University Challenges

Explaining Institutional Change in Higher Education

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ABSTRACT

Higher education policy has been subject to considerable reform in OECD states over the past two decades. Some states have introduced tuition fees for the first time, others have massively increased public funding for higher education, and still others remain in stasis, retaining the elitist model with which they began the post-war era. This paper develops a formal model of the politics of higher education reform, noting the existence of a 'trilemma' between mass enrolment, full public subsidization, and total public spending on higher education. Propositions on this trade-off and on the impact of partisanship on reform are tested statistically on a sample of OECD studies and through case histories of higher education reform in Britain, Sweden, and Germany.

Section One: Introduction

No part of the educational establishment in OECD states has received as much institutional reform over the past few decades as higher education. In 1950, almost all OECD states had a publicly subsidized higher education system limited to a small fraction of the population. In the past few decades, many states have witnessed a transformation of that elite model into a new mass higher education system, with enrolment levels often exceeding fifty percent. This transition to a mass system has provoked differing funding reforms. Several states, including Australia and the United Kingdom, have radically altered their funding structure of higher education, massively reducing the rate of public subsidization. Other states, like Sweden and Finland, have seen a huge surge in public investment in higher education in order to cope with mass enrolment. But institutional change has not been the only game in town. Some states, chiefly in Continental Europe, remain wedded to the same elite, public higher education structure with which they began the postwar era. Thus, we are left with a curious puzzle. Why did some states reform higher education while others remained in stasis? And why, of the reforming states, did some choose to build mass, partially-private systems, whereas others continued to limit investment to the public sector?

This paper develops the argument that higher education policy in the OECD is driven by a set of partisan choices within a 'trilemma' between the extent of coverage, the degree of subsidization, and the overall public cost of higher education. Consequently, governments can achieve at most two out of the following objectives: a mass higher education system, a fully publicly subsidized system, and a system that keeps public spending on higher education less than around 1.5% of GDP. Some

countries will choose mass, partially private, inexpensive higher education systems: the Partially Private model. Others will have mass, fully public, but expensive higher education systems: the Mass Public model. Finally, some countries remain at the status quo of inexpensive, publicly funded, but elite higher education systems: the Elite model. Institutional constraints and partisan politics drive any transition between these three models. Moving from the Elite model to one of the mass models of higher education requires overriding potential veto players who might block reform. For example, in Germany, where the Länder control higher education, attempts to leave the Elite status quo have foundered on institutional resistance. Where change to a mass model is possible, its form depends on partisan politics. A transition from an Elite to a Partially Private system is more likely to emerge under left-wing governments since tuition fees constitute a more progressive use of public funds than fully subsidized higher education. Conversely, changes from an Elite to a Mass Public system are more likely under center-right governments, who can channel this increased funding to the upper middle class.

To develop this argument, this paper proceeds in three steps. I begin with an analysis of the differences between three institutional types of higher education systems: the Partially Private, the Mass Public, and the Elite model. I develop a formal analysis of the trade-offs within this 'trilemma' by examining individual preferences, the aggregation of these preferences by political parties, and the preconditions for institutional change between these systems. I then conduct an empirical analysis of the trade-offs between coverage, subsidization, and overall public cost on a set of twenty OECD states. In order to examine institutional change and partisan preferences in greater detail, I conclude with

a case comparison of higher education reforms since 1960 in England, Sweden, and Germany.

Section Two: A Formal Model of the Trilemma in Higher Education

In this section I develop a simple model of political preferences over higher education systems. I characterize the move from an Elite model of higher education to a mass system as involving choices within a 'trilemma'.[1] In most public services, the government must decide both the extent of coverage and the degree to which the service will be publicly subsidized. For a fixed budget constraint, any increase in one of these measures will force a decrease in the other. Thus, we can conceptualize 'trilemmas' as the trade-off between any two of the budget constraint, the extent of coverage, and the degree of subsidization, when the other variable is held constant.

How does this pattern play out in the case of higher education? We can measure coverage with the gross enrolment rate of a given cohort in higher education.[2] Within the OECD this ranges from one third of the population in Belgium and Germany to over eighty percent in New Zealand and Sweden. Given the substantial range along this measure we can identify elite higher education systems (those with gross enrolment rates

[1] The concept of a 'trilemma' was popularized by Iversen and Wren, whose 'trilemma' involves a set of broad macroeconomic outcomes (equality, employment, and budgetary restraint). By contrast, this article focuses on a trade-off in government policies in the more restricted domain of higher education. Iversen, Torben and Anne Wren, 1998, 'Equality, Employment, and Budgetary Restraint: The Trilemma of the Service Economy', World Politics 50.4.

[2] Gross enrolment rates include multiple entries into higher education by the same individual and thus are a more appropriate index of overall budgetary strain on the government than net rates.

less than one third) and mass higher education systems (those with gross enrolment over one half). The degree of subsidization also varies widely in higher education. Some systems are almost totally publicly funded – for example, Denmark, Norway and Finland – whereas others have over fifty percent of funding from private sources– for example, the United States, Japan, and Australia. Finally, some higher education systems take relatively little from the public purse – less than 1% of GDP in Britain, Italy, and Japan, whereas others cost over 1.5% of GDP: Denmark, Finland, and Sweden.

Trade-offs within the trilemma can be characterized using the 'ideal types' of Elite, Partially Private, or Mass Public higher education systems. Some states will have high levels of coverage at a lower level of subsidization (Partially Private systems) whereas others, spending the same amount of public money, will have higher degrees of subsidization but lower coverage (Elite systems). Conversely, for a fixed level of coverage, states can trade off budgetary restraint versus subsidization. Some states will have mass systems with low levels of subsidization and low overall public cost (Partially Private systems) whereas others will have mass systems with high levels of subsidization and high overall costs (Mass Public systems). Finally, for a given level of subsidization, states can trade off coverage with overall cost. Some states will have low levels of private funding, low overall costs, but also low coverage (Elite systems), others will have similarly low levels of private funding but with high costs and high coverage (Mass Public systems).[3] We can graphically demonstrate these trade-offs in abstract using an iso-cost graph, as in Figure Two.

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[3] One further configuration is possible: an inexpensive, elite, and partially private higher education system. Such a system does not exist in any fully industrialized state but is fairly common in the developing world.

We now begin a formal analysis of the effects of subsidization, coverage, and taxation on individuals, in order to determine the micro-preferences that underlie higher education policy. Assume a state with a population normalized to one (this means that average revenues equal total revenues). We model the degree of subsidization using the parameter $p \in [0,1]$ where $p = 1$ is a fully public system of higher education. We model the extent of coverage with the variable with the parameter $s \in [0,1]$ with $s = 1$ being a system where every individual receives higher education. Coverage expands from the richest to the poorest individual. We assume that every individual has income y_i (distributed lognormally) with average income   and that a proportion τ of income is taxed to pay for higher education. Individuals only receive h (the uniform 'good' of higher education) if the coverage parameter s is large enough to include them. This relationship works as follows:

$$y_i \geq y_s(s) \Rightarrow h(y_i) = h$$
$$y_i < y_s(s) \Rightarrow h(y_i) = 0$$

The key parameter here is $y_s(s)$, which is the income of the individual at the threshold of higher education provision for a given level of coverage s. Any individual with income higher than y_s receives the uniform higher education good. Any individual with income lower than y_s receives nothing. This introduces a discontinuity into higher

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However, most middle-income countries, for example Mexico, Brazil, and Turkey have highly subsidized higher education along the lines of the Elite model, as did high-income states in 1950.

education provision since at the point around the threshold individual, the amount of higher education received jumps from zero to h.[4]

Putting these assumptions together, the government faces a budget constraint of $\tau \bar{y} = sph$. We define individual utility as:

$$u_i = [1-\tau] \cdot y_i - [[1-p] \cdot h(y_i)] + g(h(y_i))$$

The constituent elements of this expression are: a term for post tax individual income, $[1-\tau] \cdot y_i$; the proportion of the cost of higher education that must be paid privately, $[1-p] \cdot h(y_i)$; and the benefit attained from possessing higher education $g(h(y_i))$.[5]

In order to examine how changes in coverage, subsidization, and the total public cost of higher education affect individual preferences we reframe the tax rate in terms of the higher education good by applying the budget constraint to the utility function:

$$u_i = \left(1 - \frac{sph}{\bar{y}}\right) \cdot y_i - [[1-p]h(y_i)] + g(h(y_i))$$

We take the derivative of this equation with respect to p in order to examine the effects of increasing subsidization for individuals of differing income:

$$y_i < y_s \Rightarrow \frac{\partial u_i}{\partial p} = -\frac{y_i}{\bar{y}} sh$$

$$y_i \geq y_s \Rightarrow \frac{\partial u_i}{\partial p} = -\frac{y_i}{\bar{y}} sh + h$$

The first expression shows that subsidization always harms individuals with incomes below the threshold level. This is not surprising: those individuals who do not receive

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[4] This set-up reverses the typical logic of Meltzer-Richard style models in that redistribution through the tax system goes from the poor to the rich. Meltzer, Allen and Steven Richard. 1981. A Rational Theory of the Size of Government. Journal of Political Economy. 89: 914-927.

