Political Linkage Strategies and Social Investment Policies

Clientelism and Educational Policy in the Developing World

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1. Introduction

People can protect themselves from the loss of market income (wages, profits) through communal networks (family, religion, neighborhood, etc.), insurance contracts (financial markets), or government-provided support (welfare state social benefits). The latter may substitute lost income with government transfers ("social compensation") or enable them to acquire capacities to earn a new market income ("social investment"). An important ingredient of social investment policies is public education and training. But it is critical whether public support is delivered in terms of "policy," with eligibility to obtain the benefit for anyone who meets certain universalistic criteria (like residence status, age, previous qualification, insurance contribution, or labor market status), or in terms of "clientelism," as a favor delivered by politicians and their brokers to those who support them to get elected and hold public office.

An earlier study comparing 66 developing countries with at least a modicum of multi-party competition showed that clientelistic benefits tend to operate as a *substitute* for social policies of compensation (Kitschelt, 2015). Where weak state capacities prevent the implementation of encompassing effective pension and unemployment insurance schemes, people may resort to clientelism as a "second best" strategy of income risk-hedging. Both clientelistic hedging and social insurance, however, address the same problem with different arrangements of social compensation.

In contrast to social compensation, however, we show in this paper that clientelism is no substitute when it comes to social investment in capacities to earn a market income. We develop a theory on how clientelistic politics in developing countries negatively affects public education and its outcomes for skill formation by both "crowding out" educational inputs and "degrading" educational outputs and outcomes. First, clientelism "crowds out" resource inputs that could have been devoted to education. Second, clientelism "degrades" the investment effect of resources allocated to public education because they are often diverted to the personal consumption of rent-seeking clients, frequently the titular providers of such education services. In other words, clientelistic politics reduces both the size and the efficiency of public education in developing countries.

The paper is organized in five parts. In *Section 2,* we explain why government input in education should not always be considered social investments at face value. Educational effort can be deployed as an investment in educational recipients, but it can also be a strategy of social compensation and/or consumption mostly benefitting its producers, managers, contractors and teachers in the education system. In *Section 3* we introduce our theoretical arguments on how clientelism "crowds out" (Stage I) and "degrades" (Stage II) social investment efforts. In *Section 4*, we present an illustrative case study of Mexico's educational politics detailing the mechanisms postulated in our theoretical argument. *Section 5* introduces a large-N cross-national study. We first describe the data we use in Section 5.1. Then, in Section 5.2, we provide evidence indicating that clientelism "crowds out" (Stage I) input in public education. In *Section 5.3*, we show that resources devoted to education under clientelistic politics often result in very poor educational skills, thus "degrading" (Stage II) the investment momentum of public educational resource commitments. *Section 6* concludes.

2. When Do Efforts in Education Signal a Social Investment?

Education is a Janus-faced good in at least two ways: First, it can be *consumption*, but also *investment*. Second, it can be a *private* good, but also has *public* goods qualities. [1] Consumption uses up a resource and creates benefits in a single time period. Investments deploy resources to yield benefits to the owner over a multitude of time periods. Education as a consumption good is privately appropriated. However, as an investment good, it has both *private* benefits and *public* spillovers, while it is never just a collective good with non-excludable provision and non-rival consumption (Kosack 2012: 24). When a government makes efforts in the field of education, the type of goods provided – private or public, investment or consumption – cannot be directly observed or measured by any simple indicator. It is essential to distinguish four operational and observable aspects of education and consider their goods characters, as summarized in Table 1 and elaborated below.

[Table 1 about here]

1. **Educational Inputs:** These are financial resources allocated to education, converted into buildings, teaching materials, salaries and other operating budgets. This fiscal flow is easily measurable in budget ratios and GDP shares, disaggregated by public and private sources. Such inputs have consumption qualities for their providers (builders, teachers, administrators, service personnel), but may be investments from the perspective of students.

2. **Educational Throughputs:** This denotes the organizational *process* of education, or how recipients of treatment (student populations) are interfaced with inputs (teachers, facilities, etc.). Indirect measures of the throughput process are the ratios of age cohorts included in the educational process and student-faculty ratios. Also, teacher-non-teaching support staff ratios are relevant. The quality of the throughput process determines to a considerable extent whether and how inputs are converted into educational investment outputs and outcomes or mostly consumption for the participants of the process, education providers (incomes) or recipients: Presence in educational institutions could consume students' time without adding marketable skills.

3. **Educational Outputs:** These are the formal certifications graduates earn as a result of an educational process, in as much as employers recognize degrees, student grades associated with degrees, and degree-issuing institutions as signals of skill and ability and reward recipients by salary levels for their effort. From the recipient's vantage point a degree is thus a private investment good. From an aggregate societal perspective, the density of degree holders may create a collective investment goods, as high-quality employers locate in areas with more degree holders and promote economic expansion.

4. **Educational Outcomes:** These are the measured operational skills of the labor force that may or may not be associated with the distribution of degree holding. There are general verbal, mathematical and scientific skills and specific skills applicable only in narrowly defined professions. Measures of general educational outcomes, especially verbal and mathematical skills, have become available only recently and will be employed in our analysis. They are the ultimate and most desirable measure of educational investment, both private at the individual level and public.

[1] This property of education is similar to water supply and electricity (Min 2015).

[Figure 1 about here]

The four aspects of education defined above show interesting features upon examining World Bank data and our data on clientelistic linkages (see below). Figure 1 is a correlation matrix. The first four variables are (from left to right) measures of input, throughput, output and outcome in secondary education. The final variable (bottom-right) is an indicator of political linkage strategy – the effort of political parties in mobilizing voters using clientelistic benefits. The data points include a set of 66 developing democratic countries (see the note of the graph for details). The first observation derived from the matrix is that inputs, throughputs, outputs and outcomes of education are at best moderately correlated. For example, student spending does nothing to explain teacher-pupil ratios and is a rather feeble predictor of educational degree outputs or measured citizen educational competences. Much of the variation among the variables remains unexplained. This suggests that the rates of "conversion" from educational inputs into outputs and outcomes vary among developing countries. Second, the level of clientelistic effort in a developing democracy is negatively associated with educational input, throughput[2], and especially output and outcome.

Based on the four aspects of education defined above and motivated by patterns found in the data, we propose a theory of clientelism and social investment in education in developing countries. We argue that the degree to which a government provides education as private and public *investment* depends on two factors: (1) the abundance of public resources allocated to educational *inputs*, and (2) the efficiency of conversions from inputs and throughputs to outputs and outcomes. Both factors are shaped by the dynamics of distributive politics. Specifically, choices of governments in the generosity of educational inputs and the parameters of their allocation is a function of interest alignment of voters on the demand side and linkage strategies of politicians and parties on the supply side. In the context of developing democracies, the degree to which political parties mobilize voters with clientelistic benefits is the key mechanism on which our paper is focused. We argue that clientelism both *crowds out* educational input ("Stage I Effect") and *degrades* ("Stage II Effect") the efficiency of converting educational input and throughput to output and outcome.

3. Theory: Interests, Choice, and Implementation in Educational Investment Strategies

Econometric models leave little doubt that educational investments, albeit measured only with input or throughput indicators, are one critical ingredient of countries' economic growth performance, even when controlling for a host of other variables (cf. Barro 1997; Bleaney and Nishiyama 2002; Glaeser et al. 2004; Halter et al. 2014; Jones 2015). But not all education is equally important at every level of development. Moreover, different tiers of education yield different political conflict alignments, predicated on diverging distributive interests of groups and classes.

Disparities in delivering primary schooling and achieving basic literacy matter to account for economic performance matter most for the poorest countries. But in our comparison of more than 60 countries with multi-party elections, basic literacy rates among 15-year-olds and older vary rather little. Moreover, no social group—defined in terms of class, ethnicity or even gender—challenges the access of

[2] Higher pupil-teacher ratio means worse educational throughput. Thus, a positive correlation indicates a negative correlation.

any other group to basic education.[3] The political conflict about primary education has become a valence issue where politicians compete on competence.[4]

At the other extreme, tertiary education, often intertwined with technological innovation, becomes a critical contributor to economic growth primarily among countries situated near the global innovation frontier. Affluent countries exhibit big variance in post-secondary and university educational sectors (Ansell 2010; Busemeyer 2014; Garritzmann 2017). In middle-income countries outside the post-communist region, however, tertiary education captures only a small fraction of each student age cohort.[5]

The greatest economic educational challenge for middle-income countries is to raise large portions of their low-skilled, but literate work-force to higher skill-levels to enable companies to move up the global production chain to production processes with higher value-added. Chances for employment are mostly expanding for (higher) secondary education graduates. Especially in countries in the $ 5,000 to $ 20,000 GDP (2010) per capita income at PPP range, the critical political action is in the realm of improving secondary education systems, including a lower (8-10th grade) and an upper tier (11-12th grade), often supplemented by vocational education.

