
The Welfare State and Education: A Comparison of Social and Educational Policy in Advanced Industrial Societies

Gunther M. Hega
Karl G. Hokenmaier
Department of Political Science
Western Michigan University

Abstract

In their work on the development of welfare states in Europe and America, authors like Peter Flora and Arnold Heidenheimer (1981), Hugh Hecló (1985), and Francis Castles (1989) argued that there exists a trade-off between government investment in public education versus spending for social policy. We explore this "trade-off" thesis and the relationship between public education and social programs for 18 democratic industrial nations since the 1960s, with a special consideration of the German case. Our results indicate a strong association between educational policies and social programs in these nations and we find evidence of a "trade-off." More specifically, the types of welfare states Esping-Andersen (1990) describes - liberal, conservative, and social democratic - are correlated with particular profiles for educational policy. Certain types of welfare regimes exhibit a tendency to choose between educational opportunities or social insurance programs as alternative policy strategies.

Introduction

Advanced industrial societies exhibit significant variation in their social policies, i.e. in the type, combination, and measure of assistance and benefits they provide. The specific nature of their provisions for healthcare, work injury, unemployment compensation, and old-age pensions bear important consequences for the

socioeconomic opportunities and outcomes of individuals and groups. A nation's social programs reflect the socioeconomic and political institutions that shaped them. They say much about the meaning and value of citizenship, about society's view of the state and the responsibility of the political community to the individual. Moreover, past and current expenditure levels and preferences for certain social programs may limit the capacity of the government to pursue or make alternative policy strategies in the future (Flora 1986, Pierson 1994, Esping-Andersen 1996).

Just as it is possible to divide public policy into categories -- like retirement pensions, income security, healthcare, education, etc. -- the individual policies may also be classified according to the content and measure of their provisions. Through such a system of policy classification, discrete "national profiles" may be distinguished by unique combinations of policy alternatives (Esping-Andersen 1990, Castles 1993). In other words, it may be possible to determine particular categories of welfare state regimes according to the similarity of their social programs, by their tendency to produce similar and distinctive public policies. Analysts of the welfare state that have found such similarities among welfare states have been prompted to identify distinct "national styles" of public policy (Freeman 1985), different "worlds of welfare capitalism" (Esping-Andersen 1990), and particular "families of nations" (Castles 1993).

However much they vary in "national style" or in the particular substance of their social insurance programs, the welfare policies of advanced industrial societies typically include some level of provision for healthcare, old-age pensions, and unemployment insurance (Esping-Andersen 1990; Heidenheimer, Hecllo, and Adams, 1990). In addition, while education is not always recognized as part of the welfare state's policy package, it is, no less than other public programs, recognized as a core entitlement in most Western societies. After securing internal order and providing for a national defense, public education was one of the earliest programs undertaken by government -- often dating back to the early nineteenth century (Schneider 1982).

Kaelble (1981) traced the evolution of modern educational policy in Germany, France, and Britain beginning in the 19th century, focusing particular attention on the expansion of *educational opportunity*, "the proportion of children of different social or

occupational classes obtaining secondary or higher education" (1981, 240). He submits that with industrialization and the requirement for a more highly educated workforce there came increasing recognition, by aspiring persons of all social classes, that post-primary educational opportunities represented a "gateway" to socioeconomic opportunity. "Secondary and higher education began to gain recognition as a transmitter of social status..." (Kaelble 1981, 243). As state-supported educational opportunities expanded and improved, "the new educational entitlements were often recognized as constitutional or at least legal rights" (Kaelble 1981, 244). Today it is the prevalent public opinion in Europe and America that a basic education and social insurance are likewise citizen "entitlements" and "rights" (Shapiro and Young 1989).

Heidenheimer (1981) examined the long-term development of public policies in Europe and the United States that occurred with the rise of the welfare state and the expansion of new educational opportunities and social insurance programs. He argues the history of welfare state development in the West shows a trade-off took place between public investment in educational opportunities at the post-primary level and social insurance programs.

Post-primary education is perceived here as an instrument for the realization of states' concern with equality and security goals, and hence the emphasis on education and social security programs are viewed as alternative strategies pursued by emerging welfare states (Heidenheimer 1981, 269).

Similarly, Hugh Hecló (1985) speaks of a "trade-off" between public investment in education and the expansion of other social programs as a deliberate choice in welfare state development. Francis Castles (1989) recommends that state support for public education programs and social protection programs be considered as alternative welfare state policies today. It is our contention that particular kinds of welfare regimes have given political and budgetary preference to social insurance programs over educational programs, tending to limit spending on the expansion of public education and, therefore, the opportunities for social mobility. In other welfare states, higher levels of public investment on educational opportunities beyond a primary level may be viewed as an alternative policy strategy to income maintenance programs and other social insurance guarantees.

Massive support for the expansion of public education, including higher education, in the United States, must be seen as a central component of the American notion of welfare -- the idea that through public education both personal betterment and national and social and economic development would take place (Janowitz 1976, 34-5).

Where there is not a political will to maintain existing socioeconomic stratification, the pursuit of educational opportunities -- particularly post-primary -- may be publicly supported as an agent of social mobility. Fewer and minimal provisions for income security may be intended to encourage greater self-reliance and an understanding that public safety nets exist only as temporary assistance and to buffer the effects of extreme socioeconomic change, not to insulate the individual from every risk of life, societal competition, and market forces. Under such a welfare regime, public support of educational opportunities represents the individual's protection against life's uncertainties; it is the intended alternative to other social insurance guarantees by the state.