[5] We assume that g(h(y$_i$)) is a quasiconcave, strictly increasing function.

higher education do not benefit from paying for it. However, the second expression indicates that impact of public subsidization is positive for at least some of those who receive higher education. This will be true provided:

$$\frac{y_i}{\bar{y}} < \frac{1}{s}$$

Thus, the impact of subsidization on individuals rich enough to receive higher education will be dependent on their income relative to the mean and on the level of existing coverage, s. For an s of 0.1 we expect only those individuals with an income ten times the mean to be opposed to further subsidization. For an s of 0.5 (a common figure in many mass higher education systems, for example, Australia), those individuals with double the mean income should disfavor subsidization.

To provide further intuition about the politics of subsidization, Figure Two compares the impact of subsidization on individuals with varying degrees of income (with an assumption of s of one half). The horizontal axis represents individual income and the vertical axis displays the impact on individual utility of increasing subsidization. Thus for citizens with incomes below the threshold to receive higher education, y_s, the impact of increased subsidization on their utility is negative. The same applies for those citizens whose income is higher than twice the mean. However, for the group whose income ranges between the threshold income and twice the mean, any increase in subsidization leads to a positive impact on their utility. All else equal, this middle group would advocate for increased subsidization whereas the poorer and richer groups would oppose any such policy.

The same 'ends-against-the-middle' pattern emerges when we examine the effects on individual utility of increasing coverage. Differentiating the utility equation with respect to coverage, we obtain the following differential:

$$\frac{du_i}{ds} = -\frac{y_i}{\bar{y}} ph + \left[g(h) - (1-p)h\right]\frac{d\pi_i}{ds}$$

Unlike the previous analysis, this equation contains $g(h)$, the direct benefit of receiving higher education. It also contains a new variable π_i, which represents the probability of receiving higher education for the first time during the expansion. This probability will equal zero for all individuals who are not first-time receivers and will equal one if expansion includes that individual.[6] Figure Three shows that the middle group are the only group who directly benefit from increased coverage, whereas the poor and wealthy would prefer to limit expansion of coverage. Furthermore, expansion of higher education has a stronger negative effect on the very rich than does subsidization. Subsidization affects everyone who receives higher education, though tax costs may outweigh this benefit. Expansion, conversely, only directly benefits those who receive higher education for the first time.[7]

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[6] Note, that this zero / one formulation requires the use of difference operators rather than instantaneous differentials – we need to know the precise size of the expansion to be able to calculate its effects on utility.

[7] We are assuming away the potential positive externalities produced by expanded higher education coverage. There is considerable debate about measuring such effects and econometric evidence indicates externalities are larger at 'lower' levels of education than university, Haskel, J, D Hawkes, and S Pereira, 2003, Skills and Productivity in the UK using matched establishment, worker, and workforce data', Centre for Research into Business Activity Discussion Paper.

We can apply these results to examine the impact on individual utility of the three potential choices within the trilemma. Figure Four shows the following three configurations: a state with a mass higher education system ($s = 2/3$), low subsidization ($p = 1/2$) and moderate public spending – the Partially Private model; a state with a mass higher education system ($s = 2/3$), high subsidization ($p = 1$), and high public spending – the Mass Public model; and a state with an elite higher education system ($s = 1/3$), high subsidization ($p = 1$), and moderate public spending – the Elite model.[8] Three different lines demonstrate the relative preferences of individuals of different levels of income for the particular systems. No one system is preferred by all individuals. Hence trade-offs within the trilemma mean trading off the interests of different groups of individuals against one another: choices within the trilemma are distinctly political.

The preference orderings over the three systems have four permutations. The first section, for those individuals with income less than the 33rd percentile, has a preference ordering as follows: the Partially Private and Elite models first with the Mass Public model last. Thus the poorest third of society are most disadvantaged by a mass *and* fully public higher education system. This pattern may seem counterintuitive since we are used to thinking of mass public services as benefiting the poor: the ability to target goods alters the typical outcome of fiscal progressivity. This preference ordering is reversed for individuals with incomes between the 33rd and the 67th percentile. In this group, the preference ordering is as follows: Mass Public then Partially Private then Elite. The

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[8] The precise values of the parameters are somewhat arbitrary and chosen because of their resemblance to the empirical patterns in Section Three. Nonetheless, the preferences derived in the following work carry through for a variety of other parameter choices that hew to the trilemma.

reason for this reversal is that these individuals receive higher education in the Mass Public and Partially Private systems. However, in an Elite system they would be paying for the rich group to attend higher education without receiving it themselves. This group, one-third of the total population, can be thought of as the middle-class and they are clearly the key beneficiaries of the transition from an elite to a mass higher education system.

The final two sub-sections occur for those individuals with incomes higher than the 67th percentile. For this group the Elite system is always preferred to the Partially Private and Mass Public systems. This comes as little surprise. The rich receive fully subsidized higher education in the Elite system, without having to pay for anyone else to receive higher education: a classic case of targeted expenditure. However, the Mass Public and Partially Private systems shift in preference ordering around the individual with income $y_i = 1.5\bar{y}$. Below this point the Mass Public system is preferred, whereas above this point the Partially Private system is favored. Since taxation is a proportion of income but higher education is a fixed benefit, some particularly rich individuals would prefer to pay the cost of higher education privately rather than subsidize the 'poorer rich'.

In terms of the politics of choice within the trilemma, we see the following patterns. The Elite model displays a clear ends-against-the-middle dynamic, with both the poor and the wealthy content with that system over the others and the middle group unhappy at exclusion from higher education. The Mass Public model is the preferred outcome for the middle group and may be preferential to the Partially Private model for a subsection of the wealthy. Thus, the Mass Public model represents a coalition of the middle and upper-middle classes. The Partially Private model is preferred to the Mass

Public model by the poor and the very wealthy but is less preferable for the middle and upper-middle classes. However, for the middle class it is preferable to the Elite system, which would shut that group out of higher education. Thus, while the Partially Private model looks like an ends-against-the-middle coalition in comparison to the Mass Public model, it actually appears to be a middle-and-lower class coalition when compared to the Elite model.

We now turn to partisan preferences over these three higher education systems. We must first assume that parties *actually have* the freedom to alter higher education policy without institutional constraints. If veto players can totally block reform the Elite system will remain in place. Where parties are less constrained, their preferences will depend on the size of their electoral support, the degree of income inequality, and the cost of overriding potential veto players. We assume that the Elite, Partially Private, and Mass Public systems are defined as in Figure Four. That being the case, we have three equal-sized groups in the electorate: the poor (who never receive higher education), the middle class (who receive higher education only in a mass system), and the high earners (who always receive higher education). We also assume a two-party system, where the Left party can always rely on the support of the poor and the Right on that of the high earners. Both parties compete for support of the middle class, with the Left earning α and the Right earning (1-α) of that group's support, where $\alpha \in [0,1]$. To model the split among high earners in terms of preferences over Partially Private versus Mass Public models, we use the parameter $\beta \in [0,1]$ to represent the proportion of the high earning group with $y_i < 1.5\bar{y}$. Finally, we model the political cost of overriding institutional constraints and moving away from an Elite model as c. We represent the preference orderings of each

group as follows: *2* for their preferred system, *1* for the mid-ranked system, and *0* for the least preferred system.[9] Where two systems tie, we split the difference. The party preferences for each system are laid out in Table One.