Secondary education commands the largest share of total education spending (40-60%) almost everywhere. Inputs as percentage of GDP vary substantially across countries, and even more so quality of outputs and outcomes. This variance, we submit, has to do with conflict of interest among social groups and political organizations that impinge upon education politics in two stages. In the first, group conflict of interest leads to a lesser or greater funding allocation to secondary education inputs. In the second stage, the conflict results in a greater or lesser productivity of educational effort in terms of outputs and outcomes. Where clientelism becomes a dominant pattern of politics it "crowds out" education spending in the first stage and "degrades" educational effort in the second stage by turning inputs into consumer goods for the providers of educational services rather than investments, i.e., improvements of the professional capabilities of the recipients of educational services. [6]

In this paper we show the empirical effect of lesser or greater clientelism in politics on crowding out and degrading educational effort. Due to length and data limitations, we will only sketch in the barest fashion preference schedules and conflict alignments that affect the role of clientelism in educational efforts.[7] We will then **specify the hypotheses linking clientelism to educational investments at different stages of the educational process with more emphasis on the second stage** (converting inputs into outputs), as the literature has paid less attention to that issue.

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[3] In an earlier age, in Western countries, the struggle about primary education also was mostly not a distributive-economic conflict, but one about ideological control between emerging states and religious regimes (e.g., Ansell and Lindvall 2013).

[4] Of course, there are quality issues, but they may require a fine-grained sociological and economic analysis of educational governance and delivery mechanisms (Banerjee and Duflo 2011).

[5] World Development Indicators show hardly any of the countries outside the post-communist region with BA or higher tertiary level certification degrees of 15 percent or more in any age cohort.

[6] Economists, of course, have noticed the problem that educational inputs are uncorrelated to outputs and outcomes, but have solely looked for causes in the governance and organization of educational systems (degree of centralization, teacher job security, private/public schools), without endogenizing any of these features to politics and considering clientelism(cf. Pritchett 2001; 2013).

[7] An earlier version of the paper, delivered in May 2018, contains a somewhat more explicit consideration of the interest configurations and whatever micro-level data on preferences and meso-level data on party positions that test empirical implications of the theoretical set-up we could find (Chen and Kitschelt 2018).

3.1. Societal Preferences over Educational Effort

In middle income countries, introducing early and simple reforms—such as elementary education to achieve universal literacy—may be widely supported, while more advanced reforms—such as secondary school expansion—crystallize conflict among contrasting distributive coalitions (Doner and Schneider 2016). The literature on educational policy quite appropriately considers secondary school reform as an economic distributive choice over different groups' opportunities for social mobility (cf. Heidenheimer 1981; Ansell 2008; 2010; Boix 1998; Busemeyer 2015; Iversen and Stephens 2008). Like Ansell (2010), let us distinguish three stylized groups—the poor, the middle and the rich. Their political representatives make choices over the allocation and use of scarce resources: (1) whether or not to put them at all into educational investments or clientelistic consumption, with education as just one possible channel; (2) if educational investments, how much effort to dedicate to secondary education; (3) if educational investment, how much effort to dedicate to tertiary education.

The middle-income tier's upward mobility aspirations will be satisfied most, if investment in secondary education becomes the policy prerogative. As secondary objective this group may acquiesce to an emphasis on tertiary educational investments, as it funds a more distant step on the ladder of upward social mobility this group ventures to reach. Middle-income earners will abhor the waste of educational resources for clientelistic consumption and give it lowest priority.[8]

High-income recipients with resources to enroll their offspring in private primary and secondary education will want to preserve closure of middle class paths to higher education through public secondary school investments. They favor strong investment in an exclusive public higher education system, as long as it serves only their own children, but oppose expansion of secondary education to the children of the middle class. Rather than producing more competitors for their own offspring with higher secondary and tertiary educational certificates, they would rather waste educational resources on clientelistic provisions. The poor, finally, in a struggle to survive have a short time horizon and discount their children's future access to secondary and higher education. They begrudgingly opt for clientelistic politics as the least bad and most expedient option,[9] if it delivers a modicum of immediate satisfaction of needs, for example by a high ratio of unskilled non-teaching to teaching staff in the educational system.[10] But clientelistic policies outside the area of education may deliver more direct access to public resources. As runner-up preference, the poor would rather see investments in secondary than tertiary education, as they reckon that the probability of their own offspring going to secondary school is higher than attending university.

The three groups thus have different preference schedules (table 2) which opens up the feasibility of different coalitions, if none of them unilaterally controls the political system. The role clientelism may play in each configuration has consequences both for the allocation of public resources to education (stage I) as well as the conversion of educational inputs into outputs/outcomes (stage II).

[Table 2 about here]

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[8] We are ignoring here the (small?) minority of M voters who—as teachers or business infrastructure suppliers—are also producers of educational services. Their interest schedule is more complicated and faces a real trade-off between what they would welcome for themselves (rent-seeking) and their children (efficient provision of outputs and outcomes).

[9] Strong clientelism is therefore associated with higher turnout of the poor (Kasara and Suryanarayan 2015).

[10] Students of clientelism have often used public employment as a tracer of clientelistic political effort. See, e.g., Weitz-Shapiro 2014. In countries without effective welfare states, expansion of public employment is a form of "embedded liberalism" to protect the poor from destitution (Nooruddin and Rudra 2014).

3.2. Stage 1: Interest Alignments and Political Coalitions over Secondary Education Policy

A strong emphasis on clientelism as distractor from educational investments may result especially from a rich-poor coalition. At the stage of financial allocation to education, poor voters may rather see resources diverted to other programs than education, as they offer a higher yield of clientelistic side-payments. Aside from outright direct vote buying and gifts during electoral campaigns, such alternatives include direct social transfers (disability pensions, housing subsidies, nutrition aid and medical services) or public works and general administrative jobs that often exist only on paper and do not involve any operational tasks.

If a coalition of politicians and parties dominates that assemblies rich and poor voters, it is most inimical to public educational spending. A coalition of poor and middle-income voters may strike a compromise in which the poor concede some secondary educational spending. Most favorable for public sector educational budgets, and particularly for secondary education, should be a rich/middle-income coalition. Empirically, this framework implies at the micro-level that those who are receptive to clientelism put less emphasis on educational investments. At the meso-level of political parties, the more clientelistic parties should lend less support to educational investments. And we should find that this applies to both clientelistic parties attracting the rich and the poor.

At stage I, we should observe that where the average proclivity of political parties toward clientelism is more pronounced, governments spend less on education, especially secondary education. Our country sample below is confined to polities with a modicum of multi-party competition and in most, but not all, instances a sufficiently level playing field that incumbents face a realistic risk of electoral defeat and expulsion from government. This prevents us from testing the political regime hypothesis according to which authoritarian polities, presumably dominated by the rich, spend less on education.[11] But with our country sample we are able to explore whether greater clientelistic effort is associated with less educational budget allocation, even once regime properties have been largely controlled for.

3.3. Stage II: Conversion of Educational Effort into Educational Outcomes

In the second stage, dominant coalitions catering to the rich and the poor may subvert middle-class preferred secondary education investment by converting public educational expenditures into consumption expenses. This conversion may take many forms: Politicians may retain contractors to build schools and supply textbooks because they make their employees support their political benefactor in elections. Elected politicians may hire a high ratio of non-teaching to teaching staff and/or hire teachers with more concern for their political loyalty than their pedagogical competence. Also awarding scholarships to the offspring of political loyalists without regard for their educational merits will diminish the quality of educational outputs and outcomes (Hicken and Simmons 2008: 112). Much of the clientelism at stake here is not single-shot vote-buying but enduring "relational" exchange throughout legislative terms. This intertemporal resilience of relational clientelism alleviates problems of opportunism, monitoring, and sanctioning involved in clientelism (Kitschelt and Wilkinson 2007; Kitschelt and Yildirim 2018; Nichter 2010; 2014).

[11] Underlying this hypothesis is selectorate theory (Bueno de Mesquita et al. 2003): Democracies provide more "collective goods" (including education) than dictatorships. See Brown and Hunter 1999; Lake and Baum 2001. Baum and Lake 2003; Stasavage 2005; Ansell 2010.

Clientelism thus tends to misallocate people and resources in the education process for the sake of powerful partisan actors' short-term political and material consumption purposes. Because clientelistic producers and consumers of educational services obtain more resources than would correspond to an open competitive allocation in educational exam contests and in occupational markets, the educational outputs (degrees) and outcomes (skills, competences) are degraded. The hypothesis we can test, then, is that—net of expenditure input—polities with parties exerting strong clientelistic effort exhibit weaker academic outputs and outcomes. Where (input) expenditures are high, yet outputs and outcomes are weak, clientelism is expected to be at its most intense.

3.4. Potential Mediating Mechanisms: "Friendly Extensions" of the Theoretical Argument

There are at least five intervening mechanisms between clientelism and degradation of educational investment effort. They are correlated with clientelism, and may make the latter statistically insignificant as predictors of educational inputs/outputs/outcomes, although they are closely intertwined with the intervening variables in ways that may be impossible to disentangle in terms of causal direction. There may be a "coevolution" or "complementarity" of clientelism with these mechanisms.[12]

1. State Capacity: Where the government machinery is staffed by professionals hired because of their operational skills and independently of considerations of political loyalty, state capacity is higher and clientelism tends to be lower. Investment efficiency of educational policy will also be higher.

