Ibid.


175 See, for example, Blanchard, O. and Summers, L. 1986. 'Hysteresis and the European Unemployment Problem.' NBER Macroeconomics Annual, pp. 15-78.
efficiency of the workforce.¹⁷⁶ The outcome of all this is that, unlike in conventional Keynesian economics, demand factors are relegated to a position of relative unimportance.¹⁷⁷ Initiatives such as increased spending on education and labour market programmes to ensure that there is a greater match in the economy between the skills available and those that are required are emphasised instead.¹⁷⁸

According to Robert Heilbroner and William Milberg, the New Keynesian schools insistence on explaining economic interactions in terms of the optimising behaviour of rational-acting individuals ensures that, like the New Classical school, they leave little room for manoeuvre by the state to influence in a significant fashion such issues as the level of unemployment and underemployment and the way new technologies are used. From a New Classical economic perspective, economic deregulation frees the economy from its constraints and allows it to proceed along its natural trajectory. In New Keynesian economics, a more hands-on approach is seen as often being needed by the state but only to the extent of taking action to ensure that existing market imperfections do not push the economy further away from its natural and most optimal trajectory.

In Heilbroner and Milberg’s opinion, the stance adopted by both the New Classical and the New Keynesian schools essentially results in economists spending much of their time debating the finer points of theory instead of fulfilling their moral obligation to find solutions to pressing social and economic problems. From their perspective this also means that they have little meaningful to say about many of the major historical events and government initiatives which have profoundly influenced the way economies evolve:

To turn away from any attempts to lessen or even remove these malfunctions is to declare that Roosevelt’s New Deal had no intended effect on the volume and distribution of incomes, that Eisenhower’s Interstate Highway program did not succeed in improving the efficiency of the economy, or that the American entry into two world wars was without foreseen consequences for the level of employment. To approach intervention with caution is very necessary, but to abjure it in a world of massive and persistent economic problems even in the wealthiest countries, and unspeakable squalor in much of the rest of the world, make shameful the New


¹⁷⁸ Ibid.
Heilbroner and Milberg are by no means the only economists to express concerns about the relevance of modern economics. Declining student enrolments in economics in recent years, have encouraged a greater degree of self-reflection within the profession, though, as Richard Parker suggests, this growing appetite for self-criticism sits oddly with a 'steadfast resistance to fundamental change.' These opposing currents can be seen at work in a major report by the American Economic Association (AEA) which contains the findings of a two-year study on the way economists are taught. This study was undertaken by the Commission on Graduate Education in Economics which, in addition to the chairperson Anne Krueger, contained a number of prominent economists including Kenneth Arrow, Alan Blinder, Joseph Stiglitz, Lawrence Summers, Robert Lucas, Edward Leamer, Claudia Goldin, Olivier Blanchard and T. Paul Schultz.

Included in the findings of the AEA report was that 50 percent of academic economists who were awarded their PhDs in 1977-78 and 1987-88 agreed with the proposition that economic training overemphasises mathematical and statistical tools at the expense of substance. The report also found that the concerns by economists and students about the relevance of modern economics were not simply limited to econometrics and the abstract level of core theory. Graduate courses where theory was expected to have practical applications such as those focusing on the labour market and international trade were also strongly criticised for their lack of relevance:

Most students do not find the fields [non-core theory courses] serve this function [have practical relevance]. Concerns about the absence of an empirical and applied basis in the entire economics curriculum were expressed in the open-ended responses to the questionnaires. Students and faculty both noted the absence of facts, institutional information, data, real-world issues, applications, and policy problems.

179 Ibid., p. 95.

180 Parker, op. cit.


182 Ibid.

183 Ibid.
Such concerns were also echoed by several members of the commission. One member cited the example of graduate students at a leading economics department who, while able to solve complex technical problems, were unable to answer the relatively basic question of why barbers' wages had continued to rise over time despite their relative lack of productivity growth. The authors of the AEA report were sufficiently concerned by this and other evidence in highlighting the lack of grounding of many would-be economists in real-world issues that they even went so far as to express a fear that 'graduate programs may be turning out a generation with too many idiot savants skilled in technique but innocent of real economic issues.' Unfortunately, the policy recommendations made in the report are unlikely to do much to rectify this situation. For, while it did call for more effort to be made to apply theory to real world problems, its more specific recommendations were more along the lines of improving remedial maths training for new students and paying greater attention to writing and communication skills.