We see from Table One that the preferences of each party over the three systems depend on the parameters α and β. The Left party obtains 1.5 in utility from the Elite system; $2\alpha - c$ from the Mass Public system; and $1.5 + \alpha - c$ from the Partially Private system. Our first result is the counterintuitive finding that left-wing parties prefer a Partially Private system to either fully public system, provided institutional constraint costs are low enough. This occurs because the poor fail to receive higher education in any of the systems; hence it is in the Left's interest that they pay as little as possible. The greater is the Left's share of the middle class vote, α, the more attractive are both mass higher education systems compared to the Elite system. The greater is c, however, the more likely is the Left to remain content with the status quo Elite system. Whenever $\alpha > c$, the Left prefers a Partially Private system to an Elite one. Thus, when institutional constraints are low we expect left-wing parties to move from an Elite system to a Partially Private system of higher education (whatever the magnitude of α and c, the Left prefers a Partially Private system to a Mass Public system).

The Right party obtains a value of 2 from the Elite system; $2(1 - \alpha) + \beta - c$ from the Mass Public system; and $(1 - \alpha) + (1 - \beta) - c$ from the Partially Private system. Note firstly that the Right like the Elite system more than the Left do – unsurprising, since the

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[9] This scale is chosen for ease of interpretation. More generally, we can represent the ordering by $\kappa_{MAX} > \kappa_{MED} > \kappa_{MIN}$, where preferences may be unevenly spaced. The importance of the parameters α, β, and c, and the weight each party attaches to each group will depend on the unevenness of this spacing.

high earners are the chief beneficiary of this system. Secondly, the preferences of the Right over the two mass systems depend on both α and β. We find that the Right prefers the Mass Public to the Partially Private system when $\alpha < 2\beta$. This equation is more likely to hold the smaller is α (the Left's share of the middle class) and the larger is β (the group of high earners with $y_i < 1.5\bar{y}$). Put more simply, Right-wing parties will prefer Mass Public systems to Partially Private ones when their electoral share is large and when inequality is low. In both cases, their constituency is biased towards middle and upper-middle income citizens and away from the very rich. Furthermore, a small α and large β also makes the Right more likely to support moving from an Elite to a Mass Public higher education system, although this also depends on institutional costs c. The change from Elite to Mass Public will be made if $\beta > c + 2\alpha$. Right-wing parties are thus likely to advocate a transition to a Mass Public system under conditions of large electoral majorities, low institutional constraints, and low levels of inequality. High institutional constraints will sustain the Elite system as readily as was the case for Left parties.

The above example is not exhaustive of the politics of higher education. It only examined one configuration of systems (the differences between 1/3 and 2/3 coverage, and half and full subsidization). Where the status quo level of coverage is lower than a third, we expect Right-wing parties to advocate expansion up to at least that threshold. Where coverage is already at two thirds, we would expect the Left to be the chief advocates of expansion, with the Right attempting to institute quotas. In this scenario, partial privatization will be much more attractive for the Right given the very large numbers of new recipients. At the extreme, if higher education covered all citizens, the Right would advocate reduced subsidization since higher education would no longer

constitute regressive spending. Similarly, a mass public model becomes more attractive for the Left when coverage is universal. Thus, the politics of the trilemma could switch in an era of universal higher education. However, the period from 1950 to 2000 more closely resembles the model developed in this section. Thus, the precise pattern of partisanship will depend on the coverage status quo.

Furthermore, we have not exhausted the list of available policy options. In an Elite system, Left-wing parties could still try to finance entry to higher education for otherwise excluded poor and middle-class citizens through means-tested spending. We can incorporate this suggestion in the model through a lottery parameter λ, which provides higher education to individuals with $y_i < y_s$ with probability λ. In this set-up, left-wing parties prefer increasing lottery payments λ to expanding coverage s in two cases. Firstly, if none of their constituents receive higher education ($s < (1+\alpha)/3$). Secondly, if some constituents do receive higher education, whenever $s > \lambda$. Thus, before mass higher education, left-wing parties will focus resources exclusively on the lottery payment for poor students. Once higher education becomes mass there will be a see-sawing between funding direct expansion and increasing the lottery parameter.

To summarize the model, we expect low institutional constraints and large majorities to be associated with shifts from the Elite to one of the mass models. We expect Right parties to favor moving to Mass Public systems (especially in states with low inequality), and for Left parties to favor Partially Private systems. As higher education expands past half of the population, these partisan preferences will weaken, as higher education more closely resembles a uniform public good. Finally, if institutional and electoral constraints are too strong for the Left to move from an Elite to a Partially

Private system, lottery payments may constitute the Left's preferred higher education strategy in an Elite system.

Section Three: Empirical Analysis of the Trilemma

We now turn to examining empirically the propositions developed in the formal model. In particular we examine three questions. Firstly, whether right-wing parties actually favor increased per student spending on higher education – that is, targeted spending to their own constituents – as implied by the formal model. Secondly, whether the macro-tradeoffs of the 'trilemma' are apparent in the empirical experience of OECD states. Finally, in the following section we will examine whether the propositions about the partisan and institutional underpinnings of change and stasis within the 'trilemma' are manifest in case historical analysis.

We begin by addressing the first question in Table Two, which examines whether cabinet partisanship affects the composition of education spending, using a dataset of twenty OECD states during the 1990s. The composition of education spending variables come from three measures taken from the World Development Indicators: the ratio of per student public spending in tertiary versus primary education; the ratio for tertiary versus primary *plus* secondary education; and the ratio of tertiary versus secondary education. According to Section Two, we expect these ratios to be pushed higher when right-wing governments attain power, given that tertiary spending is targeted on wealthier citizens. To measure the effects of partisanship I use the cabinet center of gravity index

constructed by Thomas Cusack and Lutz Engelhardt.[10] This variable takes Budge et al's

codings for the ideology of each political party in each OECD state, as measured by the

composition of their manifesto statements. Cusack and Engelhardt then adjust this

measure to reflect the partisan composition of cabinets in each country-year, weighting

each member of a coalition appropriately. This provides us with an index ranging from

minus one hundred (the most left-wing cabinet possible) to positive one hundred (the

most right-wing cabinet possible). I also control for a variety of other characteristics:

overall spending on public education; the proportion of the population under fifteen; GDP

logged; the square of logged GDP; logged population; non-education government

consumption; and a linear time trend. I also include a lagged dependent variable to

capture temporal dependence in the data.

To estimate the impact of changes in cabinet partisanship on education

composition, I conduct a set of OLS cross-sectional time-series regressions, using

country-fixed effects. These fixed effects mean that we are solely examining the *within-*

country effects of partisanship on the composition of education spending rather than the

difference between the Social Democrats in Sweden and Labour in the UK.

Unfortunately, data availability for education composition is fairly poor, with 106

observations - around five per state. This is reflected in the relatively small coefficient on

the lagged dependent variable and in the statistical insignificance of most of the control

variables in the analysis.

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[10] Cusack, Thomas R. and Lutz Engelhardt. 2002. "The PGL File Collection: File Structures and

Procedures." Wissenschaftszentrum Berlin für Sozialforschung. Budge at al 2000 Collective Manifestoes

Project.

Nonetheless we do see a significant effect for cabinet partisanship, even in these rather unpromising data conditions. Model A, which examines the tertiary to primary per student spending ratio, shows the strongest and most statistically robust effect of cabinet partisanship. A fifty point shift from left to right on the cabinet center of gravity scale (the average range across countries) is associated with an increase of 0.35 in the tertiary / primary ratio: around a third of a standard deviation. The mean ratio in the dataset is 2.05 – thus a shift from left to right of fifty points would mean a seventeen percent increase in the ratio. Results are, however, weaker in Models B and C, which include secondary education. Model B, using the tertiary to primary *plus* secondary ratio, is both substantively and statistically weaker than Model A, while Model C, using the tertiary to secondary ratio, is statistically insignificant, though weakly positive. This reduction in robustness is likely a consequence of the less universal nature of secondary education vis-à-vis primary education. In many OECD states, less than two thirds of children attend upper secondary school, mimicking the targeting more generally associated with higher education. Primary education, conversely, is everywhere universal. The pattern of results strongly suggests that right-wing parties engage in regressive targeted spending, with the tertiary / primary split particularly indicative of this pattern. Such empirical findings jibe well with the model's predictions over spending preferences.

We now turn from micro-preferences to aggregate outcomes by examining the empirical verisimilitude of the 'trilemma' between budget constraint, subsidization, and coverage developed in Section Two. The formalization above suggested that, for a fixed level of any one variable, the relationship between the other two variables will be negative. Unfortunately, there is poor availability of time-series data on enrolments and

the funding of higher education, meaning careful within-state analysis of movement within the trilemma must wait until the case analyses of Section Four. However, the trilemma argument suggests there will be different cross-national configurations of coverage, subsidization, and total cost. To test this proposition we use a nineteen country cross-national dataset from 2002, with data taken from the OECD's Education at a Glance dataset. This dataset includes countries from several regions: North America, East Asia, Australasia, Western Europe and Eastern Europe. The small number of cases recommends a small number of key variables: coverage (gross enrolment in tertiary education), inverse subsidization (private spending as a percentage of total tertiary spending), public cost (public spending on tertiary education as a percentage of GDP), and a control for wealth (GDP per capita in $2002).