2. Between-group Ethnic Income Inequality (BGI): Ethnic divides, but only if they involve ethnic division of labor and systematic group-based income differentials, foster clientelism (Kolev and Wang 2018, building on Baldwin and Huber 2010). Polities with high BGI may produce fewer club and collective goods (Alesina et al. 1999) and consequently invest less (stage I)—and less efficiently as investments (stage II)—in education.

3. Left Redistributive Programmatic Parties: Where developing countries do incorporate "left" parties with a programmatic redistributive agenda, clientelistic effort will be lower, with more educational inputs (stage I) and more efficient investments (stage II).

4. Post-Communist Polity Context: Communist systems emphasized educational investments and this legacy may color the appeals and policies of both post-communist successor parties and liberal-democratic or nationalist competitors. This effect may come to the fore more in the efficiency of converting inputs into outputs than the generosity of educational funding in a time of economic liberalization.

5. Generic Strength of Programmatic Parties: The presence of more programmatic parties, regardless of ideological bent or legacies, may undercut clientelism and improve efficiency, if not effort, in educational policy investments. Some diversified linkage parties combine clientelistic and programmatic strategies (Kitschelt and Singer 2016), but most programmatic parties do not. Programmatism involves (1) internal cohesion of parties around public policy objectives, interacting with (2) differentiation of the parties' objectives in the party system and (3) salience of those issues on which parties show internal programmatic cohesiveness and external, systemic difference (Kitschelt and Freeze 2010).

[12] Besley and Persson (2011), among others, have invoked the idea of "coevolution" where causal relations may be impossible to identify.

3.5. Rival Accounts of Educational Investment Efforts and Outcomes

There is, however, also a set of mechanisms that may influence the effort and efficiency of educational investment independent of partisan clientelism and related political processes. When entered as controls, they may prove our argument to be wrong, or serve as complementary explanations.

(1) Particularist Electoral Institutions: Personalistic electoral systems (open list proportional representation, single-member districts) have been alleged to promote clientelism, but there is little evidence in a broad cross-national comparison (Kitschelt 2011). Nevertheless, particularistic electoral institutions could work through some other mechanism of rent-seeking politics to diminish educational expenditures and degrade educational outputs and outcomes.

(2) Open Economies: Open economies cannot afford an underfunded, inefficient educational system. They offer more opportunities for high-skill jobs and make the elites less inclined to seek system closure (Ansell 2010). Openness may enhance educational expenditure and efficiency.

(3) Liberal Democratic Regime: Full equal multi-party competition—combined with ballot secrecy and full civil liberties may boost transparency and accountability of policy-making. This may counter clientelism and increase support for efficient educational investments. As indicated above, this argument cannot be fully explored, as the current analysis is focused on countries with a some to full multi-party competition.

(4) Economic Inequality: Inequality may make it hard for individuals to invest at a socially optimal rate in education and it thereby reduces economic growth (Halter et al. 2014; Ostry et al. 2015). Inequality may also reduce educational investment and efficiency, as it weakens the middle income strata most keen on such outcomes. Inequality may work on politicy-making through clientelism (You 2015), but empirically this relationship may be tenuous.[13] The channel between inequality and education policy may be distinct.

(5) Institutional Veto-Gates and Veto-Players: More veto-gates or veto-players make the passage and implementation of new policy more arduous and likely less efficient (Tsebelis 1995; 2002). Starting from a status quo of little educational effort, polities with plentiful veto gates and players should display lower educational policy effort and efficiency. We register this argument here, but for want of appropriate data do not make even a remote effort to test it.

4. A Case Study of Degrading Educational Investment: Mexico

There is little systematic work available on the passage of policy and the implementation of educational strategies beyond the study of educational expenditures (critically: Gift and Wibbels 2014). But Mexico is an exception, primarily because the high-profile politics of its teachers' union appears to have degraded the quality of educational results (see Fernandez 2014; Chambers-Ju and Finger 2017).

[13] You's findings rely on a questionable inequality dataset and cannot be replicated with better indicators (contact Kitschelt for data upon request).

Teachers' unions may not invariably bring about such outcomes. [14] But the combination of a corporatist, authoritarian party instrumentalizing unions—with receptive and profiteering union bosses enmeshed in clientelistic networks—certainly does.

In the 1940s the ruling Mexican *Revolutionary Institutionalized Party* (PRI) merged fragmented teachers' associations into a single teachers' representation. Once centralized and with loyalists displacing intermittent leftist challengers, the teachers' union became the party's "political brigade" to mobilize the broader electorate (Chambers-Ju and Finger 2017: 219). Electoral manipulation was part of the deal, as ballot stations were typically sited in schools.

An oligarchy of union leaders and power brokers benefited from this design as teachers' functionaries, controlling teachers' hiring and firing decisions, governing teachers' training, wages, and performance evaluation, and shaping the governance structure of schools (choice of principals and district managers). Over the course of decades, this system delivered weak educational results and failed to keep up with the demands of labor markets for better trained workers. The clientelistic ruling party crafted an extremely politicized and centralized teaching system that simply could not deliver quality.

Decentralizing reforms came with Mexico's political liberalization and democratization in the 1990s and early 2000s under the first non-PRI president. With the waning power of the old PRI, the union's imperious boss, Elba Esther Gordillo, founded her own party and in 2006 was said to have unofficially sold off the union's electoral support to the winning PAN presidential contender.[15] Most likely this was a defensive act to protect the union's clientelistic network and the existing educational infrastructure from reform, thus exacerbating the performance crisis of the education system (Hecock 2014).

Ester Gordillo swung the teachers' union back into the PRI camp for the 2012 presidential election, even though the PRI's presidential candidate, Enrique Peña Nieto, ran against the power of the teachers' union and the inefficiency of Mexico's education system. The union paid a price for the opportunism of auctioning off its clientelistic capabilities to competing parties: Once in office, Nieto had Gordillo arrested for embezzlement of $ 156 million to finance her lavish lifestyle (including a private jet) and public opinion swung against the union. Lately, however, after almost five years in jail without trial and conviction, Gordillo was released from prison, as the PRI appeared to need the teachers' union again in its losing struggle to defend the presidency in the 2018 election.[16]

By being tied into and taking advantage of a clientelistic partisan struggle, the Mexican teachers' union could amass unparalleled power and resources much of which was extracted from budgetary expenditure lines to promote education as an investment. The union's clientelistic capacities even survived the regime and then oscillated between benefiting different parties.

Clientelistic political connections of teachers' unions play a role in degrading the conversion of educational inputs into outputs elsewhere, such as Colombia (Eaton and Chambers-Ju 2014). In India, the

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[14] By raising wages, unionization may attract more talented, high-quality teaching staff. By weakening performance oversight and competition among teachers, unions may lower teachers' efforts in the classroom.

[15] Nevertheless, it is unclear whether the union's operatives—as brokers—were actually materially useful for the PAN as the unofficially endorsed party. Larreguy et al. (2017), at least, find that teacher-brokers effectively raised the allied party's tally only where the brokers were ideologically sympathetic to the party the union was committed to support. This was definitely not the case for the PAN.

[16] See the report in the Guardian on December 21, 2017: https://www.theguardian.com/world/2017/dec/21/release-of-mexican-union-boss-a-sign-of-the-times-for-pena-nieto (accessed May 4, 2018).

intimate political connections of the public school teachers to political parties may be one element to account for the inefficiency of the Indian school system (e.g. Pritchett 2013). Overall, however, much work needs to be done to uncover and document the significance of clientelism in school systems and in the teachers' unions more specifically.

5. A Large-N Cross-National Study

5.1. The Data

We engage in a simple national cross-sectional analysis of correlational patterns. In contrast to Hicken and Simmons (2008), we have direct measures of clientelism as well as of educational performance for that exercise. The universe of cases is limited by our data sources. We exclude here from consideration the Western advanced postindustrial democracies and cover a maximum total of 66 countries in Eastern Europe, Latin America, Asia and the Middle East, and Sub-Saharan Africa. These are all countries with at least a modicum of multi-party competition, although in some instances hampered by hegemonic dominant parties. We therefore cannot adequately test the familiar regime hypothesis, but engage in a more fine-grained analysis of the mechanisms prevailing in educational effort and outcomes in countries with multiparty competition.

If the statistical analysis included the old (post)=industrialized world with very affluent countries as well, one dominant variable would have drowned all other contenders in accounting for educational expenditure and efficiency: economic development. If development is the only critical correlate of high-quality of education, it should come to the fore even in a slightly truncated set of countries that includes those with per capita GDP under $ 25,000 in 2008 (at PPP).

Dependent Variables

We rely on the World Bank's education indicators[17] for financial input, organizational throughput, and degree earnings (lower and upper secondary degrees among 25+ year old) as our dependent variables.[18] We can rely on a direct outcome variable for secondary school degree earners, and it is the *World Inequality Database on Education* (WIDE), sponsored by the UNESCO. It measures the percentage of school students situated in different tiers of educational systems (primary, secondary, tertiary) that pass different thresholds of competence in math, science and reading tests[19]. Clear and equivalent patterns emerge for students' math and science achievements in a cross-national perspective. To save space, we report only results for national percentages of students mastering the highest math test level (4). Performance results of reading tests, however, follow no pattern that is theoretically discernable to us, and we set them aside for future study.