... it may be argued that education offers social protection in a sense rather different from social policy in general. Certainly, state intervention is directed to the provision of a guaranteed minimum standard, but its aim is equality of opportunity rather than the equality of condition which is the rationale in other welfare arenas. Indeed, as Hecl¹ has noted of the United States, countries may choose to trade-off resources for education against the building of a welfare state (Castles 1989, 431).

The Research Problem

State-supported social welfare programs and the expansion of post-primary educational opportunities are relatively recent developments in Western societies. Both are associated with industrialization, political democratization, and the emergence and evolution of the welfare state. This is not meant to suggest, however, that a simple causal relationship exists between industrialization or political development and the social policies of welfare states. The same is true for the expansion of educational opportunities. Such connections, as well as other explanations for social welfare and educational policies, are the subjects of ongoing debate in both welfare state and education literature. Likewise is the question whether a welfare regime's preference for investment in social or education programs may reflect a deliberate choice between alternative policy strategies. Is there a trade-off between the two as alternative strategies a welfare state may pursue? Can particular policy profiles of welfare states be discerned by their preference to support educational expansion or social insurance programs?

Esping-Andersen (1990) has argued that historical and political developments in advanced industrial societies have produced three kinds of welfare states -- liberal, conservative, and social democratic. His typology arranges welfare states into three clusters, "each organized around its own discrete logic of organization, stratification, and societal integration" (Esping-Andersen 1990, 3). These three groups may be distinguished by the similarity of their social policy agendas and coverage for healthcare, unemployment, and old-age benefits; by a likeness in the manner and extent to which their welfare policies "decommodify."²

Each of the welfare regime types Esping-Andersen describes represents a distinctive social policy profile, nations with "qualitatively different arrangements between state, market, and the family" (26). In the liberal cluster the welfare coverage is typically minimal, means-tested, and often stigmatized. The market and private insurance plans may be encouraged by the state as an alternative to public protection. The welfare systems of conservative nations tend to support preservation of the status quo and its inequalities. Social rights are attached to class, status, and what one has earned by their work effort. The primary provider of welfare insurance is the state, with the market

and private insurance having only marginal roles. In the social democratic cluster welfare coverage is universal and attempts to treat all citizens equally and at a much higher standard than minimal need. The object of social democratic welfare policy is to guarantee the individual and families "a socially acceptable standard of living independently of market participation" -- but without discouraging individual aspirations or denying the opportunity for private socioeconomic achievement (Esping-Andersen 1990, 26-8, 37).

Esping-Andersen's classification of welfare regimes is not without criticism, albeit often constructive and often as the starting point for other research (Hicks 1991, Offe 1991, Castles and Mitchell 1992, Mitchell 1992, Hicks et al. 1995). Three criticisms of Esping-Andersen's model are foremost: nations are misclassified; the welfare state classifications are too few or incomplete; and Esping-Andersen's welfare state typology does not consider the redistributive effect of social policies, only expenditures. According to Mitchell (1992), typologies like Esping-Andersen's are not only "beset by boundary problems which result in the misclassification of some countries," but also suffer from a lack of reliability as a result of policy outcomes and redirection (73). Castles and Mitchell (1992) contend there is actually a fourth world of welfare capitalism -- not just the three Esping-Andersen identified -- and a "four worlds model is a better predictor of redistributive outcomes. . ." (24). Hicks et al. (1995) also argue there are "other categorizations of advanced capitalist states" (346). They claim that working class mobilization and the nature of state institutions during the 1880-1930 time period established distinctive paths of welfare state development [that] go beyond Esping-Andersen's demarcations ..." (346). Therefore, "long, common, homogeneous political histories can not be inferred from common recent policy configurations -- the basis for Esping-Andersen's typology of regimes" (346).

First, we would argue Esping-Andersen's model does not suffer from misclassification or underspecification problems. It is an effective vehicle for the meaningful differentiation and classification of welfare regimes according to the similarity -- not the equivalence -- of the social welfare programs they support. As a model, it is highly adaptable and useful to other comparative analyses. Esping-Andersen's purpose was not to define mutually exclusive and exhaustive categories of welfare states. His model only "show[s] that welfare states cluster but . . . there

is no single pure case" (Esping-Andersen 1990, 28). Because there are no real welfare states that are perfect liberal, conservative, or social democratic regime types, Esping-Andersen classified nations according to their "predominant" regime traits, even though they might possess some "elements" of other welfare state types. Theoretically, Esping-Andersen could have defined other kinds of welfare regimes based on residual, non-dominant traits, or by some other criteria of differentiation. He chose not to do so; and we would argue that further classifications would have only diminished the significance of the model. Moreover, given the small sample of nations, anything more than a parsimonious typology would tend toward national explanations and become inappropriate for more general theory building.