The formalization of the trilemma, as presented above, makes it difficult to derive a precise structural function to use in empirical analysis. Essentially, we have argued that, holding one of the three variables constant, the relationship between the other two variables will be negative. However, unfortunately, we are not in a situation where we can guarantee the exogeneity of any one variable. The very nature of the trilemma implies that changes in each variable will force changes in the others. With greater time-series data availability we could employ exogenous budgetary or enrolment shocks as instruments but with our small cross-national dataset such instruments are unavailable.[11] Hence the following results should be considered to be indicative

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[11] As a robustness check I conducted two-stage least-squares regression (2SLS) of private spending on public cost and enrolment, using other government spending and tertiary attainment in the adult population as instruments. While these instruments are far from ideal, 2SLS regression produces stronger and more robust results than OLS, assuaging concerns about endogeneity.

plausibility tests rather than robust evidence. Given that we have no a priori reason to believe any variable to be more exogenous than the others, I alternate each trilemma variable as the dependent variable. The key finding is that each variable in the trilemma is only a substantive and significant predictor of another variable once the third variable is controlled for. The following models all use OLS regression with standard errors adjusted for small-sample heteroskedasticity.[12]

Models A and B in Table Three use the percentage of tertiary spending from private sources as the dependent variable. Model A incorporates only enrolment and income, both producing statistically insignificant results. However, the addition of the public cost variable in Model B leads to highly significant results for both enrolment and public cost (at the $p<0.01$ level), and a jump in magnitude for the coefficient on enrolment. This model predicts that a ten percent increase in enrolment will force a five percent increase in the share of spending from private sources, provided public cost is held constant. An increase in public spending of one percent of GDP, conversely, reduces private spending by fifty percent points for constant enrolment. Models C and D use enrolment as the dependent variable. Model C finds no effect of public cost alone on enrolment. However, the inclusion of private spending leads to larger and more significant results. An increase in public spending of one percent of GDP raises enrolment by thirty-five percent points, and an increase in the share of spending from private sources of twenty percent raises enrolment by ten percent points. Finally, Models

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[12] Using the HC3 technique developed in Long, J. Scott and Laurie Ervin. 2000. 'Using Heteroskedasticity Consistent Standard Errors in the Linear Regression Model'. The American Statistician 54(3).

E and F use public cost as the dependent variable. Enrolment alone has no significant impact on total public spending but once we control for private spending in Model F we find that a ten percent increase in enrolment raises public spending by 0.1% of GDP, whereas an increase of twenty percent in the share of spending from private sources reduces public spending by 0.25%. The conclusion from Models A through F is that we can only understand the cross-national interplay between coverage, subsidization, and total cost of higher education in the OECD by examining all three variables simultaneously.

We can view the relationship between all three variables in Figure Five, which plots gross tertiary enrolment against the share of tertiary spending from private sources for eighteen OECD states. For each state we label both its three-letter country code and its level of overall public spending on higher education. In bivariate terms there does not appear to be a strong relationship between the variables, as we saw in Model A above. However, once we examine the public cost variable we see an interesting pattern. There are three distinct southwest-northeast lines of states in the figure, which constitute isocost lines, as in Figure One. In the northwest corner we have the two East Asian states with low levels of public funding. Along the main diagonal access we have around a dozen states spending between .8% and 1.2% of GDP on public funded higher education. These states include the Elite states like Belgium, Austria, France, and Germany. We then move along through the United Kingdom and Italy to the Partially Private core at the other end: the United States, Australia, and New Zealand with high levels of enrolment and higher private spending but similar levels of public spending. Finally we have a line of states in the southeast corner of the graph: the Nordic Mass Public states, who all spend at least

1.4% of GDP on tertiary education, with high enrolments, and high levels of subsidization.[13]

As noted earlier, unfortunately time-series data availability is very poor, meaning that a full panel data analysis of the trilemma is not viable. However, we can examine changes over the 1990s to see if the dynamic picture supports the trilemma theory. Figure Ten shows the four states in the data-set who saw an expansion of over ten percent points in gross enrolment between 1995 and 2002. Two of these states are from the Partially Private group and two from the Mass Public group. The UK and Australia both significantly increased their enrolment figures and also increased their use of private funding by at least ten percent points. They thus appear to be moving along one side of the trilemma – from an Elite education system to a Partially Private system. Denmark and Norway, conversely, have increased enrolment by around fifteen percent points each but are traveling horizontally on the graph; that is, they are not increasing private financing

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[13] It is worth noting that this configuration of states more closely matches the 'three worlds of welfare capitalism' developed by Esping-Andersen than the binary Varieties of Capitalism depiction of coordinated versus liberal market economies. This result might surprise us given the stronger emphasis placed on education in the latter project (although it focuses on general versus specific skills rather than higher education). However, there is a clear connection between the 'three worlds' typology and the trilemma. We saw in Section Two that increased equality makes right-wing parties more likely to favor Mass Public systems over Partially Private ones. Thus the Scandinavian states where governments support wage compression in the 'three worlds' model are more likely to have Mass Public systems than are the more unequal Liberal states. Similarly there is an analog between the hierarchical structure of Continental welfare states and their elitist higher education systems. Esping-Andersen, Gøsta. 1990. The Three Worlds of Welfare Capitalism. Princeton: Princeton University Press; Hall, P.A. and Soskice, D. 2001. Varieties of Capitalism. Oxford University Press.

of higher education. Instead, they are moving towards Sweden and Finland, with their very high public spending. Thus, they are moving along the other side of the trilemma triangle: from the Elite to the Mass Public system.

Section Four: Higher Education Policy in the Postwar Era in Germany, Sweden and the United Kingdom

The data analysis above suggested that, even in a small cross-sectional dataset, the logic of the trilemma holds robustly. However, the lack of extensive time-series data left us relying on cross-sectional outcomes to demonstrate a theoretical mechanism embedded in domestic politics. This section attempts to remedy this limitation by carefully tracing the political history of higher education policy since 1945 in three states that, although now emblematic of the three ideal types of the trilemma, had ostensibly very similar higher education systems in 1945: the United Kingdom, Sweden, and Germany. Whereas the Germans have retained an essentially elitist higher education system, both the Swedes and the British moved rapidly towards a mass system from the late 1980s. However, the method of financing this expansion differed substantially between the UK and Sweden, with Britain's New Labour enacting a series of reforms introducing tuition fees, while the Swedish Moderates opted for a prolonged expansion of public funding at the tertiary level. This section explores partisan and institutional underpinnings of this set of choices.

Higher Education in the United Kingdom

In 1950 British higher education was more of a rite of passage for the children of the elite than a necessary educational step for would-be professionals. In the postwar era,

fewer than three percent of children went on to university (Chitty, 2004). However, the relative affluence of the 1950s led to increases in applications to university. The existing structure of British higher education could not easily absorb such demand. While eighty percent of students applying to university in 1956 obtained places, this had dropped to sixty percent by 1964.[14] The ruling Conservative party's electoral base would be the chief beneficiary of any limited expansion of higher education, given the low status quo level of enrolment. Thus, the chosen resolution to the enrolment issue was the establishment of a Committee on potential expansion, led by Lord Robbins, which reported back in 1963.

The Robbins report was the most dramatic change in British higher education policy to date. Robbins recommended that all universities and technical colleges be governed under a unitary system, the construction of six more universities, and that 'courses of higher education should be available for all those who are qualified by ability and attainment to pursue them and wish to do so'.[15] The Conservatives accepted the Robbins recommendations within twenty-four hours of publication. The legislation demonstrates three key implications of the model in Section Two. Firstly, the report envisaged the transition from to a system where around fifteen percent of the population would attain higher education: a group coterminous with the Conservative party's base electoral support. Secondly, the subsidization of higher education was not in debate since the current regressive fiscal structure was firmly in the Conservative interest. Thirdly, the absence of major institutional constraints to policymaking in Britain, made it simple to pass this, and future, higher education legislation.

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[14] Layard, Richard, Jonathan King and Claus Moser, 1969, The Impact of Robbins. Penguin. London.