Independent Variables of Interest

We are ultimately interested in the consequences of ***parties' and entire party systems' efforts in clientelistic partisan linkage formation***. We take the parties' clientelistic effort variable(s) from the

[17] http://data.worldbank.org/topic/education

[18] Because statistical estimations yield similar results, we confine ourselves to reporting upper division secondary degree earnings only.

[19] http://www.education-inequalities.org/about

Democratic Accountability and Linkage Project (DALP)[20], with expert judgments of parties' linkage strategies collected in 88 countries in 2008-9 (see online Appendices 1-3).

We report findings for the summary index of five different clientelistic exchange relations that parties may establish with voters and that was scored by DALP experts (gift giving, social benefits, office patronage, regulatory favors, procurement contracts). We also employ a composite index of ***parties' programmatic appeals***. Construction of the programmatism variables is sketched in appendix 2. Another variable "hand constructed" from the DALP is the ***left party strength*** variable the construction of which is also described in the appendix (originally from Kitschelt 2015). On a four-point scale it measures a party's commitment to progressive income redistribution.

We also add in most specification the educational inputs, measured as per capita spending on secondary school pupils as percentage of per capita GDP of a country. We know from figure 1 that educational inputs have some, albeit not an overwhelming, relationship to outputs and outcomes.

Control Variables

The ***between-groups inequality index for multicultural polities (BGI)*** comes from Baldwin and Huber (2010), but is employed here in the expanded version constructed for Wang and Kolev (2018). All other independent variables are drawn from established data providers. State capacity is measured in terms of the World Bank's Governance Indicator for "***government effectiveness***." The more or less democratic character of the multi-party regimes included in our study is measured by the ***Polity IV's political democracy index***, running over a 21-point scale (from -10 to +10). Johnson and Wallack (2012) offer the variables tapping ***institutional electoral particularism called "ballot" and "pool."*** Export (as a % of a country's GDP) and per capita GDP at Purchasing Power Parity (PPP) calculations originate in the usual World Bank economic statistics files. And the market income-based Gini coefficients are from Frederick Solt's ***Standardized World Income Inequality Database (SWIID)***, with the best and most reliable income inequality data currently available.[21]

Estimations presented here render controls only, if they are statistically significant. Unlisted controls turn out to be unrelated to the dependent variables of interest.

Some variables reflecting features of the education system are not available for all 66 countries in the DALP study, thus reducing the available comparison cases anywhere between 34 and 66. Most of our estimations therefore include only between 45 and 52 cases, or about 69% to 79% of the maximal number of DALP country observation points. This small number of degrees of freedom in the data severely limits the complexity of statistical analysis. We avoid operating with multivariate models of more than five independent variables and try to confine ourselves to reduced-form models that delete irrelevant controls in order to preserve degrees of freedom and prevent statistical patterns to be influenced by irrelevant alternatives.

5.2. The Crowd-Out Effect

Let us begin here with an overview of primitive results that relate measures of inputs, throughputs, outputs and outcomes at the three levels of educational services to the summary measure of clientelism,

[20] See website of the DALP project for details https://sites.duke.edu/democracylinkage
[21] cf. https://dataverse.harvard.edu/dataset.xhtml?persistentId=hdl:1902.1/11992

with a singular control for economic development added. Displayed in table 3 are only relations that are statistically significant at the .05 level.

[Table 3 about here]

On the educational input and throughput side, there is an array of indicators (see table 1) that shows no correlation with clientelism at all. Consistent with the crowding out hypothesis, secondary education public expenditure is negatively correlated with clientelism. But, consistent with Harding and Stasavage (2013), gross secondary school enrollment may go up without adding any new resources, thus deteriorating student/expenditure ratios, something that may then degrade educational output/outcomes (stage II hypothesis). The same effect of clientelism is also suggested by the fact that clientelism is associated with greater expenditure for school staffs, especially in tertiary education.

The table communicates rough evidence directly about the second stage degradation hypothesis we take up in more detail in the next section: After controlling for development levels, lower and higher secondary school completion rates, as well as secondary school students' math and science competence, is negatively correlated with clientelistic partisan effort. In more partisan clientelistic polities, there is a smaller pool of the labor force with secondary education, but a large pool with only primary schooling, and the female labor force participation is negatively correlated with clientelism. But let us first focus on the crowding out hypothesis.

Table 4 explores the evidence for the crowding out hypothesis and conveys the message of table 3 in more precise numerical terms. Partisan clientelism does reduce secondary educational effort, measured by student expenditure as percentage of GDP per capita. None of the "friendly" potential mediators between clientelism and educational inputs—state capacity, ethnic divisions, left party strength, post-communist region, or programmatic partisan crystallization—make a difference disturbing this direct relationship. As an example, we show here the resilience of the partisan clientelistic effort to the inclusion of the post-communist region variable. Likewise, none of the "unfriendly" rival hypotheses advanced by alternative theories pans out, regardless of whether we introduce democratic institutions (ballot format, district size), export share of the economy, degree of civil and political liberties (various indicators), or market income inequality.

[Table 4 about here]

5.3. The Degradation Effect

To investigate the state II degradation hypothesis, we turn to the relationship between clientelism and secondary school educational output—measured by completion of lower or upper secondary school degrees among the population age 25 and older—and/or educational outcomes—measured by the percentage of secondary school students performing at the highest mathematical (or science) achievement level 4 in the WIDE study. The relationships between economic development levels and educational outputs ($r = .71$; $N=51$) and outcomes ($r = .76$; $N = 34$) are strong in contrast to those with educational inputs. In the restricted sample we can include in the multivariate analysis, there is a strong relationship between outputs and outcomes ($r = .66$; $N = 34$).

Table 5 first numerically replicates what was already announced in table 3: Holding constant for economic development, clientelism indeed covaries with a degradation of the educational outputs. This result vanishes, however, when we add the presence of programmatically redistributive parties in a party system, or the prevalence of a post-communist partisan context—imbued with more programmatic parties,

and/or the strength of parties with economic programs, in the equation. These are "friendly" amendments to the main theoretical proposition: All three factors militate against clientelism and appear to be the proximate correlates of the negative relationship between clientelism and educational deterioration.

[Table 5 about here]

A similar pattern appears when we examine educational outcomes, measured by the percentage of secondary school students reaching the highest math scores. The direct effect of clientelism on educational quality disappears, when programmatic parties are added as predictors, either in conjunction with postcommunist legacies or GINI market income inequality (table 6).

[Table 6 about here]

Table 7 ignores the complexity of multivariate relations and mechanisms. Instead, it presents an illustration with a simpler, and hence likely to be noisier exploration of the degradation hypothesis: Do countries with relatively generous educational inputs, but weak outcomes, exhibit particularly strong clientelistic partisan efforts? Indeed, the shaded quadrant of table 7 shows rather high clientelism in that combination of educational inputs and outcomes. Mexico certainly fits that bill (Fernandez 2012). Brazil and Venezuela also exemplify the pattern well. Less fitting is the placement of Costa Rica and Malaysia in this cell: both are rather high -income countries, and thereby spend absolutely greater amounts of funds on education. The distribution of cell averages across the table, however, also suggests that the association between clientelism and educational outcomes is stronger than that between clientelism and educational inputs.

[Table 7 about here]

Once again, other theoretically "friendly" mediators between clientelism and educational outcomes do not matter. Likewise, rival hypotheses about institutions and political-economic arrangements do not contribute to an account of the observable educational efficiency patterns.

Let us finally turn to an argument that overarches the input/crowding out and output/degradation hypotheses: Can we detect anywhere indications of different social coalition politics in educational policy-making and especially of an alliance of poor and rich voters, on the face of it the most unlikely union? Just to recall, the former demand a well-endowed, but exclusive tertiary educational system that keeps middle-income contenders at bay by limiting public higher secondary education. But the rich may concede to the poor the generous (non-teaching, low skill) staffing of educational services in clientelistic fashion, and thus accept low efficiency in the conversion of educational inputs into outputs.

Indirectly a very big gap in tertiary (university) educational access between the social elites, on one side, and everyone else, but particularly the middle strata, on the other, would indicate a possible poor-rich coalition. The WIDE survey so happens to break down educational performance by income quintiles, measuring the mean percentage of 25-29 year old in the income quintiles with university degrees. The standard deviation between these means is a good measure of the exclusiveness of higher education: Most likely, the greater that standard deviation is, the more successful completion of tertiary education is skewed toward a thin layer of the rich. This is the dependent variable in table 8. Equations show independent variables that ultimately mattered, plus a control for overall educational expenditures (as % of GDP).

[Table 8 about here]

The table discloses that clientelistic partisan effort systematically and robustly contributes toward making the access gradient to tertiary university degrees more uneven, by contributing to the standard deviation in the percentage of different income quintiles achieving tertiary university degrees. This applies once development levels are controlled for, as well as the supply of upper secondary school graduates who potentially could enter the university. Upper classes manage to restrict access to higher education better, where there is more clientelistic partisan effort. Of course, further research would have to probe into this interesting correlation to reconstruct the causal process that might yield this outcome. Elements along the way could be (1) less secondary education funding where clientelistic staffing policies prevail throughout the educational system and tertiary university certification is highly restricted, and/or (2) worse conversion of inputs into outputs, where clientelistic exchange pervades educational policy implementation.