6. Conclusion

Economics is often represented as having more in common with so-called 'hard sciences' such as physics than with other social science disciplines. The reality is that economics suffers from many of the same problems affecting other social science disciplines, including the failure of large numbers of its practitioners to apply theory in a consistent fashion. One discussion in this chapter which highlighted this reality is that on the concept of 'revealed preferences'. As noted, this concept neglects preferences which might have been expressed

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184 For a discussion on this issue see Krugman, Proving My Point, op. cit.

185 Commission on Graduate Education in Economics, op. cit.

186 Ibid.

187 Ibid.

had the circumstances been different. When combined with the associated theory of price indexes, it does, nevertheless, allow economists to obtain a good deal of insight, with relatively little information, about the consequences of price and income changes such as those resulting from microeconomic reform. Unfortunately, rather than make full use of the analytical tools at their disposal, the majority of economists have resorted to a less complex mode of efficiency analysis in which the poorly defined concept of efficiency is viewed as if it were an objective technical measure. This has resulted, among other things, in a bias developing within the economics profession in favour of proposed microeconomic reforms.

Another major source of bias within mainstream economics identified in this chapter is the emphasis placed on modelling. The influence of mathematical modelling within the economics profession is so ubiquitous that any economic argument which cannot be expressed in a mathematical format has tended to be neglected or dealt with simplistically. This has also resulted in a bias in favour of free market policies, as the tendency, when modelling, is to follow the line of least mathematical resistance which leads in the direction of neoclassical theory with its relatively easy-to-model but often highly simplistic assumptions about the nature of social reality.

Many mainstream economists, it is true, are often relatively pragmatic in the application of neoclassical economic theory. Especially in areas such as the labour market, market failure is relatively widely acknowledged to be sufficiently pervasive to warrant some form of intervention by the state beyond the neoclassical ideal (for example, the giving of subsidies to firms to hire the long-term unemployed). However, as shown in this chapter, such pragmatism has its limits. The majority of economists have been sufficiently accepting of neoclassical theory to ensure that they lack an appropriate framework for addressing a range of factors such as technological change, the innovation process within the firm, and institutions which have an important bearing on the long-term evolution of societies.

**The New Economic Theories**

In recent years, economists have increasingly sought to rectify some of these shortcomings. Taking advantage of advances in computer technology and the techniques of modelling, they have developed models which are more capable of addressing issues such as knowledge externalities and first mover advantage. Some of the findings by analysts
working with these new models can reasonably be utilised to justify a significantly more expanded role for the state in the management of their economies. Despite these developments, the majority of economists still favour a relatively minimalist role for the state. One reason for this is the view that the potential benefits of interventionist policies are not significant enough to justify the risks involved.

In this chapter, several reasons were identified why the current views of economists on the appropriate role of the state should be treated with a good deal of scepticism. These include the basic fact that so many economists took so long to acknowledge even some of the more obvious deficiencies of their models. As well, the new economic models still deal inadequately with hard-to-model factors such as institutions, social values, and the innovation processes within the firm. In fact, for all the talk of new theories and new economic models, the thrust of recent economic theorising still remains very much focused on explaining economic processes in terms of the optimising behaviour of rational-acting individuals. As the discussion on ‘Real Business Cycle’ theory illustrated, such reductionism has, at times, resulted in large numbers of economists pursuing some rather unproductive lines of inquiry. More generally, pressing social and economic problems such as unemployment and growing inequality both within and between countries have been viewed from within the confines of a far too narrow frame of reference.

This frame of reference has been narrowed further by public choice theorists and other neoclassical political economists who have sought to apply neoclassical assumptions about human motivation and behaviour to a study of the state and the political process. The neoclassical political economy literature has undoubtedly provided insight into the reasons why interventionist policies often fail to deliver the outcomes intended. However, as shown, this literature also views the motivations of actors from a far too narrow and deterministic frame of reference. As a consequence, it has generally failed to explore with any conviction the possibility that the answer to bad government might often be better government and not simply less government. This possibility is explored further in the following chapter which examines the reasons for the success of several rapidly growing Asian economies.