



LUND UNIVERSITY

Exploring the spread of mass schooling in rural Sweden after the 1842 'Folkskole' reform

Andersson, Jens

2015

[Link to publication](#)

Citation for published version (APA):

Andersson, J. (2015). *Exploring the spread of mass schooling in rural Sweden after the 1842 'Folkskole' reform*. Paper presented at Sjätte nordiska utbildningshistoriska konferensen, Uppsala, Sweden.

Total number of authors:

1

General rights

Unless other specific re-use rights are stated the following general rights apply:

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Read more about Creative commons licenses: <https://creativecommons.org/licenses/>

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

Exploring the spread of mass schooling in rural Sweden after the 1842 'Folkskole' reform

Paper presented at the "Sjätte nordiska utbildningshistoriska konferensen" in Uppsala 20-21 August 2015

5 August 2015

Jens Andersson

Department of Economic History

Lund University

1 INTRODUCTION

A wave of recent research has attempted to explain within-country variations in the rise of primary schooling by studying local political and economic conditions. There is a particular focus on the role of the spread of democratisation and local elites in the development of schooling. An important lesson coming out of these studies is that conditions varied markedly between countries and over time. This paper studies the development of primary schools in rural Sweden after the school reform of 1842 in the context of industrialisation and democratisation of Swedish society. The findings give support to an elite-control interpretation of the spread of schooling in the latter half of the 19 century, rather than a bottom-up movement related to the spread of democratisation. This can be explained by the fact that Sweden remained an elite-democracy during the period and that industrialisation was relatively late.

2 PREVIOUS LITERATURE

The relationship between human capital and economic growth is complex and controversial (Benos and Zotou 2014). There is also little agreement on the explanation for the historical rise of primary schooling. Why was an educational system that for so long was reserved for the selected few opened up to the broader population? The answer needs to relate to the start of modern economic growth and the spread of democratisation that coincided with the emergence of social spending. Three broad perspectives on the development of mass schooling can be identified in the literature.

From a human capital perspective schooling constitutes an investment that states and individuals engage in based on an expected economic return (Björklund et al. 2005; Dickson and Harmon 2011). There is, however, considerable controversy about the role of human capital in the early modern and pre-modern period. Some view the industrial 'revolution' as an elite project that led to a lowered demand for skills among the working populations (Mokyr 2005; Mitch 1990). Other studies find important returns to informal skills among 19th century workers, but not necessarily to formal schooling or literacy (Bessen 2003; Boot 1995; Rosés 1998). There is also evidence that point to increased return to and demand for education among freehold farmers in Sweden (Nilsson, Pettersson, and Svensson 1999; Nilsson and Pettersson 2008). It would seem as if different groups fares differently at different points in time.

The sociologically oriented perspective has associated the rise of public mass schooling in Western Europe and North America to European ideas of the state, citizenship and individualism (Rowan 2006: 204). In this view mass schooling can be viewed as a ritual ceremony of modern citizens; rather than a rational project, schooling is a rite the passage of individualised modern society. These developments were transnational in that they

permeated the whole Western world and promoted standardisation and universalism (isomorphism) (Boli 1989: 47-50).

The political economy perspective emphasises the role of different social groups in promoting or opposing institutional change. This perspective has recently gained a lot of traction within the institutional literature more broadly in explaining the development of the state and different institutions (North, Wallis, and Weingast 2006; Acemoglu, Johnson, and Robinson 2004). There are two principle views within this perspective that relates to schooling. The social control view sees the development of schooling as a way for the elite to control the population or build the nation state. This is a view that has been widely accepted in both the Swedish and the US context (Boli 1989:14-16; Lindert 2004: 99-104). Since the emphasis is on elite interest the social control view plays down the role of representative democracy in schooling (Erlingsson 2009: 83). Studies of historical schooling has traditionally emphasised the role of central authorities and broader school reforms in driving school outcomes and determining differences between countries. Recently more focus has been put on the local levels.