6. Conclusion

Our paper shows that clientelism is a critical form of political mediation impacting social investment strategies both in terms of fiscal effort as well as substantive political-economic effectiveness and efficiency. It goes beyond the familiar regime hypothesis that democracies spend more on education and Hicken and Simmons' (2008) exploration of educational effectiveness with rather indirect independent and dependent variables and a smaller number of observations.

Clientelism "crowds out" educational investment in favor of more direct clientelistic fiscal exchanges. Clientelism also "degrades" educational effort by undercutting professional quality-control of educational service delivery in favor of diverting funds to rent-seeking educational service providers (builders, managers, teachers, maintenance staff) and political favorites among the recipients (politically connected, but intellectually unfit students). While clientelism may address liabilities that call for social compensation (old age, unemployment, invalidity) where universal insurance systems are weak (Kitschelt 2015), clientelism does nothing to address social investment policies: It is clearly a net value subtractor. The critical area of secondary education in middle-income countries demonstrates this sharply. Behind the clientelistic penetration of educational services stands a logic of social power that this paper could barely touch: The ruling elites of all times have known that nothing is more dangerous to their continued predominance than to equip the downtrodden and exploited, or even potential middle income challengers, with knowledge and skills. This may shine through in the deliberate deployment of clientelism as a technique of domination.

Finally, let us situate our investigation within the framework of the overall volume on social investment strategies. We are contributing to advance our understanding of the politics of creating social capital in low to middle-income countries. The question is whether this capital is generated as an inclusive or a targeted social investment. Strong clientelism points the way to a targeted investment, but in many ways to a subversion of social investment, as resources are drained away from the operational purpose to empower citizens with better labor market opportunities.

Our paper does not lay out and test an explicit model of the micro-level preferences of groups of social actors and their aggregate collective action (parties, interest groups), but it develops implications of a socio-economic interest-based configuration of conflict that can be tested at an aggregate level. It suggests that economic group interests are behind the different educational social investment strategies. If an urban middle stratum (we do not dare say "class") gets its way, they advance educational investment efforts and efficiency while containing clientelism. The rule of economic and political oligarchies, as well

as their cooptation of poor constituencies, however, undermines educational investments through proliferating clientelism.

It is likely—but not tested in our paper—that educational investments are highly salient issues in many polities, particularly those in secondary education. The sketch of a Mexico case study suggests as much.

Political legacies may play an important role in shaping the extent to which thriving clientelism undermines educational investment policies. A history of communist rule as well as the presence of programmatic parties outside of a post-communist context contain clientelism and favor more educational effort and investment.

References

Alesina, Alberto, Reza Baqir and William Easterly. 1999. "Public goods and ethnic divisions." *The Quarterly Journal of Economics* 114(4):1243–1284.

Ansell, Ben and Johannes Lindvall. 2013. "The political origins of primary education systems: Ideology, institutions, and interdenominational conflict in an era of nation-building." *American Political Science Review* 107(03):505– 522.

Ansell, Ben W. 2008. "University challenges: Explaining institutional change in higher education." *World Politics* 60(02):189–230.

Ansell, Ben W. 2010. *From the ballot to the blackboard: The redistributive political economy of education*. Cambridge University Press.

Baldwin, Kate and John D Huber. 2010. "Economic versus cultural diff ences: Forms of ethnic diversity and public goods provision." *American Political Science Review* 104(04):644–662.

Banerjee, Abhijit and Esther Duflo. 2012. *Poor economics: A radical re- thinking of the way to fight global poverty*. PublicAffairs.

Besley, Timothy and Torsten Persson. 2011. *Pillars of prosperity: The polit- ical economics of development clusters*. Princeton University Press.

Bleaney, Michael and Akira Nishiyama. 2002. "Explaining growth: a contest between models." *Journal of Economic Growth* 7(1):43–56.

Brown, David S and Wendy Hunter. 1999. "Democracy and social spending in Latin America, 1980–92." *American Political Science Review* 93(04):779– 790.

Busemeyer, Marius R. 2014. *Skills and inequality: Partisan politics and the political economy of education reforms in western welfare states*. Cambridge University Press.

Corstange, Daniel. 2016. *The price of a vote in the Middle East*. Cambridge University Press.

De Mesquita, Bruce Bueno. 2005. *The logic of political survival*. MIT Press.

Doner, Richard and Ben Ross Schneider. 2016. "The Middle-Income Trap: More Politics than Economics." *World Politics*, 68 (4): 608-44.

Downs, Anthony. 1957. "An economic theory of political action in a democ- racy." *Journal of Political Economy* 65(2):135–150.

Eaton, Kent, and Christopher Chambers-Ju. 2014. "Teachers, Mayors, and the Transformation of Clientelism in Colombia." In: Diego Alberto Brun and Larry Diamond. Eds. *Clientelism, Social Policy, and the Quality of Democracy.* Baltimore: Johns Hopkins University Press. Pp. 88-113.

Fernandez. Marco. 2012. *The Political Economy of Education*. Mexico. PhD Dissertation. Department of Political Science, Duke University.

Gallagher, Mary E and Jonathan K Hanson. 2015. "Power tool or dull blade? Selectorate theory for autocracies." *Annual Review of Political Science* 18:367–385.

Gift, Thomas and Erik Wibbels. 2014. "Reading, writing, and the regrettable status of education research in comparative politics." *Annual Review of Political Science* 17:291–312.

Glaeser, Edward L, Rafael La Porta, Florencio Lopez-de Silanes and An- drei Shleifer. 2004. "Do institutions cause growth?" *Journal of economic Growth* 9(3):271–303.

Halter, Daniel, Manuel Oechslin and Josef Zweimüller. 2014. "Inequality and growth: the neglected time dimension." *Journal of Economic Growth* 19(1):81–104.

Harding, Robin and David Stasavage. 2013. "What democracy does (and doesn't do) for basic services: School fees, school inputs, and African elections." *The Journal of Politics* 76(1):229–245.

Hecock, R. Douglas. 2014. "Democratization, Education Reform, and the Mexican Teachers' Union." *Latin American Research Review*, 49, (1): 62-82.

Hicken, Allen and Joel W Simmons. 2008. "The personal vote and the efficacy of education spending." *American Journal of Political Science,* 52(1):109– 124.

Iversen, Torben and John D Stephens. 2008. "Partisan politics, the welfare state, and three worlds of human capital formation." *Comparative political studies* 41(4-5):600–637.

Johnson, Joel W and Jessica S Wallack. 2008. "Electoral systems and the personal vote." *Database*

Jones, Charles I. 2015. *The Facts of Economic Growth*. Version 2.0. http://web.stanford.edu/~chadj/facts.pdf

Kasara, Kimuli and Pavitra Suryanarayan. 2015. "When Do the Rich Vote Less Than the Poor and Why? Explaining Voter Turnout Across the World." *American Journal of Political Science.* Vol. 59, 3: 613-627.

Kitschelt, Herbert. 2011. Do Institutions Matter for Parties' Electoral Linkage Strategies? Paper presented at the Annual Meeting of the American Political Science Association 2011, Seattle, September 1-4.

Kitschelt, Herbert. 2015. "Social Policy, Democratic Linkages, and Political Governance." Paper presented at the workshop on Social Policy and Clientelism, University of Cologne. November 7, 2015.

Kitschelt, Herbert. 2016. The Political Economy of Pure Programmatic Partisan Politics. Paper presented at the Annual Meeting of the American Political Science Association, August 30-September 4, 2016.

Kitschelt, Herbert and Matthew Singer. 2016. Diversified Partisan Linkage Strategies. Paper presented at the 23rd Council of Europeanists Conference, Philadelphia, April 14-16, 2016.

Kitschelt, Herbert and Steven I Wilkinson. 2007. *Patrons, clients and policies: Patterns of democratic accountability and political competition*. Cambridge University Press.

Kosack, Stephen. 2012. *The Education of Nations. How the Political Organization of the Poor, Not Democracy, Let Governments to Invest in Mass Education.* Oxford: Oxford University Press.

Lake, David A and Matthew A Baum. 2001. "The invisible hand of democ- racy: political control and the provision of public services." *Comparative political studies* 34(6):587–621.

Larreguy, Horacio, Cesar E. Montiel Olea, and Pablo Querubin. 2017. "Political Brokers: Partisans or Agents? Evidence from the Mexican Teachers' Union." *American Journal of Political Science.* Vol. 61, 4: 877–891.

Min, Brian. 2015. Power and the Vote: Elections and Electricity in the Developing World. Cambridge University Press.

Nooruddin, Irfan and Nita Rudra. 2014. "Are developing countries really defying the embedded liberalism compact?" *World Politics* 66(04):603– 640.

Ostry, Mr Jonathan David, Mr Atish R Ghosh and Raphael A. Espinoza. 2015. *When should public debt be reduced?* International Monetary Fund.

Pritchett, Lant. 2001. "Where Has All the Education Gone?" The World Bank Economic Review. Vol. 15, 3: 367–391.