[15] British Ministry of Education, 1963. The Robbins Report.

Labour, elected in 1964, soon departed from Robbins orthodoxy. Anthony Crosland, the education secretary, rejected the call for a unitary system of higher education, instead establishing a 'binary policy', retaining the split between universities and technical colleges. Moreover, Labour rejected Robbins' calls for the construction of six new universities. Why did Labour choose to undermine Robbins? While the party was not unsympathetic to the universities, the technical colleges better suited their chief constituency, the working and lower-middle classes, who they could target using the 'binary system'. Expanding university access by the new construction of universities was undesirable for two reasons: firstly, it overly favored Conservative constituents, and secondly, it promised to draw away students and resources from the technical colleges.

Labour were not the only enemies of expansion in the late 1960s. A group of right-leaning iconoclasts, led by C.B. Cox and A.E. Dyson published a series of anti-progressive education pamphlets known as the 'Black Papers' between 1969 and 1970. The most pointed attack on university expansion was Kingsley Amis's well-known assertion that 'more will mean worse'.[16] This reflected the elite's concern that the regressive structure of higher education would be 'progressivized' to the detriment of their offspring. This view was typical among the 'Establishment Tories', whose socio-economic status was far removed from the majority of the Conservatives' voting base. The split among the Tories mirrors that presented in the model between the upper-middle class proponents of a Mass Public system and the very wealthy who prefer Elite and Partially Private models.

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[16] Cox, CB and AE Dyson, 1971, *The Black Papers on Education*. Davis-Poynter. London.

The Tory schism over higher education flared up again two decades later. There was concern by the late 1980s that the UK was lagging in international terms with only fifteen percent of young adults attending universities or polytechnics. The 1988 Education Act, passed by education minister Kenneth Baker, attempted to kickstart the university sector by ending the binary system. Baker also called for a doubling of enrolment, from fifteen to thirty percent over the next twenty-five years and suggested that private tuition fees might be a suitable mechanism for financing this expansion. These proposed changes in coverage and subsidization met in-party resistance and Baker's successor, John MacGregor, abandoned these policy aims on taking office in 1989.[17] This disagreement is not surprising. Britain's high level of inequality meant that Tory support was split between the middle-class advocates of a Mass Public system and the wealthy, who preferred the maintenance of the Elite system, or else a transition to tuition fees. The disagreement led to inaction. Since no quotas existed, enrolment had expanded to thirty percent by 1993. However, financing was not keeping up. Split over higher education policy, the Tories chose the path of least resistance: they maintained overall funding levels while permitting increased enrolment, thus reducing per student spending by around fifty percent.[18]

The ensuing and unsustainable decline in the quality of British higher education presented New Labour, elected in a landslide in 1997, with a particular dilemma. Overall enrolment was now close to a third of all students and rising rapidly. Yet, the social composition of university had changed very little: even by 1997 private schools,

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[17] Chitty, Clyde, 2004, Education Policy in Britain. Palgrave. Basingstoke.

[18] Lawton, D. 1994. The Tory Mind on Education. Falmer Press.

accounting for only seven percent of all secondary education, accounted for nearly forty percent of the students of the 'top' thirteen universities.[19] Consequently, increases in public funding would lead to a Mass Public system, mostly serving the interests of Conservative voters. However, the Elite system was unsustainable because of the increase in enrolments. Instead, Labour's massive electoral majority underpinned a shift to a Partially Private system. This was feasible because electoral support vastly outweighed any remaining institutional resistance to expansion and because Labour had to be keenly attuned to the demands of its new large middle-class constituency.

The Education Act of 1998 began the shift by introducing up-front tuition fees of £1,000 per annum - the first time private funding had been sought for university education in the UK. This was furthered in 2004 by legislation setting £3,000 per annum 'top-up fees'. This measure was accompanied by student grants for poorer families and income-contingent repayment of loans. The government also announced the establishment of an Office of Fair Access to ensure that working-class children were supported in entering higher education. Simultaneously, the government announced a 'soft target' of 50% enrolment by 2010. The Act proved highly controversial and barely scraped through, against Conservative, Liberal, and Labour backbench opposition.[20] However, the contents of the Act were generally beneficial to Labour's core constituency.

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[19] Chitty fn(17).

[20] Stevens, Robert, 2004, From University to Uni. Politicos: London. The opposition of Labour backbenchers may seem surprising given the progressive nature of tuition fees. Some of the opposition may have been a function of ideological inertia – a deep disabiding for private money in the public sector. However, there was considerable concern that fees would inhibit enrolment by poorer students.

Tuition fees replaced a large tranche of regressive public spending. The slanting of student support to benefit those who either come from poor families (the new grant) or end up in them (the payback threshold for fees) was highly progressive. Finally, Labour combined an emphasis on increased enrolment with the establishment of an access regulator to ensure that this increase benefited the poorer members of society.

The reactions of all three major parties to the 2004 reforms mirrored those suggested by the formal model. Labour advocated the transition from an Elite system to a Partially Private one, which would benefit the poor and the middle class. The Conservatives argued, instead, for the retention of the system as was, campaigning on the basis of revoking all fees and instituting a quota on admissions instead. This would have amounted to retrenching into an Elite system.[21] Finally, the centrist Liberal Democrats demanded the revoking of fees but campaigned for increased overall funding of higher education on the Mass Public model, a position popular with students and many middle class voters but unpopular with both the poor and the wealthy.

Higher Education in Sweden

Swedish higher education looked remarkably similar to that of the United Kingdom in the pre-expansion era. Like the UK, in 1945 fewer than five percent of Swedes attended university. Moreover, also like Britain, Sweden had a fragmented post-secondary education system, split into universities and vocational colleges. As in the UK, there was little concerted parliamentary interest in higher education until the mid-1960s.

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[21] The Conservatives with low expected electoral support and high levels of income inequality among their constituency were unlikely to support a Mass Public system, as predicted in the formal model.

However there were two important steps conducted by the politically dominant Social Democrats during this period. The first was a higher education finance bill passed in 1965, providing study assistance for all full-time students in higher education (set at 25% grants and 75% loans).[22] This reform achieved the Social Democratic goal of ensuring that those poorer students who did attend university would be able to afford it independently, similar to the lottery payment in Section Two. The second step was the appointment of a higher education commission in 1968, U68. Unlike the Robbins report, the Social Democrat-led commission recommended *limiting* total resources in the higher education sector. Since higher education had a limited enrolment, any expansion would be unlikely to include Social Democratic core constituencies. Hence expansion was undesirable.

The reforms recommended by U68 were passed in 1975 following a 'principle proposition' from the Social Democrats, though they would not enter law until 1977, during the period of the 'bourgeois coalition' from 1976 to 1982. The final law, H-77, largely represented the demands of the Social Democrats' proposition, with the bourgeois coalition too fragile to make major changes.[23] The 1977 Higher Education Act unified the various systems of higher education into one nationwide system: the *hogskola*.[24] The most interesting aspect of the reforms was their impact on access. Although a nominal quota was established (known as *numerus clausus*) there was also a major effort made to

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[22] Salerno, C, 2002, Higher Education in Sweden, CHEPS Higher Education Monitor Country Report.

[23] Bauer, Marianne, Berit Askling, Susan Marton, and Ference Marton. 1999. Transforming Universities: Changing Patterns of Governance, Structure, and Learning in Swedish Higher Education. Jessica Kingsley Publishers, London.

[24] OECD, 1993, Economic Survey: Sweden.

integrate the adult population into the higher education system.[25] For the first time people over twenty-five were put on equal footing with school-leavers leading to a massive increase in adult enrolments (fifty percent of students).[26] Thus the Social Democrats' original intentions to limit the size of the sector but to encourage broader socio-economic participation within these limits found ample support in H-77.

The return of the Social Democrats to power in 1982 was accompanied by little major reform, given H-77 fulfilled most of their demands. Enrolment levels remained fairly steady throughout the 1980s because of the *numerus clausus* system and the most major piece of reform was a further adjustment to student grants and loans coming in 1989. This reform increased the size of grants and made loans income-contingent, mirroring New Labour's 2004 Education Act. Despite this small act of progressivity, the Social Democrats did not undertake any more major reforms, indeed they hoped to cut the higher education budget in the late 1980s, despite concern that Sweden's enrolment levels compared poorly internationally.[27] As Salerno notes, 'it would eventually take change in government before calls for reform turned to action'.[28] When Carl Bildt led the Moderate party to victory in the 1991 election, little time was spared in rethinking higher education policy. Already in 1984, the Moderates had committed to 'free admission' of

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[25] Salerno fn(22). The '25-4' plan allowed citizens over twenty-five to enter higher education provided they had completed four years of employment

[26] Johansson, Maria, 2004, 'The Swedish Model for Capital Expenditure in Higher Education from a Lifelong Learning Perspective', Dissertation, Stockholm University.