In a landmark contribution on the rise of social spending in the Western world Peter Lindert advocates a bottom up perspective and contends that decentralised control over taxes and schooling (through democratic voting rights) allowed advanced regions to develop mass schooling, which would not happen under centralised government (Lindert 2004: 105; Goldin and Katz 2008: 161). Lindert, together with Sun Go, later moved on to argue that greater affordability, autonomy of local governments and diffusion of voting rights in the northern states can explain why school enrolment was higher in the North than in the South of the United States by 1850 (Go and Lindert 2010). Their results have been supported by other studies of local schooling in the US in the 19th century that have found a negative relationship between inequality and spending on local schools, in particular in the North of the US (Stoddard 2009; Vollrath 2013). These results from the US have provoked a recent wave of similar studies from other parts of the world, many of which are work in progress. Some authors come to results that give support to the negative association between different measures of inequality and schooling and learning outcomes in the case of Prussia (Cinnirella and Hornung 2015), Spain (Tapia and Martínez-Galarraga 2015), Sao Paulo in Brazil (de Carvalho Filho and Colistete 2010) and colonial Korea (Go and Park 2012). Other studies instead find support for the social control view that considers education to be part of an elite project rather than a bottom-up movement, as in the case of Habsburg (Cvrcek and Zajicek 2013), Argentina (Elis 2011), China (Gao), as well as in the US in a direct critique of Lindert and Go (Shammas 2014). For the UK it has been argued that social structure does not explain literacy in rural England and that cultural factors may instead have been at play in the form of proximity to areas with well-developed education such as Scotland (Clark and Gray 2014). The focus of this literature has been related to the political economy perspective and more particularly on the relationship between local economic and political inequality on schooling and learning outcomes. An important lesson coming out of these studies is that conditions may vary markedly between countries and over time. In authoritarian and centralised countries decentralisation and the spread of the franchise cannot be expected to be a good explanations of local schooling. In addition, the impact may vary over time. At a later stage of school development (Lindert 2004) has argued that decentralisation may actually slow down convergence of schooling between regions, a phenomenon that has been found for Italy (Cappelli 2013).

The review of explanations to the rise of mass schooling shows that there are a great number of seemingly conflicting factors that influence school development. Most authors recognize that there are several forces at play, even though many tend to lend primacy to one or a couple of factors. It is thus necessary to take a holistic and pragmatic approach that considers the interaction between economic, social and political forces in order to understand the development of schooling in Sweden (Richardson 2010: 53; Westberg 2014). Sweden was under the influence of flows of ideas as proposed by the sociological explanations, not the least from abroad, that provided a normative context for the debate and models to organize schooling. There was on-going change in economic conditions, even though the industrial 'revolution' did not really start to transform Sweden

until the last quarter of the 19th century as we will see below. A middle-class began to form that was to invest in their children's 'human capital'. The distribution of economic resources and political power fuelled the political debate and the balance of power, not the least the emergence of growing social problems that threatened law and order. As we will also see below, there were important reforms to modernize political institutions in Sweden during the 19th century; formal political power spread, but the persistence in terms of real political power is striking. Sweden remained an elite democracy. What is interesting about the Swedish case is that the conditions resemble those of the US, but combined with efforts of the central government to control to support the spread of basic education. In Sweden decisions over school financing was traditionally a local affair. Central support developed as Sweden underwent industrialisation and local decision making democratised. Sweden thus is a good ground for testing the role of central reforms versus local economic and political variables in determining variations in local schooling.

The task now is to develop a set of hypotheses that can realistically be tested by using available data and quantitative methodology. The obvious place to start is Lindert and Go's results that link school development and the franchise at local level. The assumption is that diffusion of the franchise is associated with higher degrees of school development, as more and more of the population gets a say in education. Since formal voting rights were tied to wealth criteria in Sweden, the diffusion of the franchise is also a measure of the size of the relatively well-to-do or middle class. Assuming that this group recognised the externalities of public education - as proposed by Stoddard (2009) - the first hypothesis can be formulated:

Hypothesis 1: A higher share of people with voting rights is associated with higher spending on public schools

The situation that voting rights were weighed by income/resources also created a situation where one or a few voters had very high shares of total votes. A highly weighted voter may potentially have gained even greater influence since smaller voters may not have found it worthwhile to vote at all, but may also have lost influence by having to consider the will of the majority. One can see a parallel with the elite versus the communicative views of democracy here.¹ From a social control perspective, the top elite may be interested in promoting schooling for social order reasons, but may have less incentive to do so for other reasons. In addition, these interests changed over time. The net effect is therefore unclear, why the hypothesis we would like to test is:

Hypothesis 2: The presence of voters with large shares of the votes is significantly correlated (negatively or positively) with spending on public schools

So what can be said about the link between the absolute wealth of a locality and school development? Lindert and Go assert that the association is positive, but they do not test it on grounds that it may cause simultaneity bias and reverse causation, without really explaining why that would be the case (Lindert and Go 2007). As we have seen there are opposing views within the human capital perspective on the role of human capital during different phases of industrialisation. We can attempt to measure this issue by the inclusion of two different measures of wealth in the model presented below. The value of land can be considered to represent the traditional economy, while taxable income is more linked to industrialisation and the service economy. If we presume that more wealth implied more resources that could be freed for schooling, the link is likely to be positive, but this would depend on the distribution of wealth:

Hypothesis 3: The level of average wealth is positively correlated with spending on public schools

Other hypotheses could of course have been formulated pertaining to for example demographic factors or the socio-economic structure of a school district, but have been excluded to focus the scope of this paper and

¹ The participatory democracy view emphasises the need for high levels of participation in elections to give a clear mandate to politicians. The elite democracy view doubts the ability of the people to rule itself and argues that the elite always rules. Finally, the communicative view argues that democracy is based on free and open debate. The two latter views give less importance to elections and voting patterns (Stava 2001: 170).

reduce the data needs. Testing the importance of informal institutions – norms and values – as advocated by the sociological explanations would have been particularly interesting. To what extent was schooling part of a modernistic (intentional or not) project aimed at forming individual women and men? This could be analysed from a spatial perspective, based on the assumption that ideas travel between neighbouring geographical areas. For example, proximity to urban centres (with enhanced access to their relative wealth of ideas and services) may have had an effect on how schooling is considered, even though the outcome of urban rural dynamics is difficult to predict (Jonsson et al. 2009). What will be clear from the discussion below is that schooling developed at different pace in different Swedish regions for various reasons that are difficult to tease out because of the multi-causalities involved.

3 METHOD AND DATA

The methodology adopted here is to use econometric analysis to test the hypotheses. This approach is by its nature limited in that it is prone to multi-collinearity and omitted variable bias do. School spending will be used as a proxy for school development, since other input and output variables, such as enrolment and learning levels have not been compiled and published for this period (even though primary data exist in archives). Moreover, it has been possible to include only a limited number of socio-economic variables and no geographical or demographic variables (such as the share of the population consisting of school age children and the level of urbanisation used by Go and Lindert) are used. The exclusion of demographic data is a particular loss, since Go and Lindert show that age distribution matters. It should also be emphasised that the model only allows us identify associations, not causality between variables.

The empirical test will be done using a simple linear multivariate regression model using cross-sectional data on Swedish municipalities compiled from published historical statistics from Statistics Sweden (BISOS) and some additional sources. The model is run on data on all rural municipalities in 10 counties: *Blekinge, Elfsborgs, Göteborgs och Bohus, Halland, Jönköping, Kalmar, Kristianstad, Kronoberg, Malmöhus* and *Östergötland*. These counties correspond to the South land mentioned above, with the exclusion of the island of Gotland. This area demonstrates substantial variation in terms of geography and level of urbanisation, while excluding areas of considerably different character such as the Stockholm area and the sparsely populated north. Only rural municipalities are covered since towns and townships had different characteristics in terms of administration, voting patterns and school spending.

The 10 counties comprise 1 266 municipalities or slightly more than half of all Swedish municipalities at the time. 114 municipalities were excluded from the sample mainly because they shared common school districts (*VoteShare* cannot be aggregated since the underlying statistics are based on intervals of percentages) and in some cases because data for one or more of the variables were missing. In order to correct for one-off events, such as investments in buildings, and other irregularities in the spending data, the highest five per cent spenders per capita of the remaining sample were excluded, corresponding to 58 observations. One municipality was excluded because it did not receive any state grants.