_____. 2013. *The Rebirth of Education: Schooling Ain't Learning*. Washington, DC: Brookings Institution Press.

Stasavage, David. 2005. "Democracy and education spending in Africa." *American journal of political science* 49(2):343–358.

Stokes, Susan C, Thad Dunning, Marcelo Nazareno and Valeria Brusco. 2013. *Brokers, voters, and clientelism: The puzzle of distributive politics.* Cam- bridge University Press.

Tsebelis, George. 1995. "Decision making in political systems: Veto players in presidentialism, parliamentarism, multicameralism and multipartyism." *British journal of political science* 25(03):289–325.

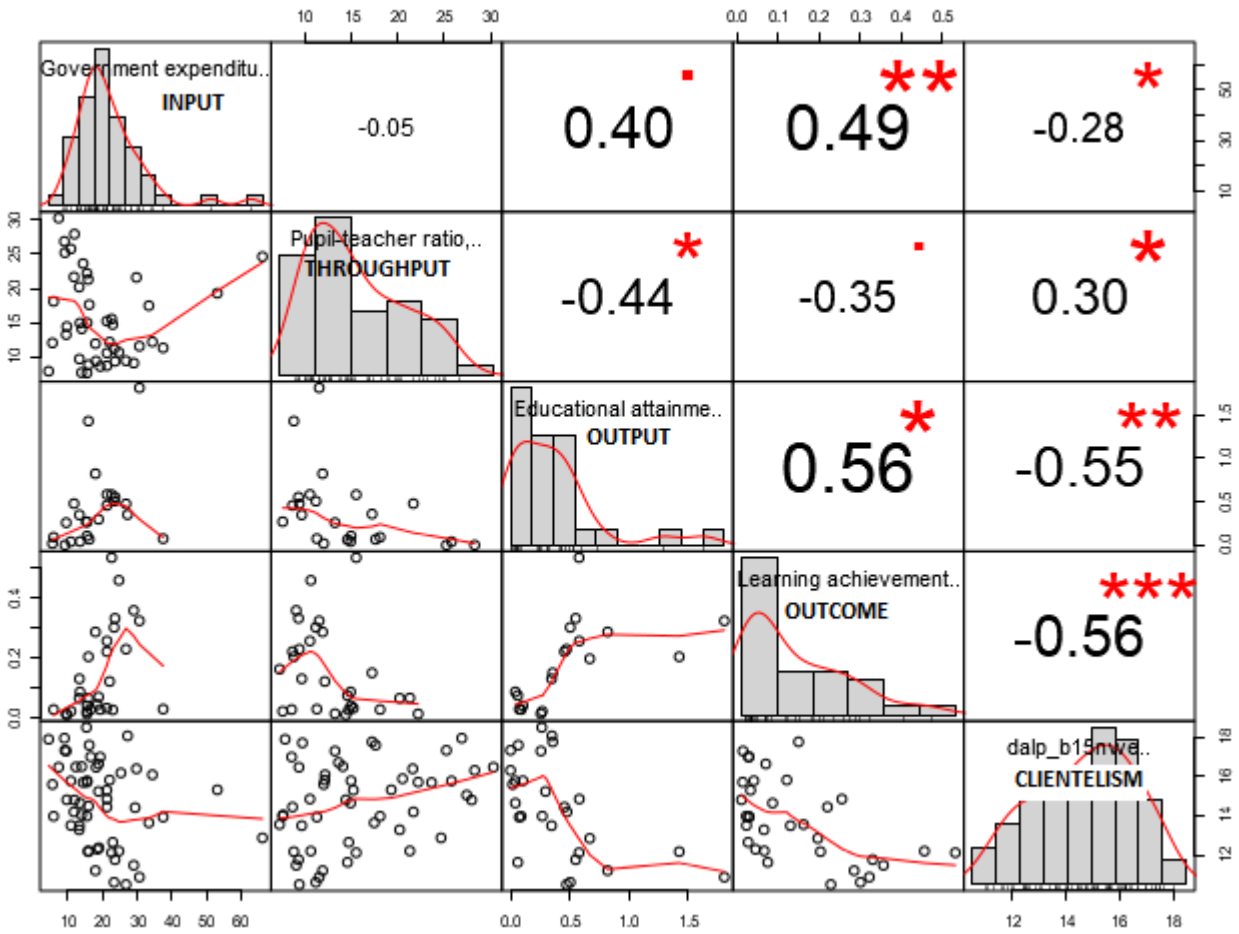
Tsebelis, George. 2002. *Veto players: How political institutions work*. Prince- ton University Press.
Wang, Yi-Ting and Kiril Kolev. 2018 "Ethnic Group Inequality, Partisan Networks, and Political Clientelism." Forthcoming, *Political Research Quarterly*. First View.
Weitz-Shapiro, Rebecca. 2014. *Curbing Clientelism in Argentina. Politics, Poverty and Social Policy*. Cambridge: Cambridge University Press.
You, Jong-sung. 2015. *Democracy, inequality and corruption*. Cambridge University Press.

Tables and Figures

Table 1. Attributes of the Educational Process

	Inputs	Throughputs	Outputs	Outcomes
Primary	• Government spending on education (% GDP) • Per student capita educational spending on different tiers of the sector (as % of GDP per capita); • Capital investments in education (Buildings, software, machines) • Teachers' salaries • Non-teaching staff salaries	• Teacher-pupil ratio (levels) • Children out of school (ratios) • Teacher training at different levels • educational staff expenditure as % of total school expenditure;	• School level completion and certification (graduation) rates (primary, secondary, tertiary educational attainment)	• Literacy rates (youths, adults) • % labor force with primary, secondary, upper secondary, tertiary school completion; • math, science, reading performance at different school levels
Secondary				
Tertiary				

Figure 1: Correlation Matrix of Educational Input, Through-put, Output & Outcome, and Clientelism



Note: The variables, from left to right are: (1) Government expenditure per student, secondary education (% of GDP per capita); (2) Pupil-teacher ratio, upper secondary; (3) Educational attainment, at least completed upper secondary, population 25+, total (%) (cumulative); (4) Learning achievement in mathematics (level 4) for upper secondary school; (5) Parties' effort in clientelism [DALP b15nwe]. Variables (1)-(4) are averages of data points from 2008 to 2014. Variable (5) is based on an the DALP expert survey from 2008-2009, see description in the text.

Table 2: Group Preferences over Educational Policies

Priority	Low income poor group (P)	Intermediate income group (M)	High income rich group (R)
1	1. clientelistic delivery of educational inputs	1. secondary school investments	1. tertiary school investments
2	2. secondary school investments	2. tertiary school investment	2. clientelistic benefits of educational inputs
3	3. tertiary school investments	3. clientelistic delivery of educational inputs	3. secondary school investments

Table 3. Where Does Clientelistic Partisan Effort "Subvert" or "Distract from" the Educational Effort? A Preliminary Exploration

(coefficients of the relationship of overall clientelistic partisan effort (as measured DALP B15.nwe) to educational measures (input, throughput, output and outcome), *after* controlling for economic development only (GDP per capita @ PPP 2008)

	Inputs	Throughputs	Outputs	Outcomes
Primary				• **% labor force with only primary education (& male) is greater where B15 is higher;**
Secondary	• **Government expenditure per secondary student (% GDP) declines with higher clientelistic effort/B15**	• **Gross secondary school enrollment goes up with clientelistic effort/B15**	• **educational attainment/school completion in lower secondary and higher secondary schools is lower, where clientelistic effort/B15 is higher; (all >= 25 year old)**	• **% of secondary school students who receive top level math and science results declines with rise in clientelistic effort/B15;**
Tertiary	• **tertiary school staff compensation goes up with clientelistic effort/B15**			
All levels	• **educational staff expenditure rises with clientelistic effort/B15**			• **percentage of females in the labor force declines with more clientelistic effort/B15;**

Table 4: Clientelism Crowding Out of Educational Inputs

	Dependent variable:		
	Government expenditure per student, secondary (% of GDP per capita)		
	(1)	(2)	(3)
Partisan Clientelistic effort	-1.479**	-2.610***	-2.345***
(dalp_b15nwe)	(0.681)	(0.690)	(0.739)
Development: per capita GDP		-5.299***	-5.952***
(dalp_lg_GDPpcPPP)		(1.467)	(1.593)
Post-communism			3.544
(X3.9.postcomm)			(3.329)
Constant	41.344***	104.148***	104.760***
	(10.088)	(19.633)	(19.928)
Observations	56	56	54
R^2	0.080	0.262	0.284
Adjusted R^2	0.063	0.234	0.241
Residual Std. Error	10.552 (df = 54)	9.541 (df = 53)	9.649 (df = 50)
F Statistic	4.721** (df = 1; 54)	9.412*** (df = 2; 53)	6.600*** (df = 3; 50)
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 5. Clientelism Degrades Educational Output