Castles and Mitchell (1992) and Hicks et al. (1995) have defined other and additional categories of welfare regimes, based on research questions and classification criteria different than Esping-Andersen (1990). He "scored" and classified welfare regimes after determining the "potential" decommodification of their provisions for old-age pensions, healthcare and unemployment compensation (1990, 50). It was by evaluating "redistributive outcomes," the real achievements of social programs, that Castles and Mitchell (1992) argue the case for a "fourth world of welfare capitalism." Based on an examination of development paths during the period of early welfare state development, Hicks et al. (1995) argue there are "other categorizations of advanced capitalist states." There can be no surprise that such different research produced dissimilar findings about types of modern welfare states. What is more, given separate agendas, no model can be stipulated to invalidate either of the others.

Even if Esping-Andersen should be found wrong in claiming that the kinds of welfare regimes he describes are the product of similar political histories (Hicks et al. 1995, Offe 1991), his typology of welfare regimes would remain. His procedure for evaluating and "scoring" the potential decommodification a nation's social programs might achieve and determining its regime type does not depend on that inference (Esping-Andersen 1990, Chapters 2-3). That is critical to the integrity of this examination and the use of Esping-Andersen's model.

The simplicity of Esping-Andersen's welfare state typology makes it attractive to our analysis. That his model has built-in assumptions about the objectives, preferences, and tendencies of each

welfare regime type for its social programs makes it more so, especially as these "traits" might be associated with other public programs receiving government support. However, Esping-Andersen has not included education with social insurance in the policy profiles of the welfare states he describes. We argue it should be because education, like other social programs, can reduce an individual's dependence on the vagaries of labor markets, or at least improve his or her position. Educational achievement, particularly at the secondary and higher levels, is a recognized vehicle of social mobility (Janowitz 1976). Education can broaden socioeconomic opportunities and enhance an individual's ability to accumulate personal wealth, reducing their dependence on wage labor and market forces over the long run. Moreover, just as an individual's long-term reliance on social safety nets may be lessened by education, so can the welfare state's long-term requirements for income assistance and other social programs. Therefore, we submit that state support for the expansion of public educational opportunities may be viewed as another option available to certain welfare regimes to reduce the individual's market dependence and improve their long-term social security. Conversely, the lack of support for educational expansion might reflect a choice by certain regime types to favor reproduction of existing class structures and labor market conditions.

Research Questions and Hypotheses

Is there evidence of a relationship, perhaps a trade-off, between government spending for education and social insurance programs in welfare states? Do some regimes exhibit a preference to invest relatively more in education, while others direct a greater share of public spending to social insurance programs? Is a welfare state's level of financial commitment to social welfare programs a good predictor of its investment in public education, and vice versa? Do welfare states with similar social insurance provisions also support like educational systems? Is there a difference in educational systems between welfare regime types? Can Esping-Andersen's typology of liberal, conservative, and social democratic welfare states also be applied to educational policy? Do modern welfare states "cluster" for the similarity of their educational policies, just as they do for their social welfare programs?

In this article we argue that Esping-Andersen's welfare state typology can be applied to the field of education policy. We hold there is

a specific relationship between the kinds of social insurance programs found in Western societies and the educational policies they support. Welfare states with similar social insurance profiles will also tend to "cluster" according to the likeness of their educational policies. Second, welfare regimes may exhibit a preference to invest in public education or spend on expanded social insurance provisions; these are explicit policy alternatives from which welfare regimes may choose. Finally, we argue that variation between kinds of welfare states is demonstrated not only by particular social insurance profiles and patterns of educational expenditures, but also by the different mixes of general education and vocational training found at the secondary level. As it represents an agent of social mobility and a policy alternative to the provision of safety nets through social insurance, general education enrollments at the post-primary level will vary between kinds of welfare state.

Hypothesis 1: Along with unemployment insurance, sickness benefits, and old age pensions, every citizen of a modern welfare state also has a right to at least a basic education; it is one component of the total social benefits package to which every citizen is entitled. The specific nature of a state's social insurance provisions, along with the educational entitlements and opportunities offered, reflects a particular policy profile. It is hypothesized that an examination of the educational policies found in advanced industrial democracies will show their tendency to cluster into three distinct groups -- liberal, conservative, and social democratic -- that correspond to Esping-Andersen's typology of welfare states (1990).

Esping-Andersen associated unique social welfare policy agendas for unemployment, health, and old age compensation with each of his welfare state types. Though he did not include education policy in his hypotheses about social policy similarities and welfare regime types, we submit the same relationship holds for a state's education policy. In other words, particular tendencies in educational policy will correspond to Esping-Andersen's welfare regime types, to his threefold typology of liberal, conservative, and social democratic regimes. Just as certain groups of welfare nations "cluster" according to Esping-Andersen's criteria, they will also group according to their national education policies.

Because of the belief in self-reliance and emphasis on educational opportunity as an agent of social mobility, liberal welfare states are expected to direct the highest percentage of public sector dollars to education. Given their concern for de-commodification, but without sacrificing individual freedom and opportunity, social democratic states will be found to spend less on education than liberal regimes as a percentage of total public spending.³ However, these nations may demonstrate a comparable or even greater education "effort," as indicated by their higher spending on education as a percentage of GDP and a larger commitment of real education dollars per student. Finally, given its concern for order and the stability of the socioeconomic order over social mobility, the conservative welfare state is expected to score behind both liberal and social democratic states for all the variables measured.