The model to be estimated is:

$$\ln SchoolSpend = \beta_0 + \beta_1 VoteRate + \beta_2 VoteShare5 - 10 + \beta_3 VoteShare10 - 25 + \beta_4 VoteShare25 - 50 + \beta_5 \ln TaxValue + \beta_6 \ln TaxIncome + \varepsilon$$

SchoolSpend is the model's independent variable and is the logged total amount in kronor of spending on public primary schooling per capita in each municipality minus state grants from the central government. The grants were distributed in relation to the number of teachers employed, why it is highly correlated to overall school spending. Spending data are from 1874 as published in BISOS P 1874 and have not been corrected for any differences in cost of living between the different municipalities. Three main items are included in the

spending data: school buildings and inventory (24 per cent of total school expenditures at national level); teacher's wages (63 per cent) and other expenditures (13 per cent). Teacher's wages were recurrent costs and did not vary substantially between years. Spending on buildings includes one-off investments in the building stock, which means that there may be great variations between individual years. This could be evened out by taking averages over several years, but since there was a secular increase in school spending in the mid 1870's this would be a complicated task. In the model population extreme spending only appears in a few observations, why the procedure that has been adopted is to eliminate a share of the highest spenders.

The reliability and quality of the published school data and the reports on school spending from the local school districts from which the data have been compiled have been disputed, not the least by contemporary sources. Municipalities compiled and reported the data by using various methods and coverage, payment in kind caused problems for accounting and in some instances expenditure by sub-municipal school units (*rotar*) did not enter the accounts (BISOS U 1874, p. IX). Hultqvist (1965, p. 290) cautions against any attempt to use the data for quantitative comparisons between local administrative units over space and time, without testing the data at their local archival sources. In a critique of school spending data Waldow (2002, p. 153) calls for using the same critical examination of quantitative data as for qualitative data.

The population data are from 1871 as published in BISOS R 1871. These data were reported by the local clergy and followed the old parish division that did not match completely the division into municipalities (BISOS R 1871, p. IV). Since schooling was managed by the church, it seems appropriate to use these data. They differ from the population data reported in BISOS U 1874, which are based on tax records (BISOS U 1874 U, p. X). During the period 1871-1874 the total Swedish population grew rather quickly by 3.2 per cent (BISOS A 1874), why the use of 1871 population data may over-estimate spending per capita per capita school and does not account for differences in population growth between counties. Dividing school spending by child in school age instead of total population would have been preferable, but that kind of demographic data at municipality level are not available from the published sources used here. School children are usually considered to be children of age 7-14 years, a group which represented 17 per cent of Sweden's total population in 1874 (BISOS A 1874), with variations between counties. Other demographic variables may also have influenced the willingness to spend on education, but these are not captured by the model.

VoteRate represents the ratio between the number of franchised individuals or corporations published in BISOS R 1871, table 1, column 10 and total population. The variable allows us to test Hypothesis 1 on the presumed positive association between school spending and the relative share of the middle-class with voting rights. It should be clear from the discussion below that the voting data do not tell us much about how decision-making took place in practice, but represent the share of the population that was given voting rights because they met the stipulated wealth or income requirements (Mellquist 1974, p 115). It is also important to keep in mind that the votes were weighted according to income.

VoteShare 5-10, 10-25, 25-50 represent the number of franchised individuals or corporations that hold voting shares corresponding to the intervals 5-10 per cent, 10-25 per cent and 25-50 per cent of all votes in the municipality divided by the total number of franchised individuals or corporations (*VoteRate*). This is a measure of the concentration of power, in that for example somebody holding more than a quarter of all votes was likely to wield substantive influence over municipal affairs. The source is BISOS R 1871, table 1, column 27-32. This variable allows for a test of Hypothesis 2 on the correlation between the existence of a small elite and school spending.

TaxValue represents the taxable value of land (*Taxeringsvärdet å fast egendom*) in kronor in 1873 per capita sourced from BISOS U 1874. Taxation based on land value was introduced in the beginning of the 19th century. According to law taxable value of land should be based on quality, output and price, but actual practice varied between administrative areas (Olsson 2005, p. 76).

TaxIncome represents taxable income (*Beskattningsbar inkomst*) in kronor in 1873 per capita extracted from BISOS U 1874. The taxable income was the sum of income from capital, employment, pensions and business. Examples of groups concerned include blacksmiths, carpenters, parish priests, school teachers, inspectors, gamekeepers and train station masters (from registers of tax payers held at the Regional state archives in Lund).