[27] Fritzell, A, 1998'How is the Swedish Higher Education System Governed?', Högskoleverkets Skriftseries.

[28] Salerno fn(22).

students in their party program of that year.[29] In 1992 the bourgeois coalition released its *Memorandum on Independence of Universities and University Colleges*, which resulted in the Higher Education Act of 1993. This Act granted universities considerable autonomy in their admission standards, thus marking the end of the *numerus clausus* era. Financing, henceforth, would be undertaken on a per-student basis, rather than on the basis of national demand forecasts.[30]

This reform led to an enormous increase in enrolments, leading to a doubling of new entrants from 1990 to 2000. Unlike the British Conservatives, the Swedish Moderates permitted the overall university budget to rise along with enrolments. By 1998, Sweden ranked fourth among OECD nations in per student funding: at $13,224 per student (at least a third higher than the UK). Thus the Swedish Moderates sparked a series of enrolment and funding increases that mark the Mass Public model. This transition was aided by the relatively low institutional costs to change in Sweden – there were no lower levels of government preventing reform. Furthermore, although the bourgeois coalition did not have a large majority, the low level of inequality in Sweden meant that, unlike the British Conservatives, there was little internal split within the Swedish Right over tuition fees. Thus the Mass Public model was a feasible choice for the Right.

The huge expansion of higher education in Sweden during the 1990s has begun to weaken the earlier partisan split. With some of the highest enrolment rates in the world, funding of higher education increasingly resembles a universal public good rather than a

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[29] Bauer et al fn(23), p.128.

[30] Marton, Susan. 2000. The Mind of the State. BAS. Gothenberg.

targeted one. Consequently, the Social Democrats have supported the transition to a mass system. However, they have emphasized somewhat different reforms to the Moderates. The most important development was the enactment of the 2001 'Open Higher Education' Bill, with an aim to widen access and participation. In a similar vein to New Labour's 2004 Act, the Bill aims for a fifty percent participation rate and established a recruitment commission to help broaden access and develop courses for students who fail to meet traditional entry requirements. Funding for the sector has increased further, with Sweden now spending over 1.5% of GDP on higher education, and with the tipping point of fifty percent enrolment reached, it is now the Social Democrats who are the chief advocates of increased enrolment and funding.[31] Thus, as argued in Section Two, in truly 'mass' higher education systems, the politics of the trilemma reverse.

Since inequality is low in Sweden, tuition fees remain off the table for the right. Henrik von Sydow, a Moderate parliamentarian, stated in 2003 that 'it is not on the agenda […] we don't want to have a system where students have to pay for higher education. It's not the Swedish model and it's not the way to go'.[32] Of course, von Sydow is not alone among European right-wingers in his antipathy towards fees – the UK Conservatives wanted to revoke them – but unlike New Labour, even the Social Democrats have no interest in tuition fees, since enrolments are so large. Instead, the higher education system has become part of the 'Nordic model' over the past decade – on its way to becoming a universal entitlement.

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[31] Ibid.

[32] The Guardian, 2003, 'Tuition fees gain allure in cash-hit European campuses'.

Higher Education in Germany

Germany has a storied tradition of higher education. The system of research universities established in nineteenth century Prussia became a model for many of the world's best universities, especially in America.[33] Indeed, in 1960 German higher education was as expansive as that in Britain and Sweden. Around four percent of each cohort of school-leavers entered the higher education system, which like Britain and Sweden was divided into universities and technical colleges. However, unlike Britain and Sweden, Germany faced a set of institutional constraints that would make future expansion and reform of higher education much more difficult. Firstly, Germany had sixteen higher education systems rather than one, since the Basic Law provided the Länder with control over universities. Coordination between the Länder was slow and piecemeal: Helmut Kohl referred to the council of Länder education ministers as 'the most reactionary institution in the Federal Republic'.[34] Secondly, each year's higher education budget was negotiated in the Länder legislations as a lump sum, rather than through per-student funding as in Britain and Sweden.[35] This meant that expansion of student numbers would not necessarily be met by a commensurate increase in funding. Thirdly, the structure of German law, based on the Basic Law, meant that reform to the higher education system would have to be achieved through constitutional mechanisms.

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[33] Muller, Stephen (ed.). 1996. Universities in the Twenty-First Century. p.5

[34] Hufner, Martin, 2003 'Governance and Funding of Higher Education in Germany', Higher Education in Europe 28(2).

[35] Konow, Gerhard. 1996. Planning, Financing and Accountability of German Universities. In Muller fn(31).

Although German enrolment had expanded to around ten percent by 1970, there was concern over the universities' ability to meet this rising demand. In 1969, the CDU / CSU / SPD grand coalition government passed an amendment to the Basic Law which stipulated a new role for the Federal government in higher education, particularly in terms of funding university expansions, for which the Federal government would pay fifty percent. As Section Two noted, attaining an expansion of higher education is difficult and requires near full representation of the middle class in order to overcome institutional constraints. The grand coalition permitted legislative expansion of higher education since the middle class - the chief beneficiary of expansion - was no longer split across parties. However, partisan preferences became much more distinct following the victory of Willy Brandt's Social Democrats in late 1969. The SPD government that controlled German government until 1982 introduced a variety of higher education reforms reflecting their particular ideological concerns.

Chief among these SPD reforms was the introduction of the BAFöG (*Bundesausbildungsförderungsgesetz*) system of student financing. This provided student grants aimed at low-income students and was funded two-thirds by the Federal government.[36] This was followed in 1974 with the introduction of student loans. As suggested by the 'lottery payment' in Section Two, the chief reform interest of the Left was ensuring that working class children would be able to access higher education, rather than any particular interest in increasing per-student financing or coverage, which would mostly benefit CDU/CSU constituents. The countervailing position of the CDU/CSU

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[36] Onestini, C. 2002. Federalism and Lander Autonomy: The Higher Education Policy Network in the Federal Republic of Germany, 1948-1998. Routledge.

became clear in 1983, one year after entering office, when they changed the BAFöG system into an interest-free loan instead of a grant. Furthermore, the CDU/CSU were content to let inflation reduce the number of eligible recipients from 44.6% in 1972 to just 12.6% by the time the Social Democrats returned to power in 1998.[37] Gerhard Schröder's government reacted to this starving of the BAFöG system by increasing the generosity of grants and eligibility significantly in 2002.

Thus, in terms of increasing the progressivity of access to university, partisan patterns played out in Germany in a similar manner to the UK and Sweden, with the left pushing grants and access by the working class and the right limiting such financial support. In terms of overall expanded access, however, neither party has been willing to encourage the transition to a mass system, largely because of the institutional constraint of overriding the Länder.[38] The size of the overall system stagnated under CDU/CSU rule: an increase from 18% to 25% of the cohort attending university from 1985 to 1995. The SPD government was also not willing to finance substantial expansion: by 2000 the rate of attendance had risen only to 27%, by this point almost twenty points lower than the UK and Sweden.[39] Underlying this stagnation was one of the Kohl government's final acts of legislation: the 1998 Amendment to the Higher Education Framework Act. This amendment established national quotas on the number of students who could enter any of the following fields: medicine, veterinary medicine, dentistry, biology, architecture, business management, and psychology. These types of restrictions allowed the

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[37] Hufner fn(32)

[38] Ostermann, Hanna, 2002, '"Rotten at the Core?" The Higher Education Debate in Germany', German Politics, Vol 11. (1).

[39] Hufner fn(32).

CDU/CSU to significantly limit entry into a number of the professions best represented in their constituency and this strategy resembles that of UK Conservative party in 2005.

