The Large Welfare State as a System

By Richard B. Freeman*

There are three great puzzles in interpreting European experience with large welfare states, supportive government regulations of markets, and related social partner centralized bargaining arrangements in the labor market. The first is why welfare-state economies successfully combined relatively narrow wage distributions and high social benefits and taxes with full employment for so long. Until 1983 Western Europe had lower unemployment than the United States despite a compressed wage distribution that arguably should have reduced employment of the less skilled and despite taxes and benefits that created gaps between market activity and consumption that could easily have destroyed work ethics and locked the poor into a welfare trap.

The second puzzle, poignant to Americans facing homelessness and urban blight, is how large European welfare states conquered poverty, when our War on Poverty failed in its lofty goals. The differential success of European and American welfare policies arguably explains the different tone of debate over welfare in Europe than in the United States. In Europe, the conservative goal is to preserve the successes of the welfare state while cutting back excesses. In the United States the debate is more over whether there are any successes worth saving. Both of these puzzles reflect the market-oriented economist’s surprise at the performance of extensive welfare states: why did large welfare states work so well for so long? (See Mancur Olson, 1990.)

The third puzzle is why reforming welfare-state policies seems to incur high economic costs. Most economists and certainly the political leaders who led the withdrawal from government intervention in markets and sought to reduce welfare-state spending (often with only limited success) expected these reforms to yield rapid economic improvements at modest redistributive cost. Areas in which the welfare state distorted or constrained producer or consumer choices could reasonably be expected to exhibit expansion of production possibility frontiers, reductions in deadweight losses from taxes, or in the case of labor market reforms, reductions in unemployment, with resultant gains in output. Taking a step toward more efficient outcomes ought to show up in national bottom lines.

For the most part, however, rapid costless transition has been a pipe dream. Sweden’s modest reforms in taxes, wage-setting practices, rules for benefits, and regulation of industries during the 1980’s and 1990’s may have raised economic efficiency, but they did not prevent an economic crisis at the outset of the 1990’s or set the stage for a fast recovery. Thatcherite labor-market reforms in the United Kingdom weakened unions and cut the replacement rate on unemployment compensation in half, but unemployment remains higher than it was prior to those changes. Overall, the movement of advanced capitalist countries toward a smaller welfare state has been mindful of the transition in formerly communist countries toward the market economy. In both cases, steps toward an arguably more efficient economy produced unexpectedly large economic losses, which raises the question: what is it about the welfare state and its supportive economic institutions that makes reforms costly?

In this paper I offer the “welfare-state-as-system” (WSS) hypothesis to deal with the italicized questions: why extensive welfare states worked well and why efficiency-oriented reforms have proved

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costly. I argue that in a welfare state, economic agents are more tightly linked than in decentralized market economies. This implies greater costs of adjusting to changes in the economic environment or in specific policies than would occur in less tightly linked economies. The reason is that changes in one aspect of a highly interactive system alter the efficiency of other parts of the system. Economic agents, modes of behavior, and institutional rules in one part of a tightly linked economy adapt to the operation of all other parts and thus will suffer a loss in efficiency when one of those other components changes. For example, a wage-setting system that is well suited for a regime of high income taxes (say through payment of nontaxable fringe benefits, or by schemes to transform earnings into capital gains) may be poorly suited to a regime of low income taxes. By analogy with models of fitness landscapes in biology (Stuart Kauffman, 1989, 1993), the WSS hypothesis views the extensive welfare state as existing in a landscape of alternative economic institutions, each set of which has a given output. The welfare state must descend from its adaptive peak to reach a new and hopefully higher peak.

This is not the sort of hypothesis that is amenable to econometric testing, so the goal of this paper cannot reasonably be to "prove" that it is right. Rather I will offer some evidence and argumentation that justify the WSS as a way to think about the three puzzles of the large European welfare state. To establish the evidentiary base, I summarize results from a recent National Bureau of Economic Research (NBER)-SNS research study of the microeconomics of Sweden's welfare state (Freeman and Robert Topel, 1995). This study, conducted by paired teams of American and Swedish economists, brought out the sometimes surprising ways in which Sweden's welfare and economic policies have historically fit together in a systemic way. To develop the argument, I direct attention to analyses and simulation models of systems that indicate that change in highly coupled systems is more costly than in loosely coupled systems (Kauffman, 1989, 1993; Daniel Levinthal, 1994). One missing link in my argument, which the reader will surely notice, is the lack of evidence that interactions among agents are more tightly linked in the welfare state than in a more market-driven economy; I simply take this as a postulate. There are other weaknesses as well, which makes this a speculative paper designed to spur thinking rather than a fact-finding report.