	Dependent variable:					
	Educational attainment, at least competed upper secondary, population 25+, total (%) (cumulative)					
	(1)	(2)	(3)	(4)	(5)	(6)
Partisan Clientelistic effort (dalp_b15nwe)	-6.591*** (1.369)	-7.423*** (1.494)	-2.400 (1.637)	-0.997 (1.677)	-1.021 (1.103)	-0.061 (1.585)
Educational Input Government expenditure per student, secondary (% of GDP per capita)		-0.465 (0.324)	0.219 (0.304)	0.156 (0.297)	0.007 (0.206)	0.146 (0.272)
Development: per capita GDP (dalp_lg_GDPpcPPP)			17.427*** (3.764)	15.573*** (3.833)	11.932*** (2.688)	14.589*** (3.430)
Redistributive programmatic parties (X3.6.left.party.strength)				6.719** (2.714)		
Postcommunist legacy & party context (X3.9.postcomm)					30.983*** (4.165)	
Parties with Economic Programmatics (dalp_new_CoSalPo_Econ_kf_c)						7.230*** (2.001)
Constant	144.946*** (20.057)	166.544*** (24.477)	-74.114 (55.723)	-85.026 (54.681)	-52.558 (37.619)	-99.669* (49.914)
Observations	51	45	45	43	43	44
R^2	0.321	0.370	0.586	0.620	0.820	0.689
Adjusted R^2	0.307	0.340	0.556	0.580	0.801	0.657
Residual Std. Error	21.233 (df = 49)	20.889 (df = 42)	17.133 (df = 41)	16.506 (df = 38)	11.350 (df = 38)	15.163 (df = 39)
F Statistic	23.193***(df = 1; 49)	12.340***(df = 2; 42)	19.373***(df = 3; 41)	15.476***(df = 4; 38)	43.322***(df = 4; 38)	21.633***(df = 4; 39)
Note:						*p<0.1; **p<0.05; ***p<0.01

Table 6. Clientelism Degrades Educational Outcome

	Dependent variable:					
	Learning achievement in mathematics (level 4) (Upper secondary by Country Total All , Average)					
	(1)	(2)	(3)	(4)	(5)	(6)
Partisan Clientelistic effort	-0.038***	-0.038***	-0.021**	-0.018*	-0.010	-0.011
(dalp_b15nwe)	(0.010)	(0.011)	(0.009)	(0.009)	(0.010)	(0.010)
Educational Input		0.006*	0.005**	0.004	0.003	0.003
Government expenditure per student, secondary (% of GDP per capita)		(0.003)	(0.002)	(0.002)	(0.003)	(0.002)
Development: per capita GDP			0.144***	0.139***	0.134***	0.142***
(dalp_lg_GDPpcPPP)			(0.029)	(0.030)	(0.030)	(0.027)
Postcommunist legacy & party context				0.050	0.019	
(X3.9.postcomm)				(0.034)	(0.040)	
Parties with Economic Programmatics					0.024	0.022*
(dalp_new_CoSalPo_Econ_kf_c)					(0.015)	(0.012)
Income inequality						-0.005*
(gini_market_m_00s)						(0.002)
Constant	0.673***	0.544***	-1.014***	-1.011***	-1.105***	-0.953***
	(0.139)	(0.192)	(0.342)	(0.347)	(0.349)	(0.327)
Observations	34	30	30	28	27	27
R^2	0.315	0.463	0.726	0.729	0.757	0.797
Adjusted R^2	0.293	0.423	0.694	0.682	0.700	0.748
Residual Std. Error	0.118 (df = 32)	0.113 (df = 27)	0.082 (df = 26)	0.079 (df = 23)	0.078 (df = 21)	0.072 (df = 21)
F Statistic	14.694***(df = 1; 32)	11.621***(df = 2; 27)	22.962***(df = 3; 26)	15.496***(df = 4; 23)	13.115***(df = 5; 21)	16.446***(df = 5; 21)
Note:						*p<0.1; **p<0.05; ***p<0.01

Table 7. Educational Inputs, Outcomes, and Clientelism

		OUTCOMES: % Math Scores (4)		
		<-¼ sd below global mean	**Within +/- ¼ sd around the global mean**	**> ¼ sd above global mean**
INPUTS: Education Expenditure as % of GDP	**> ¼ sd above global mean**	BRA (15.3) CRI (12.66) MDA (13.93) MEX (15.78) MYS (12.3) VEN (16.99) **Average clientelism: 14.49**		EST (11.49) ISR (12.19) LTU (14.44) LVA (10.52) SVN (10.89) **Average clientelism: 11.91**
	Within +/- ¼ sd around the global mean	ARG (16.98) COL (15.7) URY (11.64) **Average clientelism: 14.77**	SRB (13.5) **Average clientelism: 13.5**	HUN (14.85) KOR (12.13) POL (11.78) **Average clientelism: 12.92**
	<-¼ sd below global mean	ALB (13.97) CHL (12.22) GEO (13.98) IDN (14.81) MUS (16.63) PAN (17.28) PER (13.51) ROU (14.64) THA (13.29) **Average clientelism:14.48**	BGR (15.81) HRV (13.56) **Average clientelism: 14.68**	CZE (10.63) JPN (12.21) RUS (12.86) SVK (11.22) **Average clientelism: 11.73**

Table 8. Tertiary Education Completion Variance and Clientelism: Are there Indications of a Poor-Rich Coalition?

Does Clientelism Exacerbate the Disparity of Educational Investment Strategies?

	Dependent variable:		
	Tertiary completion rate (25-29 years old) (ALL by Country Wealth Index Quintiles , Standard Deviation)		
	(1)	(2)	(3)
Partisan Clientelistic effort	0.008	0.017***	0.010**
(dalp_b15nwe)	(0.005)	(0.005)	(0.004)
Development: per capita GDP		0.035***	0.037***
(dalp_lg_GDPpcPPP)		(0.010)	(0.008)
Education Expenditure as % of GDP		0.001	0.0001
("dalp_pegdpeducexp")		(0.007)	(0.005)
Selection into the pool of tertiary school entrants			0.513***
(Upper secondary completion rate, 3-5 years above upper sec school grad year)			(0.086)
Constant	0.046	-0.397***	-0.389***
	(0.072)	(0.144)	(0.108)
Observations	54	48	48
R^2	0.045	0.256	0.593
Adjusted R^2	0.027	0.205	0.556
Residual Std. Error	0.072 (df = 52)	0.064 (df = 44)	0.048 (df = 43)
F Statistic	2.445 (df = 1; 52)	5.049*** (df = 3; 44)	15.688** * (df = 4; 43)
Note:			*p<0.1; **p<0.05; ***p<0.01

Tertiary completion rate (25-29 years old) (ALL by Country Wealth Index Quintiles , Standard Deviation)

APPENDIX

A.1. Measures and Index of Parties' Clientelistic Effort

For a more detailed analysis of the notion of clientelism and the individual questionnaire items, as well as the construction of the summary index of clientelism, see Kitschelt (2011), downloadable from the DALP website at http://sites.duke.edu/democracylinkage/ . Experts rated parties on 5-point scales on five different types of clientelistic exchange displayed in table 1 of this paper. Below I display a correlation matrix for the five variables. These correlations are extremely high, but this feature is driven by the presence of a substantial number of parties in Western advanced postindustrial democracies that have virtually no clientelism. As shown in Kitschelt (2011), the correlation is substantially lower between some of the five indicators, when affluent countries are excluded. Especially the correlation between providing gifts/vote buying (b1) as spot-market, individually targeted clientelistic technique and the relational clientelistic techniques (whether targeted at individuals as patronage b3 or procurement b4 at business firms and non-profit associations) as well as the spot-market "wholesale" technology of regulatory favors account for only 40-45% of the variance Nevertheless, in spite of the diversity of clientelistic linkage profiles across parties and countries, even then a principal components analysis generates just one very strong underlying latent variable that captures the variance of most of the scores on all five clientelism indicators (chronbach's alpha=0.955). Let us here display only the very high correlations among the five variables, when all 506 parties in 88 countries are included:

pwcorr b1 b2 b3 b4 b5

	b1	b2	b3	b4	b5
b1	1.0000				
b2	0.8192	1.0000			
b3	0.7722	0.8267	1.0000		
b4	0.7965	0.8137	0.9023	1.0000	
b5	0.7537	0.7926	0.8037	0.8924	1.0000

A. 2. Programmatic Structuring ("Crystallization") of Party Competition: CoSalPo_4 (from DALP)

The DALP survey's fourth module[22] asked experts to identify parties' precise *policy positions* on a series of issue dimensions.[23] In addition to standardized policy questions asked in each country, the latter included nationally idiosyncratic issues and issue dimensions that could not be scored across the entire data set of 88 countries.[24] Experts were also given the options 'Don't Know' and 'Party has no Clear Position'. We will make use of this policy placement data to identify whether or not a party meets three criteria Downs (1957) outlined to enable voters to choose among parties based on their programmatic commitments: The party must issue appeals that are (1) distinct from the appeals of other parties, (2) internally shared (coherent) by the relevant party operatives and (3) salient for the parties' activities. A more detailed development of the operationalization of these attributes and of the overall measure of programmatic appeals can be found in Kitschelt and Freeze (2010), available on the DALP website (http://sites.duke.edu/democracylinkage).