TaxValue and *TaxIncome* are both measures of municipalities' wealth. Hypothesis 3 presupposes a positive association between these measures and school spending. The two variables can also be said to represent pre-modern (*TaxValue*) and modern (*TaxIncome*) measures of wealth and can thus also be used as indicators of the economic structure of municipalities. Historically, land was the most valued asset, but as industrialisation accelerated and the private sector grew, non-land income became increasingly important. This trend is apparent in statistics on tax values. The total taxable value of agricultural real estate increased by 25 per cent between 1862/70 and 1881/90, while the value of other estate grew by 150 per cent and taxable income grew by 120 per cent over the same period, albeit from low levels (Statistics Sweden 1960, table 237, pp. 224-225). This changed the share of votes based on agriculture as opposed to other sources of wealth or income, from 68 per cent in 1871 to 56 per cent in 1892 (Mellquist 1974, p. 124). The 1870s seems to mark an acceleration of this trend. For example, wage statistics indicate that sustained growth in real wages did not occur until around this time (Söderberg 2010, p. 467).

4 ECONOMIC AND POLITICAL DEVELOPMENTS IN SWEDEN IN THE 19TH CENTURY

4.1 GROWTH AND STRUCTURAL CHANGE

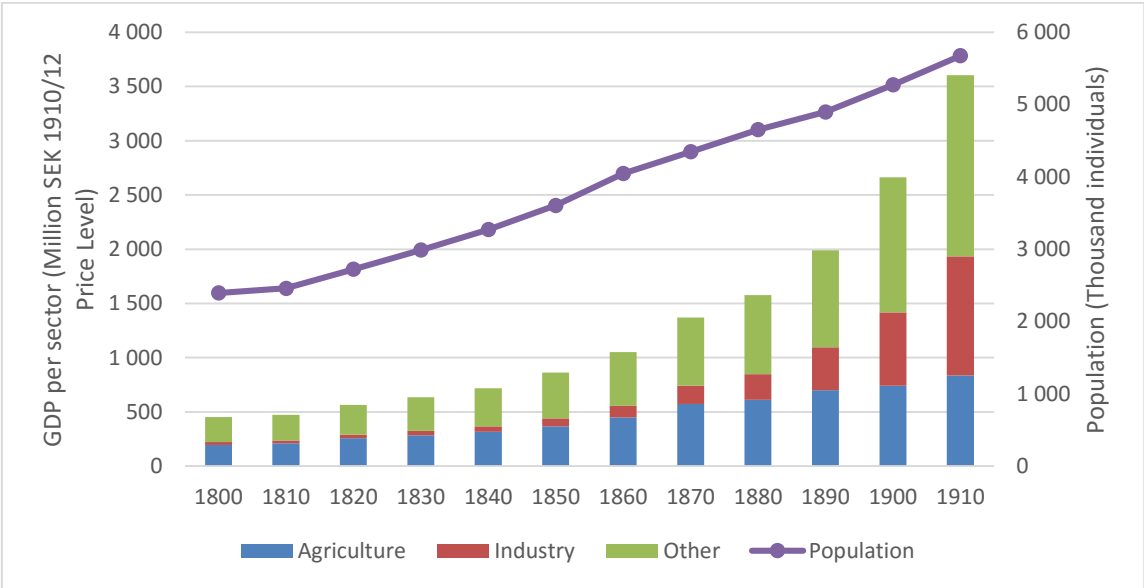
It is important to understand the historical demographic and economic context in which public primary schooling evolved. Figure 1 shows the Swedish development of three key variables – population, GDP and sectoral shares - during the 19th century and slightly beyond. By the time of the 'Folkskole' reform in the 1840s Sweden was still a poor predominately rural country. Agriculture still employed around 70% of the working population. The industrial revolution was at its early stages (*reference*). Industry only accounted for around 7% of GDP. The economy was growing, but so was the population, why GDP per capita expanded slowly. By the end of the decade the situation was different. By the 1900s the Swedish economy had expanded four times in real terms and the industrial sector was almost as large as agriculture. A structural change was well underway, but the country remained poor with a GDP per capita slightly above Spain, but significantly lower than Denmark (*Maddison project*). There was also significant regional variation in economic development both in the beginning of industrialisation, but also in the way it spread. Figure 2 summarises the developments that took place between 1860 (the earliest period for which there is data) and 1900. In 1860 most counties were poor and predominantly rural, except for Stockholm. By 1900 the more industrialising counties were clearly wealthier on average. The counties of Malmöhus, Göteborg and Gävleborg had pulled away from the other counties. Another group that stands out are the northern counties, such as Jämtland and Norrbotten that are wealthier than could be expected given their high share of agricultural employment.