Hypothesis 2: There is a specific association between public expenditures for education and social insurance in democratic welfare states. Preferential investment in public education or social programs are alternative policy strategies those welfare regimes may choose to support. Liberal welfare states view educational opportunity as an alternative to the decommodifying policies of social democratic regimes and the work-related insurance and "earned" benefits found in conservative welfare states. Rather than a broad and universal safety net of social insurance provisions, liberal regimes offer educational opportunity as an individual's protection against the risks of life. The individual is held to be responsible for his or her own outcome.

It is hypothesized that increasing levels of state spending for education, measured as a percentage of all public expenditures, are inversely related to that for social insurance programs. In particular, liberal welfare states are expected to spend more on education, as a proportion of total public sector spending, than either social democratic or conservative states.

Hypothesis 3: Each type of welfare regime -- liberal, conservative, and social democratic -- may be associated with a particular educational policy profile. We submit that the size of the vocational training effort at the secondary level is an important indicator of the characteristics of these educational systems. Secondary level vocational training is very often terminal; it completes a student's formal public education. Terminal vocational programs can have the

effect of reducing requirements for, and on, the system of higher education. On the other hand, as levels of participation in secondary level general education increase, so do the number of potential candidates and requirements for the system of higher education.

Given their emphasis on educational opportunity as an agent of social mobility, and a real alternative to expanded social insurance provisions, we hypothesize liberal nations will have the highest proportion of secondary level students enrolled in general education curriculums. On the other hand, we expect enrollments in vocational training to be highest in conservative welfare states, where social insurance tends to support maintenance of the status quo and more limited social mobility. Social democratic regimes, given their concern for decommodification without sacrificing individual freedoms and opportunities, will have higher general education enrollments than conservative nations, but less than liberal welfare states.

Research Design and Methodology

The purpose of this study is to investigate whether specific types of welfare states may be associated with particular educational policy outcomes, to see if policy variations in national welfare systems are related to specific educational policies and systems. It builds on the work of Esping-Andersen (1990), who has identified three kinds of welfare regimes in advanced industrial societies, and upon Castles' (1989, 1994a) efforts to identify the causes for variation in social and educational spending by Western societies. Specifically, Castles' model to explain educational spending is modified to test the applicability of Esping-Andersen's welfare state model to the field of educational policy. The three welfare state types are then tested for their association with unique educational policies, to see if variation in educational policy can be explained by the particular constitution of the welfare state. Finally, it is explored if, as Heidenheimer (1981) has suggested, there is evidence of a trade-off between education and other social security policies as alternative welfare state strategies.

This study examines the relationship between spending for education and social insurance programs in advanced industrial nations for the inclusive 1960-1990 time period. It is not intended to analyze that association over time, within and between nations, but to determine if different kinds of welfare states display distinctive

patterns for educational policy just as they do for social programs. To this end, cross-sectional demographic and public spending data has been collected at five year intervals beginning in 1960, categorized by welfare state type, and pooled for regression modeling that separately tests the effect of social policy on educational outcomes and educational policy on social programs. If these equations and other descriptive statistics do provide evidence of an association between social and educational policy, the nations in this study should "cluster" by welfare regime type and the similarity of their social and educational policies.

The advanced industrial nations included in this cross-sectional study are those for whom the Organization for Economic Cooperation and Development (OECD), United Nations, the International Monetary Fund (IMF), and International Labour Office (ILO) have compiled the most complete education and social policy data for the inclusive time period 1960-1990 (see table 1). The eighteen nations comprising this group include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States. All data are adjusted for inflation and exchange values are based on purchasing power parity and

**Table 1:
Variable Map and Data Sources**

Number of Valid Cases: 123¹

Variable	Source
Nation	
Year	
Liberal Dummy	Esping-Andersen (1990)
Conservative Dummy	Esping-Andersen (1990)
Social Democratic Dummy	Esping-Andersen (1990)
Electoral strength of socialist parties in national elections	OECD (1997)
GDP per capita / 1000	OECD (1997)
Social Insurance as % of GDP	ILO (1992, 1996) ²
Social Insurance as % total public spending	ILO (1992, 1996); OECD (1993, 1995, 1997) - own calculation
Real Social Insurance dollars per capita	Product of GDP per capita and Social Security as % of GDP divided by 100
Public Spending on Education as % of GDP	OECD (1993, 1995, 1997)
Education as % of total public spending	OECD (1993, 1995, 1997)
³ Real education dollars per student	Product of GDP per capita/1000 and Social Security as % of GDP, divided by % of population in 5-29 age group.
% population in 5-29 age group	United Nations Statistical Yearbook
% population over age 65	United Nations Statistical Yearbook
% General Education secondary students	UNESCO Statistical Year- book ⁴
% Vocational Education secondary students	UNESCO Statistical Year- book ⁴

Notes on Data Sources:

¹ The 1960 records for Denmark, France, and Switzerland are missing

² 1989 values used for 1990

³ 1965, 1970 and 1985 values estimated for France; 1985 value
estimated for Japan

⁴ 1985 value estimated for Sweden; 1990 value estimated for Belgium

The sample is comprised of 123 observations out of 126 possible for the eighteen nations over the 1960-1990 period. It was not possible to complete the 1960 records for Denmark, France, and Switzerland because the required spending data for social insurance and education was not available. Each missing record represents one of the three different welfare state groupings. It is not believed this missing data tends to bias or compromise the analysis.