First, to measure the *distinctiveness* of a party's position on any issue dimension, we compute the average distance between a party j's mean position (across experts) on issue k and the mean positions of all other parties (across experts) on the same issue k. The resulting indicator represents the average differentiation of a party j's position on issue k from that of all other parties in the system.

[22] Data can be downloaded from http://sites.duke.edu/democracylinkage.

[23] Each was measured on a 10-point scale.

[24] The five core policy issues cover (1) the defense of national identity, (2) moral-cultural governance (tradition versus individual choice) and (3) various aspects of economic governance and distribution (redistributive spending on the poor; state role in the economy; universalistic social insurance). Precise question wordings can be found on the DALP website.

Second, we operationalize the parties' *internal programmatic coherence* by the consistency of the experts' policy placements. Parties characterized by internal dissention and temporal inconsistency are more likely to generate inconsistent expert policy placements. We adopt the conventional approach and operationalize a party j's *cohesion* on any single issue k as the standard deviation of expert judgments for j on issue k.[25]

Third, as a second measure of programmatic variance, but also of the salience of the issue dimension for the political pursuits of a party, we use the share of experts who *do not attribute a position* to j on dimension k (i.e. the share of experts who chose 'Don't Know', 'Party has no clear Position', or left the question blank). To the extent that experts fail to score parties on a particular issue dimension, this is also a sign that said parties do not meet the minimal level of cohesion and consistency required for responsible and reliable programmatic choice.

For each party j on issue dimension k, this leaves us with three distinct indicators: differentiation, cohesion, and non-attribution. As a first step towards an integrated measure, we normalize each of these three measures to [0,1] such that each is increasing in the extent to which it satisfies the relevant programmatic criterion (i.e. higher scores indicate more distinctiveness, greater cohesion, and lower levels of expert non-attribution). The absence of any one of these properties is sufficient to undermine a party's programmatic capacity: parties which do not differentiate from their competitors will generate a 'rationality crisis', regardless of whether or not their platform is unified and consistent (thus satisfying the responsibility/reliability criterion); parties which generate extremely low response rates are unlikely to satisfy the responsibility/reliability criterion, even if the small number of experts that judge place them consistently and distinctly from other parties; and so on. To create a single, integrated index operationalizing party j's programmatic capacity on issue dimension k, we thus calculate the product {distinctiveness X cohesion X non-attribution}, which yields a *programmatism score* in the range [0,1] for j on k.

One approach to measuring a party's aggregate programmatic capacity would be to average their programmatism scores across all of a country's issue dimensions. However, different parties may give different emphases to different issues in campaigns and governance, and we may not want to classify a party as 'non-programmatic' for failing to generate high programmatism on all conceivable issues. For the aggregate index of programmatic partisan effort, we therefore select the *four* issue dimensions on which party j has the highest programmatism scores, and takes the average of j's scores on these four dimensions. Label this indicator PROGRAM. A range of different indices employing fewer or more items were constructed and compared (Kitschelt and Freeze 2010). The PROGRAM index turns out to provide scores that are highly correlated with the range of alternative indices with different numbers of issues aggregated into a single party-based programmatism score.

To arrive at an overall national score of programmatism across all parties, then, first for each party the average CoSalPo scores are being calculated across the selected policy dimensions to construct the index. Then, the party scores of CoSalPo_x, where x stands for the issues from which parties' programmatism was constructed, weighted by the electoral size of each party in the preceding two legislative elections.

The index can numerically vary from 0 to 1; among the 506 parties in our data set it empirically varies from .059 to .513, with a mean (standard deviation) of .226 (.119). Another index was constructed in similar fashion including for each party the three economic issues (CoSalPo_3.econ) on which experts rated the parties. More details can be found in Kitschelt and Freeze (2010).

Operationalizing the Downsian criteria for rational programmatic choice is, as can be seen, no simple task. The PROGRAM indicator is a composite of three distinct measures, each of which is likely subject to measurement error arising from the methodological pitfalls of expert surveys. Before proceeding, it is thus essential to establish a minimum of construct validity. The Kitschelt and Freeze (2010) exploratory paper reports the bivariate relationship between the PROGRAM indicator and four distinct variables with which, *a priori*, one would expect it to be associated. Past research suggests that policy-based accountability should be associated with both higher levels of economic development and higher levels of democratization (Keefer 2007; Stokes et. al 2013; Kselman and Kitschelt 2013). In both cases the association is strong and in the expected direction (correlations of r=.62 and r=.33). The other two construct validity tests draw on information provided in the DALP dataset. Parties' programmatic effort should not be perfectly correlated with the parties' clientelistic effort, measured in ways described below in Appendix A1. But there should be—on average—a negative relationship between the two, even though some parties may simultaneously engage in intense clientelistic and programmatic efforts. Indeed, the overall relationship between programmatism and clientelism across 506 parties in 88 countries is r = -.52. Finally, the DALP also asks experts to provide a 'round-about' assessment of the extent to which parties pursue votes based on their programmatic policy promises.

[25] To take out an individual expert's idiosyncratic anchor, however, we have transformed expert i's party positions jk into differences from the mean position k-bar she assigns to all parties j on issue k, by subtracting a party j's position from that mean k-bar.

Although this item is noisy, and measures programmatic 'effort' rather than programmatic coherence and distinctiveness, the positive correlation (r=.40) again suggests that our more detailed measure of programmatism varies in ways which satisfy at some basic level the criteria for construct validity.

A.3. Strength of Left-Redistributive Parties Present in Party Systems (from DALP)

Constructing the index of left-redistributive party strength requires two operations. First, identify the parties that count and measure the crystallization and extremism of their distributive programmatic propensities. Second, score the competitive strength of these parties for the entire party system as a function of the electoral weight of these parties in the two legislative elections preceding 2008 and the radicalism and cohesion of their positions. The DALP survey again is the empirical reference for the construction of a simple 0-3 scale. Score computation can be requested from the author. To provide a flavor of the scoring, here are the criteria to be met to reach the highest score 3 for the strength of the left-redistributive parties in a party system:

- The parties counting as redistributive must have scoring averages on the three core economic issues in the expert survey of < 4.0 on a 1-10 scale, with lower values indicating more redistributive positions.
- The cohesion score on these issues, averaged over a polity's parties meeting the first criterion, must exceed an average of .25, substantially above the average of all parties/issues scored in DALP.
- The experts' left-right placement of the parties must be 4.0 or lower on a 1-10 scale, with 1 indicating the most leftist position.
- The combined share of leftist-redistributive parties must be greater than 20% of the vote in the two most recent legislative elections preceding the 2008-9 DALP survey.
- The age of the left-redistributive parties must exceed a weighted average of 10 years.

By way of illustration, using the scoring scheme Hungary achieves a score of on 1.0 in 2008, although its major left party was in government with 42.6% of the average vote in the preceding two legislative elections. This is so because the party embraced centrist economic policy positions barely on the left side of the scoring scale's midpoint (4.92) with a high level of internal incohesion, indicated by the low level of agreement among experts about the appropriate score of the party (average cohesion score 0.092). By contrast, many other postcommunist countries in 2008 displayed smaller, albeit more cohesive and more programmatically redistributive parties than Hungary and therefore earned higher scores of 2 or 3.

A.4. Post-Communist Legacies: National-Accommodative and Bureaucratic-Authoritarian Communism (dummy variable)

For the construction of the legacy of communist rule types, see Kitschelt et al. (1999: 35-42). Bureaucratic-authoritarian and national-accommodative communisms are here collapsed into score 1 of the dummy variable. Both types reflect pre-communist conditions under which, compared to patrimonial communism (dummy variable = 0) higher state capacities, more cumulative experience with bottom-up political action under conditions of a modicum of civil liberties, and the mobilization of socialist-redistributive parties interact with each other to shape communist regimes after the end of Stalinism that eventually permitted a direct transition toward liberal democracy, relative strong structuration with programmatic parties (albeit not necessarily stable party labels and organizations), and a transformation of risk-hedging regimes toward an emphasis on social insurance systems with rather little clientelism in the mix. National-accommodative and bureaucratic-authoritarian communisms include the Central European and East Central European formerly communist countries. Most fission products of the Former Soviet Union, except the Baltic countries, but including Russia's Central Asian colonial periphery, Southeastern Europe (Albania, Bulgaria, Macedonia, Romania and Serbia) as well as Mongolia belong to the patrimonial type of communism.

A.5. State Capacity: Government Effectiveness 2008 in the World Bank's Worldwide Government Indicators (WGI)

Government effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Access this table to see a list of the individual variables from each data sources

used to construct this measure in the Worldwide Governance Indicators at:
http://info.worldbank.org/governance/wgi/index.aspx#doc

A.6. Polity IV Scheme of Political Regime Form (Authoritarianism-Democracy)

The Polity IV scheme intends to measure political competition more so than civil liberties. Its complex scoring procedures cover several subjects—political competition, constraints on executive authority, elite political recruitment and mass political participation. The combined index of autocracy and democracy has a 21-point scale running from (closed) dictatorship (-10) to (open) democracy (+10), with scores exceeding 5 typically labeled democracy. Data sources can be located at http://www.systemicpeace.org/polity/polity4.htm . The variable constructed here averages a country's index scores in the five years leading up to the DALP expert judgments of partisan linkage strategies.