I. A Systems Explanation of Success

Consider first some factors that arguably permitted capitalism's most highly advanced welfare state, Sweden, to combine a highly egalitarian earnings distribution before taxes, and even more so after taxes, with full employment for so long. The compressed wage structure was associated with effectively constant private-sector employment for nearly three decades, which necessitated public-sector employment as the engine for the growth of jobs needed for full employment. Such growth required high taxation and a reasonably efficient public sector to deliver services that citizens want. The high taxes themselves arguably fed back onto the wage-determining process, making it easier for high-skill workers to accept wage compression: after all, much of a wage increase would show up in progressive taxes rather than in improved consumption. Thus, we have a positive feedback loop from compression to government employment to taxes and back to compression.

The NBER-SNS research points to other effects of wage compression on the supply and demand sides of the labor market which buttress rather than work against full employment. On the supply side, compression lowers search unemployment: with little wage variation in the economy, people have little incentive to search for the best-paying job (Lars Ljungqvist and Thomas Sargent, 1995). Compressed wages, highly progressive taxes, and welfare benefits in turn work together to reduce the incentive to work long hours and arguably increase the desire for additional vacation and holiday time, which tilts employee-hours toward bodies, raising demand for labor through a form of work-sharing (Anders Bjorklund and
Freeman, 1995). For a period of time, wage compression helps expand high-wage traded-goods industries by providing them with less-expensive high-skill workers and buttressed demand for the less skilled in those sectors, though this ultimately reduces the supply of the more skilled (Per Anders Edin and Topel, 1995). In addition, wage compression affects the distribution of industrial employment and the size distribution of establishments (Steven Davis and Magnus Henrekson, 1995). Eliminating low-wage sectors and firms makes it easier to maintain a narrow wage distribution. Compression also affects the price level: if low skill workers are paid high wages, the goods they produce will be high priced. Even industrial regulation, with legal cartels (Stefan Fölster and Sam Peltzman, 1995), has a logic in this analysis, making it easier to maintain the high prices necessary for the high wages.

The NBER-SNS research did not, however, conclude that all parts of the Swedish model contributed to full employment. It rejected the notion that labor-market policies, on which some 3 percent of GDP is spent in a normal year and 5 percent in the 1990's crisis period, was a big factor in containing unemployment (Anders Forslund and Alan Krueger, 1995). Thus, it contradicts the widely held view that active labor-market programs are "the" reason for Sweden's high employment in favor of a more multifaceted systemic explanation.

On the issue of supply-side disincentives, Sweden avoided welfare traps by creating a welfare benefits system. This system requires some labor participation before people receive most benefits, or makes those benefits an intrinsic part of the job (Thomas Aronsson and James Walker, 1995; Bjorklund and Freeman, 1995; Sherwin Rosen, 1995). High taxation of wages that might otherwise induce people to stay out of the labor market is offset by benefits attached to work. Parents benefit through subsidies for child care; if you do not work, you do not get the subsidy (Rosen, 1995). Other workers benefit through generous sick leave and vacation and holiday pay; only an employee can take advantage of a sick-leave policy that at its peak produced roughly three times as many days absent as in the United States. By conditioning work-related benefits on holding a job (with some moderate specified hours) rather than making them proportional to hours, moreover, Sweden created "kinked" budget sets that support the low hours worked (Aronsson and Walker, 1995) and thus a form of work-sharing.

Finally, with respect to Sweden's egalitarian income distribution, it was the combination of wage compression, high employment, and the work-related welfare system, supported by high taxes, that redistributed income to such an extent that low-decile Swedes are considerably better off in purchasing-power-parity terms than low-decile Americans (Bjorklund and Freeman, 1995). With a compressed wage structure, a person with a job is part of normal society. The high rate of employment meant that society could pressure persons on unemployment benefits to take jobs, which really existed (Ljungqvist and Sargent, 1995). All of these factors—along with the magnitude of government redistributive spending—enabled Sweden to conquer poverty while the wealthier United States failed to do so.

In sum, the NBER-SNS research portrays Sweden as having a highly interrelated welfare state and economy in which many parts fit together (be they subsidies, taxes, collective bargaining, wage compression, etc.) in ways that maintained high employment and wage compression, that offset work disincentives from welfare benefits and high taxes, and that ultimately helped eliminate poverty.