Building on Francis Castles' (1989, 1994) work, this study also seeks an explanation for variance in national education expenditures, but in relation to particular constitutions of the welfare state and as an alternative to financial support of social insurance programs. This analysis also attempts to associate similar patterns of government spending for social insurance with specific types of welfare regimes and as an alternative to spending for public education. As in Castles' studies, only public expenditure data is analyzed. Data on private insurance and educational funding is not sufficiently available.⁴ More importantly, the inclusion of such data would change the unit of analysis and is at cross-purposes with this analysis.

The inclusion of private funding data would change this investigation from one of welfare regime types to an examination of national patterns of expenditure for education and social insurance. Particularly for the liberal group of nations, the addition of private to state expenditures would certainly revise upward the real dollars spent nationally on education and social insurance. It would reflect the total national effort, however, and not that of the welfare state. That is why private funding cannot be included in the expenditure data for either education or social insurance. Moreover, the exclusion of private funding data is helpful in discerning the policy preferences and objectives of welfare regimes; and society's view of the welfare state's role. What social and educational programs a welfare regime supports, and how it spends for them, tells much about its view of state and individual responsibilities; its desire for social order; and its commitment to the well-being of the individual, family, and community.

Where private funding is a significant source of funding, for either education or social insurance, it is assumed this may be reflected in reduced levels of real government expenditures and a smaller portion

of the public budget allocated to that policy area. It may follow in such welfare nations that individuals have a greater responsibility for their personal well-being and socioeconomic advancement. On the other hand, where private sources of funding are less or not significant, the burden on government to finance may be greater in real dollars and as a proportion of total public spending. In these welfare nations the state has a much larger role and responsibility to ensure the socioeconomic well-being and achievement of individuals, families, and the community.

Two measures of state spending, real education and real social dollars per capita have been selected as dependent measures for regression modeling. Each of these variables reflects a welfare regime's "intent" and commitment of "effort" to fund education and social insurance programs. To have examined either education or social insurance spending as a percentage of the GDP could have introduced a distorting effect, resulting from the considerable variation in GDP size between nations, and because such measures may tend to reflect more the capacity of a state to spend rather than a regime's policy preferences.

In terms of independent variables, the two regressions on real education and social insurance dollars per capita have these in common: welfare regime type, left-wing party influence, national economic resources, and demographic factors. A dummy variable for Esping-Andersen's welfare regime types has been added to evaluate the power of that model to explain differences in public spending for education and social insurance. States were coded as liberal, social democratic, or conservative as classified by Esping-Andersen. Instead of Castles' measure of right-wing party influence, the electoral strength of socialist parties in national elections was operationalized to evaluate partisan influence over government spending for education and social insurance. The politics of the left are normally associated with working class interests and the support of social programs that benefit that constituency. Like Castles, the GDP per capita is utilized as representative of national economic wealth and indicative of the capacity, the potential resources, available to support public policies. Evidence of a positive association between either real education or real social insurance expenditures and the GDP would demonstrate the influence of national wealth on spending levels. However, varying levels of social or educational expenditures per capita that are unrelated to

GDP size or growth might indicate there is a choice or some intent involved in a welfare regime's "effort" to support particular policies.

The demographic variables examined in this study have been modified and made more inclusive than those in Castles' model. While Castles selected that proportion of the national population under 25 to represent the size of the school-age population, the current study takes the percentage of the national population in the 5-29 age group. This group more accurately represents those actually receiving educational benefits from the state, excludes the preschool population, and allows more weight to be given older students and higher levels of education where the enhancement of socioeconomic opportunities tends to be greatest. Increases or decreases in the size of this group may directly affect the level of public expenditures for education, both in total dollars and real dollars per capita. In addition, the percentage of the population over age 65 was included to determine if variation in the size of this group might be associated with levels and changes in social insurance and educational expenditures. Those over 65 not only tend to be the primary beneficiaries of the states social insurance system, but they are often among the most political active, especially as voters. Of particular interest is whether senior citizens, major recipients of social insurance benefits, might exhibit a negative association with educational spending, a program for which they may be liable for taxes but do not receive any direct benefits in return.

Four additional variables are utilized in the regression modeling, two in each equation. In the regression on real social insurance dollars per capita, education spending as a percentage of total public spending and real education dollars per capita have been added to assess any influence they might have on social insurance expenditures. Similarly, in model 2 social insurance spending as a percentage of total public spending and real social insurance dollars per capita are regressed on real education dollars per capita to ascertain the possibility of their association with educational spending. After controlling for demographic factors, in particular the size of specific population groups that are beneficiaries of the state's financial commitment to social insurance and education, a policy sector's share of total public spending may reflect the preference of the welfare state to support and invest in particular public programs over other policy alternatives. In this study, a negative association reported by the regression analyses between education as a proportion of total public

spending and real social insurance dollars per capita would provide evidence for our hypothesis that preferential investment in education or spending on social insurance provisions are alternative policy strategies welfare regimes may choose to follow. Similarly, a negative association between social insurance as a percentage of total public spending and real education dollars per capita would indicate a regime preference for one or the other programs as its favored policy alternative.

Finally, data has been collected concerning the percentage of full-time secondary level students enrolled in vocational training and general education curriculums. This information allows testing whether different kinds of welfare states, as defined by Esping-Andersen, may be associated particular kinds of educational systems and patterns of spending for education and social insurance programs.