Rural Sweden in the 18th century was characterised by improved social, economic and political status of the peasantry, declining tax levels and a series of good harvests (Magnusson 1996: 109). Thanks to these favourable conditions, farmers could take advantage of the enclosure movement, improved technologies and growing internal and export markets to increase agricultural production. This process gained momentum in the first decades of the 19th century (Bengtsson 2005, p. 343). Agricultural progress was coupled with strong population growth; the Swedish population grew from around 1.8 million in 1750 to 2.4 million in 1810 and 4.2 million in 1870 (Statistics Sweden 1999). Declines in infant and child mortality from the late eighteenth century

onwards led to increases in life expectancy, but there were periods of stagnation or even reversal until the end of the 19th century (Bengtsson 2005, p. 346).

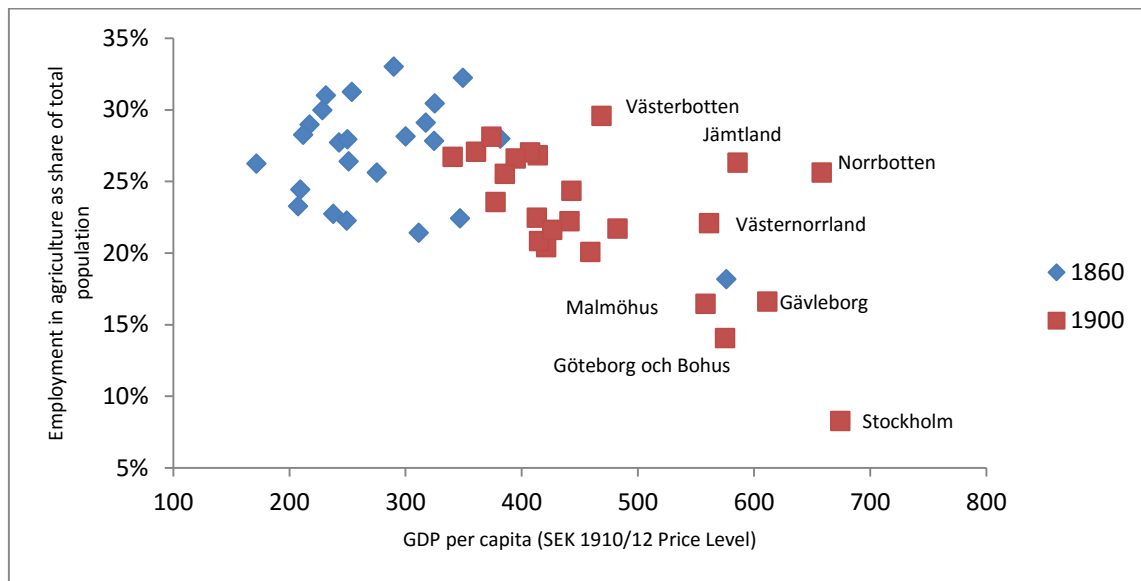
The agricultural transformation led to a proletarianisation of the countryside (Magnusson 1996, pp. 211-213; Bengtsson 2005, p. 359). The number of peasants increased by 10 per cent between 1750 and 1850, while the number of landless quadrupled. Land-owning farmers could take advantage of increased commercialisation of agriculture, while the landless had to rely on self-sufficiency or wage labour. The process of proletarianisation started in Malmöhus county in the south of Sweden (see map in Appendix), with its agricultural plains. The effect on rural poverty levels is less clear (Andersson and Gunnarsson 2005, p. 17; Bengtsson 2005, p. 349). Starting from a higher level, poverty levels seem to have fallen in small-holder based western Sweden that experienced the most rapid transformation, compared to the less dynamic eastern Sweden, which was dominated by larger estates. When industrialisation accelerated in the 1860's the east benefited more in terms of poverty reduction relative to the west. By the 1870's, Sweden was still a rural society based on small family owned free-hold farms (Andersson and Gunnarsson 2005, p. 21), with only 13 per cent of the population living in urban areas (Statistics Sweden 1999, p. 42). Wealth inequality increased over the 19th century (*unpublished data*).