Thus, German higher education has not transitioned yet from an elite to a mass system. Many Germans now believe a crisis point has been reached. In 1997 there were widespread national protests over the under-funding of higher education and the CDU/CSU and SPD both agreed that reforms were necessary.[40] However, the SPD were unable to break the endemic *Reformstau* blocking change. Nor is there any real consensus on whether a Partially Private or Mass Public path is the way forward. The SPD appeared to reject the former option by passing a bill preventing tuition fees in 2002. The CDU/CSU conversely have made some rhetorical nods towards fees. Nonetheless, they are unlikely to be able to enact these fees, since they would directly hurt their own constituency of the upper middle class who are the vast majority of university students (by 1999, only twelve percent of university students had working class parents). Ironically, coalition government, as in the mid-1960s – could be the savior of expansion. Or since federal reform is constrained, change may come from the veto players themselves – the Länder. Nordrhein Westfalen introduced limited tuition fees in 2006 to much student opposition.[41] The German system then remains in stasis – the quota system and the constitutional role of the Länder have prevented transition to a mass system of higher education.

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[40] Schleicher, Andreas, 2006, 'The Economics of Knowledge: Why Education is Key for Europe's Success', Lisbon Council Policy Brief.

[41] Financial Times, 25th October 2006. 'Germany's corridors of learning start to chart independent path'.

Section Six: Conclusion

The politics of higher education present a stark contrast to our typical theories and empirical knowledge of public spending in advanced industrial nations. Since higher education is disproportionately accessed by the wealthy, public spending on it is almost always regressive. Thus, analysis of higher education flips on its head our typical understanding of the redistributive politics of public spending. Furthermore, it also alters our understanding of institutional change, where the literature typically focuses on a binary view of change / no change. But what matters just as much in higher education is the *type* of change that prevails – in this case the distinction between Partially Private and Mass Public models. This paper explains institutional change from the ground up – that is, as the result of parties aggregating individual preferences over different higher education systems and attempting to impose reform over the heads of possible veto players. Institutional change is not inevitable but nor is it unidirectional.

The analysis demonstrated that higher education systems in the OECD fall into three key types: the Partially Private, Mass Public, and Elite systems; and that transition between these types is highly politicized and highly difficult. This problem is particularly stark for Elite countries because transition requires the combination of low institutional costs to change and large electoral majorities and may also be easier in states with low inequality. Once a transition does occur, politicians will be faced with a choice between the Partially Private or Mass Public model. Perhaps counter-intuitively it is left-wing parties who are more likely to pursue a Partially Private model, as happened during the Blair administration in the UK. Conversely, governments could choose to publicly finance expansion: the Mass Public model. Tellingly, it was the Moderate party in

Sweden who made the most concerted steps towards this model of higher education, with the Social Democrats instead focusing on access for the working class.

The potential transition of Continental Europe's Elite system of higher education into a mass system depends on the ability of governments to override both electoral and institutional blocks on change and this may only be feasible under conditions of a 'grand coalition', like that presently governing Germany. Even then, questions over the direction of institutional change may prove even thornier than that over transition from elite to mass higher education. For there is no clear prediction, short of knowing the future partisan composition of Continental Europe, whether England or Sweden will be the chosen model. Even increased business and popular demand for higher education may yet founder on the rocks of partisanship.

Table One: Party Preferences over Higher Education Systems

	Poor	Middle	Rich	Costs	Total
Left (Elite)	1.5	0	0	0	1.5
Left (Mass Public)	0	2α	0	$-c$	$2\alpha - c$
Left (Partially Private)	1.5	α	0	$-c$	$1.5 + \alpha - c$
Right (Elite)	0	0	2	0	2
Right (Mass Public)	0	$2(1-\alpha)$	β	$-c$	$2(1-\alpha) + \beta - c$
Right (Partially Private)	0	$(1-\alpha)$	$(1-\beta)$	$-c$	$(1-\alpha) + (1-\beta) - c$

Table Two: Partisan Effects on the Composition of Education Spending

	MODEL A	MODEL B	MODEL C
	Tertiary education over primary education	Tertiary education over primary and secondary education	Tertiary education over secondary education
LAGGED D.V.	0.473	0.349	0.466
	(0.052)***	(0.076)***	(0.094)***
CABINET COG	0.007	0.003	0.005
	(0.003)**	(0.002)*	(0.004)
PUBLIC ED as a % GDP	0.043	0.041	0.258
	(0.078)	(0.051)	(0.122)**
POPULATION<15	0.043	0.031	0.033
	(0.044)	(0.035)	(0.091)
LOG (GDP)	-3.166	-6.034	-15.481
	(5.072)	(3.267)*	(8.901)*
LOG (GDP) SQ	0.040	0.109	0.337
	(0.096)	(0.063)*	(0.175)*
LOG (POP)	-3.049	-2.431	-6.286
	(3.016)	(1.683)	(4.921)
GOVEX/GDP	-0.053	0.002	0.076
	(0.039)	(0.025)	(0.061)
YEAR	0.043	0.014	-0.037
	(0.026)	(0.015)	(0.037)
CONSTANT	21.731	95.781	346.323
	(84.656)	(58.372)	(161.427)**
OBSERVATIONS	106	95	99
COUNTRIES	20	20	20
R-SQUARED	0.73	0.52	0.50

All models use country-fixed effects. Standard errors in parentheses, * significant at 10%; ** significant at 5%; *** significant at 1%

Table Three: The Trilemma in OECD States in 2002

	MODEL A	MODEL B	MODEL C	MODEL D	MODEL E	MODEL F
	% PRIVATE	% PRIVATE	ENROLMENT	ENROLMENT	PUBLIC COST	PUBLIC COST
ENROLMENT	.194	.571			.007	.010
	(.281)	(.177)***			(.005)	(.003)***
PUBLIC COST		-51.708	14.021	35.390		
		(10.756)***	(9.149)	(15.501)**		
% PRIVATE				.489		-.012
				(.235)**		(.004)***
GDP CAP	-.789	.328	-.106	-.237	.0216	.012
	(.791)	(.535)	(.421)	(.475)	(.009)**	(.008)
CONSTANT	33.887	41.398	40.606	9.041	.145	.553
	(24.869)	(17.073)**	(10.966)***	(15.275)	(.305)	(.251)**
N	19	19	19	19	19	19
R-SQ.	0.11	0.66	0.12	0.36	0.36	0.76

All regressions use OLS with small-sample robust standard errors. Standard errors in parentheses, * significant at 10%; ** significant at 5%; *** significant at 1%
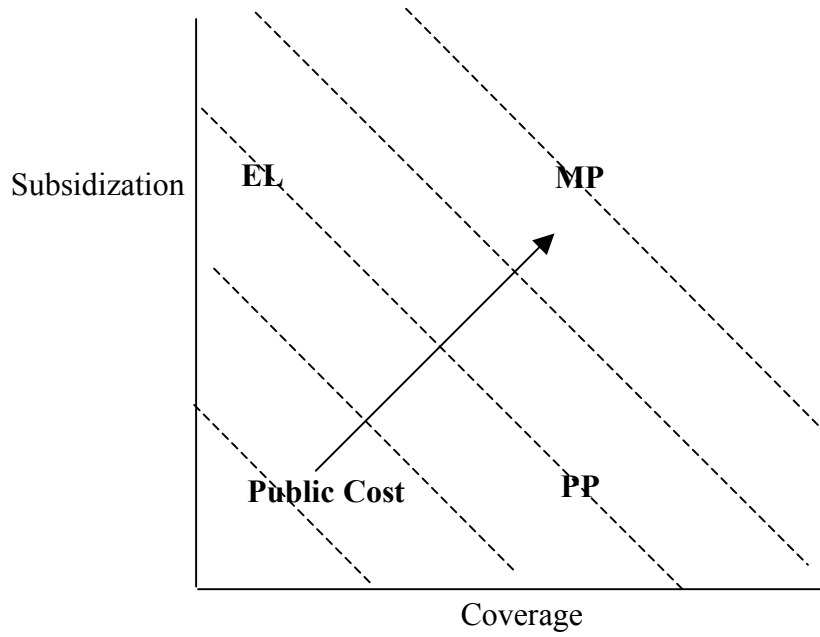
Figure One The Trilemma as an Isocost Graph