Castles' variable for incremental program growth has been omitted. Period-to-period changes in expenditures are not being evaluated in this analysis. The measure of Roman Catholic strength has also, and necessarily, been excluded. Castles' Catholic "family of nations" closely corresponds to Esping-Andersen's group of conservative welfare states;⁵ Catholic influence is captured by the conservative welfare state variable.

All national records have been coded according to Esping-Andersen's (1990) typology of welfare state regimes. Germany, together with Austria, Belgium, France, and Italy has been assigned to the conservative category. Australia, Canada, Ireland, Japan, New Zealand, Switzerland, the United Kingdom, and the United States have been classified as liberal. Denmark, Finland, the Netherlands, Norway, and Sweden have been put in the social democratic group.⁶ National GDP per capita data was taken from the 1997 edition of the OECD's Political Data Handbook and are adjusted for inflation. Social security expenditures as a percentage of the GDP were obtained from the ILO's 1996 edition of "The Cost of Social Security." Social security expenditures, elsewhere referred to social insurance, include benefits for old-age pensions, sickness and maternity, work injury, and medical care (ILO 1996, 3). Public spending on education as a percentage of the GDP was taken from the OECD's Political Data Handbook for the years 1960 through 1980 and the OECD's 1997 edition of Education at a Glance for 1985 and 1990. Likewise were the figures for public spending on education as a percentage of total government expenditures.

UNESCO's Statistical Yearbook was the source for data on secondary level enrollments in general and vocational education curriculums. Information about the size of national populations in the 5-29 age group and those over 65 years of age was taken from the United Nations' Statistical Yearbook. All figures have been standardized.

The following national expenditure data was calculated. Social insurance spending as a percentage of total public expenditures is based on ILO data for social insurance as a percentage of the GDP and knowledge of the ratio between education as a percentage of total public spending and educational expenditures as a portion of the GDP. Real social insurance dollars per capita is the product of social insurance as a percentage of the GDP and the GDP per capita. It has been divided by 100 so that it would be in the same meter as other GDP-based statistics. Real education dollars per student is the product of educational spending as a percentage of the GDP times the GDP per capita, divided by the percentage of the population who are aged 5-29. This age group most accurately a nation's student population -- those who are eligible, attending, and actually receiving public educational benefits. No similar group identification could logically be made for the distribution of social insurance benefits. The portion of the population eligible for and receiving benefits from social insurance programs is far more difficult to identify because it varies so greatly by the types and combinations of welfare programs supported by the state, the different age and kinds of groups covered, and other conditions of eligibility. Not distributing total social insurance expenditures over the eligible population has the net effect of understating the true per capita figure. Although our findings are not affected by this dilution, the real difference between per capita education and social insurance expenditures may not be as apparent.

Findings

Our findings provide additional support for the different kinds of social security states described by Esping-Andersen. They also offer evidence that particular kinds of welfare states have distinctive educational policy profiles. Summary data by welfare regime type shows that conservative nations tend to place greater emphasis on social insurance expenditures than education, relative to the other welfare state types. While they tend to lead in social insurance spending as a percentage of total public spending, they are laggards in

educational spending. Germany fits this pattern well. However, in terms of spending "effort," as measured in real dollars per capita, social democratic nations lead the conservative and liberal states in both social insurance and educational commitments. Liberal welfare states lag behind in all measures of social insurance spending, but rank ahead of the conservative in all categories of educational spending. Liberal states also lead in general education participation at the secondary level, at a rate significantly higher than that of conservative and social democratic states with their considerable vocational curriculum offerings. Germany and Austria, with their "dual systems" of vocational education, lead the sample countries in enrollments and spending for vocational education.

These findings represent confirmation for our hypothesis of an association between the education and social policy profiles of modern welfare states. Just as liberal, conservative, and social democratic welfare regimes may be distinguished by the similarity of their social insurance programs, so can they by the educational policies they support. More specifically, liberal welfare regimes tend to be associated with greater support of general education curriculums at the post-primary level, an agent of social mobility and opportunity and an alternative to expanded social insurance programs. This is supportive of Hecló and Heidenheimer's proposition that educational opportunity is the liberal state's policy substitute for the social insurance and income protection that is characteristic of conservative and social democratic welfare states. This is not to overlook the greater "effort" of social democratic states in public education spending, but there is clearly a greater emphasis placed on vocational training than in liberal welfare nations. Of the countries with extensive and comprehensive vocational education programs, only liberal Switzerland is not part of the conservative regime type.

Generally, for all nations in the sample, regardless of welfare state type, real spending per capita for both education and welfare increased - long with the GDP per capita -- at every five-year interval over the time period of the study. This rise was relatively more rapid in the earlier than later years of the 1960-1990 period. A slowing in the rate of increase is reflected in the downward movements and fluctuation of expenditures for social insurance and education as a percentage of total public spending, first in the social democratic data of 1975 and then in 1980 for the conservative and liberal nations. The

data thus correspond correctly with the known period of welfare state expansion, throughout the 1960s and into the 1970s, and then with contraction that began in the mid-1970s. Nonetheless, from 1960 to 1990 real expenditures for education increased by a factor of four in liberal nations, a little less than 3.8 in conservative states, and almost 3.3 times in social democratic. However, as measured in terms of real dollars per capita, social democratic nations spent over 1550 dollars more in 1990 than in 1960, liberal states 1300, and conservative 1050. For social insurance programs the social democratic states increased real spending over the time period greater than six-fold and 2800 dollars per capita, conservative states by a factor of four and 1800 dollars, and liberal regimes by 1300 dollars or almost four-fold.