All of which is not meant to downplay the costs involved in this variant of capitalism—costs which arguably make the adaptive peak of the large welfare state lower on the landscape of economic institutions than other potential variants, including less-extensive welfare states (Assar Lindbeck, 1992). There is some evidence that countries with high welfare-state expenditures do more poorly on some economic outcomes than do other advanced countries (see SNS [1994 table 3] for some summary) (Alberto Alesina and Roberto Perotti, 1994),
though this form of cross-country analysis is hardly definitive. In the case of Sweden, in the 1980's government outlays were 60 percent of GDP; much of this consisted of transfers. Beyond the direct costs are the deadweight or distortionary losses induced by taxes or benefits, and the resources spent on programs that do not fulfill their goals. While it is difficult to measure deadweight losses, those extra costs can be considerable even with moderate elasticities of response when the distortionary incentives are large (Aronsson and Walker, 1995; Rosen, 1995). In the diminished economy of the 1990's, the government share of GDP in Sweden reached 70 percent, which is unsustainable. Critics of the Swedish economic performance note, further, that productivity growth has been slower than in many other OECD countries (as has U.S. productivity growth) and attribute this in part to long-run welfare-state economic deficiencies that, for whatever reason, took their toll sharply in the 1990's.

In short, the NBER-SNS study portrays the Swedish welfare state and economy as a tightly connected system. If Swedish economic and political agents were fully adapted to the advanced welfare state prior to the 1990's, ensuing changes in the economic environment, ranging from technology to Sweden's comparative advantage in the world trading system (Edward Leamer and Per Lundborg, 1995) and efforts to reform the system would be costly, for they required agents to adjust to new incentives and government rules, as well as to market conditions per se.

II. A Systems Explanation of the Cost of Change

If one accepts the description of links given above and the notion that the welfare-state variant of capitalism is a more tightly coupled system than decentralized market variants, the implication that changes are likely to be more costly than in less tightly connected societies follows fairly directly. The general claim from systems analyses is that a highly interdependent system has problems in adjusting to changed conditions: unless there is considerable redundancy built in, a change in one factor or a particular shock to the tightly connected economy is likely to have far-reaching consequences.

Consider, for example, how tax reductions might affect the Swedish economy. They would make it more cost-effective to widen wage differences. They would give greater incentive for workers to increase hours worked, through overtime or through reductions in vacations or holidays, with consequences for employment, as firms would need fewer workers in a given category to do the same amount of work. The tax cuts would induce greater search unemployment and would affect human-capital formation. To be fiscally sound, the reductions would require less spending on benefit programs that may have induced high labor participation or that funded the public-sector employment that kept the economy at full employment. They could also lead to changes in savings or investment behavior, and so on. With many people potentially at "kinks" in their budget sets due to complicated taxes and benefits, there is a greater potential for substantial discontinuities in behavior than in economies where the state plays a smaller role in income distribution and economic affairs.

To make this argument formal, I rely on Kauffman's (1989, 1993) model of rugged fitness landscapes, which was designed to analyze epistatic interactions in biology, and various computer simulations thereof. The NK model posits a system of \( N \) parts (call them economic institutions or policies) each of which takes on, for simplicity, a limited set of possible values (say 0 or 1) and whose marginal product depends on the value of \( K \) other parts of the system. For example, scholarships for higher education or tax deductions for on-the-job training might have a higher marginal value in a system with narrow wage differentials, where they offset the disincentive to invest in human capital, or in a system with high inequality in family income, which makes it difficult for the able poor to invest, than in systems with high wage differentials or egalitarian family income distributions. The degree of coupling
of the model is captured by \( K \), the number of different parts of the system that affect the outcome of any given part. If \( K = 0 \), there are no interactions; changes in any component has limited effects on the overall outcome, and independent movements of each part (separate policy innovations) can bring the system to its peak through a gradient search. At the other extreme, if every part of the system is linked to every other part, it is difficult to improve matters by making a single change or local adaption. What is needed are "long-jump" adoptions—changes in several components at once—which may be impossible to bring about except in a politician's promises. A program of separate changes designed to reach a new observed peak is then likely to lead to worse outcomes before it leads to better ones. To gain the benefits of a more market-oriented economy, it is not enough to change marginally one element or another. Consistent with this argument, Levinthal (1994) has simulated responses to changes in an \( NK \) environment (modeled as changes in the outcomes for given sets of attributes) and shown that long jumps are more important in achieving good outcomes when the environment changes in systems with a greater interaction among institutions.

The Kauffman model is highly abstract. It permits ready computer simulations at the expense of the detail of actual situations. As applied here, it treats all elements of the welfare state and economy similarly, when in fact sectors and programs differ in their effects and linkages. Banking and credit systems, for instance, may have greater effects on the labor market than the labor market has on them. Still, assuming that an extensive welfare state is more tightly linked than a more decentralized economic system, this model offers some insight into the performance of the large welfare states. Specific model aside, my answer to the questions with which this essay began, based in part on the NBER-SNS study of the Swedish welfare state, is that the extensive welfare state worked well for some period because of the tight connections between its parts, but that this made it less adaptable to a changing economic environment and made it costly to make the changes that should raise efficiency and create a better long-term economic outcome.

REFERENCES