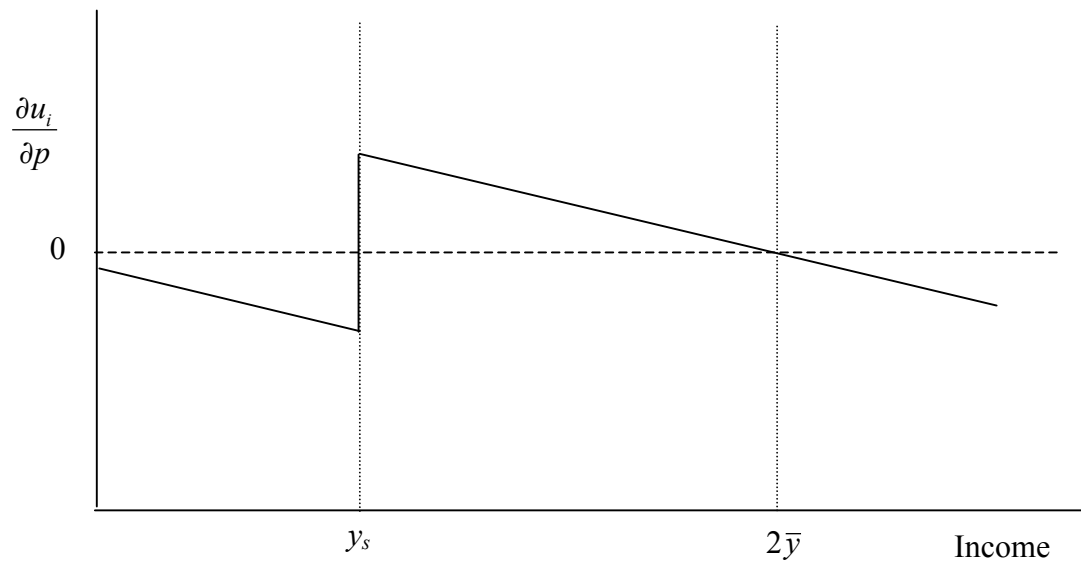**Figure Two: Income and the Effect of Subsidization on Utility**

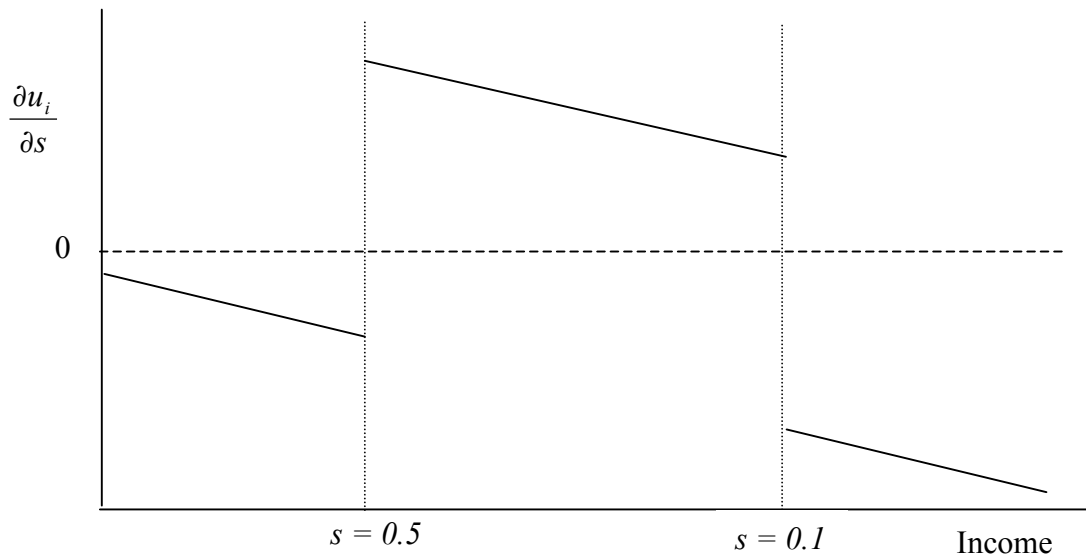**Figure Three: Income and the Effect of Changes in Coverage on Utility**

$\frac{\partial u_i}{\partial s}$

0

$s = 0.5$ $s = 0.1$ Income

Figure Four: The Trilemma and Individual Utility

Utility

Mass Public

Partially Private

Elite

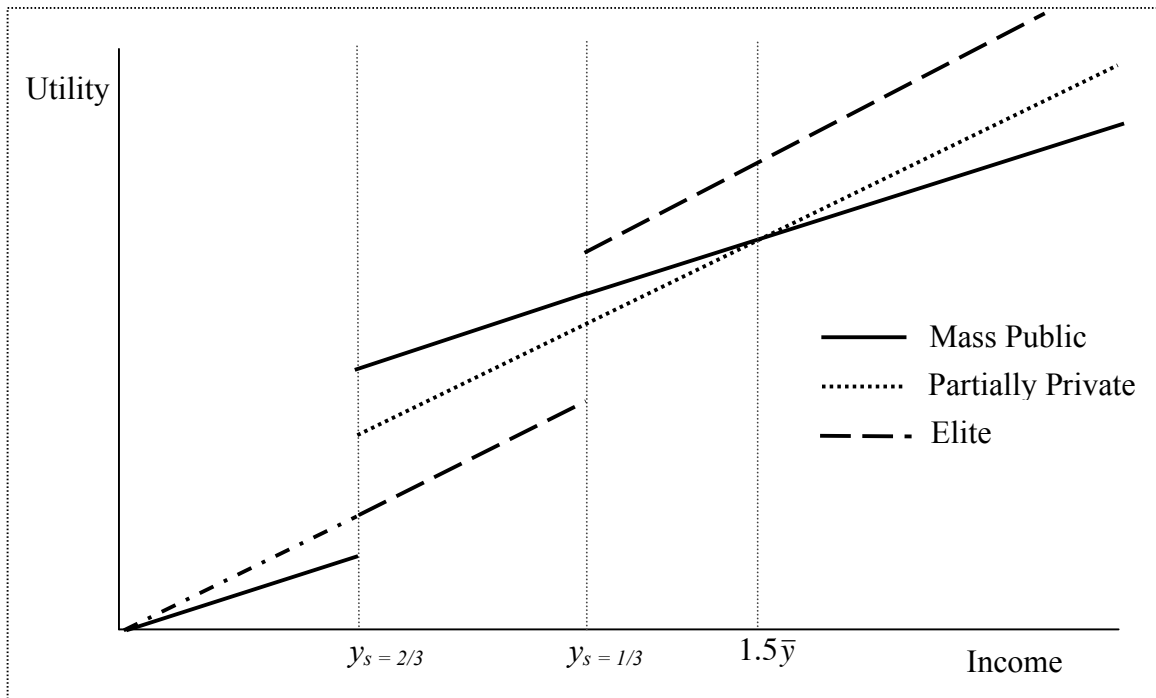$y_{s\,=\,2/3}$ $y_{s\,=\,1/3}$ $1.5\bar{y}$ Income
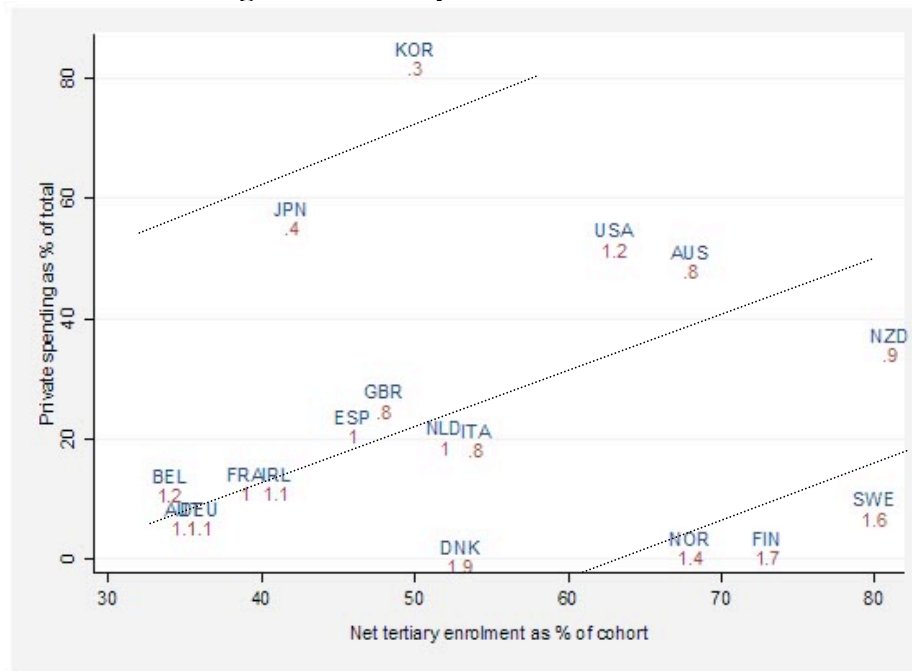
Figure Five: Empirical Iso-Cost Lines

Figure Six: Changes in Selected States 1995-2002