Regression modeling offers additional support for the hypotheses of this study (see table 2). The results provide evidence that the kinds of welfare states described by Esping-Andersen (1990) -- liberal, conservative, and social democratic -- have distinctive policy profiles for education as well as social insurance. Furthermore, the equations reveal an association between a regime's spending for education and that for social insurance programs. As hypothesized, public spending for education and social programs appear to be strong predictors of one other.

The models indicate a tendency by social democratic nations to invest in education and social insurance at higher levels than both liberal and conservative regimes.⁷ Once again, these welfare regimes demonstrate a greater "effort" to support education and social insurance programs than conservative or liberal welfare states. Conservative nations are shown to spend somewhat less on social insurance, but more than liberal states. On the other hand, liberal regimes tend to place a greater emphasis on educational spending than do conservative. This represents confirmation of what was depicted an earlier analysis of descriptive statistical data: While social democratic regimes tend to allocate a slightly smaller share of public spending to social insurance than conservative nations, social democratic regimes spend the most real dollars on social insurance, followed by conservative and then by liberal states. When it comes to educational expenditures as share of total public spending, social democratic and liberal nations spend relatively the same and decidedly more than conservative states. Social democratic regimes rank first in real education dollars per capita,

followed by liberal and then conservative nations. Germany, as a member of the conservative cluster, clearly belongs to the laggards.

Table 2:
Regression Models of Social Insurance and Public Education Expenditures

	Model 1 Real Social Insurance \$ per capita	Model 2 Real education \$ per capita
Constant	-2.5096*	-0.6144
Conservative	0.3065*	-0.0161
Social Democratic	0.3412*	0.2163*
Socialist Electoral Strength	0.0060*	-0.0019
GDP per capita	0.0185	0.1073*
Social Insurance % of Total Public Spending		-0.0095*
Real Social Insurance Dollars per capita		0.2520*
Education % of Total Public Spending	-0.0751*	
Real Education Dollars per capita	1.0777*	
% Population 5-29	0.0575*	0.0113
% Population over 65	0.0805*	0.0403*
% Secondary level general Education students	.0044	-0.0009
Adjusted R-Square	0.866	0.916
n =	123	123

* Indicates significance at the .05 level or greater

Both regression equations report a close association between public spending for education and that for social insurance programs. As hypothesized, education and social spending appear to be strong predictors of one other. In particular, there is a statistically significant positive relationship between the real dollars spent for education and social insurance programs. This is hardly a surprise. The educational and social spending data examined in this study come from an extended period of economic growth and prosperity, one in which school enrollments and the size of elderly populations in most advanced industrial societies steadily grew. An increase in the monies going to either education or social insurance is thus not difficult to explain. It is important to recognize, however, that they did not move in perfect tandem over time. There were differences between types of welfare state regimes, as well as between education and social insurance, in the rates and timing of expenditure growth.

Especially meaningful to this inquiry is the negative association shown between education as a share of total public spending and real social insurance dollars per capita, and the similar contrary relation between social insurance as a share of total public spending and real education dollars per student. Expenditures for public policies are not the function of a budgetary "pie" with "slices" of fixed proportions for given programs. Nor are the spending changes for any policy area -- for education, social insurance, defense, or anything else -- matched automatically with spending changes in other areas. In other words, there is no necessary correlation between government spending in different policy sectors. Specifically, there is no a-priori reason to think spending for education and social insurance spending would move in perfect tandem, up and down, or that the two might be inversely related. That a statistically significant negative association between spending for education and social insurance was reported by each regression indicates a relationship between the two policy areas. It is supportive of our hypothesis that a preference to invest in education or social insurance programs are alternative policy strategies that governments of welfare states may choose to pursue.

An interesting finding is that the GDP per capita is a good predictor of educational spending but not for social insurance. This is probably best explained as evidence of the non-discretionary nature of spending for social insurance programs. They have a "life force" of their

own. In America, social security has even been called the "third-rail" of politics. There, and elsewhere, politicians who would seek to "touch" and reduce social security benefits and eligibility do so at their peril. As compared to education, social programs seem to exhibit very strong lock-in effects (Pierson 1994). Most social programs enjoy widespread public support, especially those that benefit the middle classes. The popularity of social programs has helped to justify their ever-increasing costs, and expenditures have become far less a function of politics and the state of the national economy than public expectations and the size of the group eligible for benefits. Education, on the other hand, appears more responsive to movement of the GDP and national politics. Although education and social insurance both saw steady increases in real dollar expenditures per capita over the period of the study, education's share of public spending began a decline during the mid-1970s that corresponds with the economic recession of that period. Not until the 1980s does social insurance's share of public spending also show a downward movement. It may be, too, that education has a threshold beyond which additional per unit (student) costs are relatively less than that for recipients of social security benefits. Schools may become crowded as the school-age population grows, but expenditures do not necessarily increase in mark-step, nor are new schools necessarily built or additional teaching staff hired.

It is perhaps tempting to read too much -- or the wrong thing -- into the results of regression modeling for the relationships between the two age groups examined and real spending for education and social insurance. First, as one would expect, increases in social insurance spending are positively associated with the growth in the size of the population over the age of 65 and educational spending with the 5-29 age group. Second, and what might appear surprising, is the positive association shown between the 5-29 cohort and higher levels of social insurance spending. However, what must be considered is that social insurance provisions in many nations, particularly healthcare, also cover members of the 5-29 age group. Especially given the economic prosperity and general expansion of welfare states during that period -- increasing coverage and benefits for more of the population -- it is not a mistake that the younger population may be associated with increasing social insurance costs. The connection between a growing elderly population and increased educational spending is perhaps troublesome. It is very likely spurious. The populations in advanced industrial societies have been aging at the same time educational spending per

capita has been rising. The two are associated in time, and probably no more.

The variable measuring socialist electoral strength displays less power than educational spending data and welfare state variables in predicting social insurance expenditures. Although the variable was returned with a positive coefficient that is statistically significant, as expected, the value of the coefficient is so small that its effect is only marginal. It is probable that the influence of social democratic parties has been captured elsewhere, specifically in the social democratic welfare regime variable and, to a lesser degree, in the conservative dummy. Socialist parties have clearly enjoyed their greatest electoral strength in the welfare nations that have exhibited the most welfare "effort", the social democratic and conservative regime types.

Welfare state type and social insurance expenditures are also more powerful predictors of educational spending than socialist electoral strength. We are hesitant to make too much of the weak negative association reported between socialist electoral strength and real education spending. Once again, the socialist party influence may have been trapped by the regime variables for conservative and social democratic states. Especially when one considers the "effort" social democratic nations put into their spending for education, it is difficult to argue that socialist party strength would be negatively associated with educational spending.

Given the use of separate regression models for social and educational policy, inferences about causal effects will not be made when no more than the existence of statistical associations should be stipulated. However, the following does seem clear as a result of this investigation. First, the data indicate an association between tendencies in educational spending and the social insurance alternatives supported by welfare states. In particular, the kinds of welfare regimes identified by Esping-Andersen -- liberal, conservative, and social democratic -- exhibit distinctive patterns of support for public education just as they do for social insurance. Second, and following from the previous, welfare regime type and social insurance expenditure data are powerful predictors of educational spending tendencies. Likewise are welfare regime type and educational expenditures of social insurance. Third, the education systems of the kinds of welfare regimes described by Esping-Andersen demonstrate

different educational strategies and objectives. The education systems of liberal, conservative and social democratic welfare nations do not provide the same educational opportunities, the same gateway to socioeconomic opportunity.

The data concerning secondary enrollments in vocational training and general education, combined with patterns of spending for education and social insurance, offers evidence of the different socioeconomic "intentions" for the educational systems of liberal, conservative and social democratic welfare states. Finally, the data suggest preference to invest in education or social insurance programs may be alternative policy strategies followed by certain kinds of modern welfare states. Liberal welfare nations like the United States and Japan demonstrate a preference to invest in educational opportunities over the expansion of social insurance programs. Alternatively, conservative nations have tended to favor social safety nets over funding educational opportunities. Germany clearly exemplifies the conservative welfare regime type.

Notes

1. Hugh Hecló, *The Welfare State in Hard Times*, (Washington, D.C.: American Political Science Association, 1985), p. 16.
2. Decommodification describes "the degree to which individuals, or families, can uphold a socially acceptable standard of living" without reliance on wage labor and independent of market forces (Esping-Andersen 1990, 37). With respect to the welfare state, decommodification is a function of its social programs and the degree to which those provisions make "living standards independent of pure market forces. It is in this sense that social rights diminish citizens' status as 'commodities'" (Esping-Andersen 1990, 3).
3. As used in this study, "total public spending" and "total public expenditures" are defined as the amount of financial support given by government to all areas for which it is responsible (OECD 1995, 121).
4. The OECD has advised that the inclusion of private funding data would only raise the GDP share going to education by about

10 percent for the United States, Japan, and France (OECD 1995, 71). That would not significantly alter the findings of this study.

5. Castles' Catholic "family of nations" in 1960 included Austria, Belgium, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. Although part of the 1960 "family," Germany failed to meet the Christian Democratic party criterion in 1990, making it the only conservative welfare state not also characterized as "catholic" by Castles.
6. Of these, Esping-Andersen's classification of the Netherlands as social democratic has been the most contested. Although Esping-Andersen himself later (1992) conceded that the Netherlands might actually fit better into the conservative camp, we decided to stick with his original classification since we are trying to test the applicability of his original welfare regime typology, with all its strengths and weaknesses, to education policy.
7. The value returned for the constant in the regression models is relative, representing only the y-intercept of the equation. However, it does mark the liberal position as a reference point from which to assess the different influences of social democratic and conservative regimes on education and social programs, based on the value and strength of the coefficients returned for their dummy variables.

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Biographical Sketch

Gunther M. Hega is Associate Professor and Karl G. Hokenmaier Instructor in the Department of Political Science at Western Michigan University in Kalamazoo, Michigan, USA. Hega has published a book and several articles on education policy in Europe and is currently writing a book on vocational education policy in Germany, Switzerland, and Austria. Hokenmaier recently published an article on the trade-off between education and social security in Germany and the United States in the "American Journal of Political Science" and is working on a book on the topic.

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