FIGURE 1 GDP PER SECTOR AND POPULATION IN SWEDEN 1800-1910



Source: Schön, L. and Krantz, O. Swedish Historical National Accounts 1560–2010. Note: The “Other” category is the sum of the sectors “building and construction”, “transport and communications”, “private services”, “public services” and “services of dwellings”. The data is presented in decadal averages, meaning for example that 1840 corresponds to the average of 1840-1849.

FIGURE 2 EMPLOYMENT IN AGRICULTURE AND GDP PER CAPITA FOR SWEDISH COUNTIES 1860 AND 1900



Source: Enflo K, Henning M. and Schön L. (2014): Swedish regional GDP 1855-2000: Estimations and general trends in the Swedish regional system, Research in Economic History, volume 30, 47-89.

4.2 THE POLITICAL SYSTEM AT CENTRAL AND LOCAL LEVELS

4.2.1 CENTRAL POLITICAL INSTITUTIONS

The Swedish political tradition is characterised by the co-existence of strong central government and local self-determination (Möller 2010, pp. 18-21). This may seem contradictory, but has its historical explanations. Basic local institutions – such as thing (*ting*), hundred (*härad*) and parish assembly (*sockenstämma*) - appeared during early medieval times. In a European perspective, the peasantry had a strong voice, since it was one of the four estates, while feudalism never was a strong feature of Swedish society. A strong central state started to emerge during the 16th century and this development accelerated in the 17th century because of the need to finance Sweden's imperial ambitions around the Baltic Sea. During the 18th century the parliament got increasingly influential. The Freedom of Print Act (*Tryckfrihetsordning*) of 1766 was path-breaking in that it gave all citizens a right in principle to access public documents. This early period of parliamentarism degenerated and was followed by a period of monarchic rule, which ended in 1809 with a new constitution that was to remain in place until 1975.

The 1809 constitution was based on Montesquieu's principles of the division of power (Möller 2010, pp. 21-22). The king was given executive powers, while the parliament was given responsibility for taxes and expenses. The parliament also had to approve of new legislation proposed by the king and provided a controlling function of the government that formally was advisor to the king. A number of factors fuelled the need for further reform (Möller 2010, pp. 25-26). The parliament did not work very well. Liberal opposition wanted to constrain the power of the king and strengthen the role of the government and the parliament. In parallel, new social groups emerged that did not fit into any of the four estates. The nobility was increasingly losing its economic dominance and the traditional clergy was challenged by pentecostalist movements. The peasantry was the first of the estates to demand reform of the representative system, inspired by the Norwegian parliament that had broad-based voting rights and strong farmer representation (Christensen 2006, pp. 727-728). The basic reason was opposition to what farmers perceived as the unjust tax exemptions of the nobility.

In 1866 there was a parliamentary reform that replaced the estate based parliament with a bicameral system, with indirect elections to the first chamber and direct elections to the second chamber. The chambers had equal standing and both chambers had to approve of new legislation. Möller (2010, p. 26) argues that the reform led to a modernised system of representation, with a stronger position of the parliament and a vitalisation of its work, while Lewin, Jansson et al. (1972, pp. 40-41) instead consider the reform to have made the parliament even more exclusionary since it favoured the land-holding aristocracy at a time when parliaments in other European countries were increasingly opening up for representation of the working class. Christensen (2006, p. 745) points out that the conservative interests of the parliament of the estates were preserved, since the first chamber of the new parliament was dominated by large land owners and wealthy individuals. In addition, the right to vote was only modestly increased from around five per cent to six per cent of the population or around 20 per cent of all men above the age of 21.

4.2.2 LOCAL POLITICAL INSTITUTIONS

The predecessors of the modern municipality were the independent towns and the parishes in the countryside (Gustafsson 1996, pp. 13-14). The main responsibility of the parishes was to deal with church related matters, but they were also the basis for local decision-making about secular issues. After the Reformation of the 16th century the parish was given responsibility for education and care of the poorest. Gradually, tasks such as road maintenance, health care and election of peasant estate representatives to parliament were added. The parish council was the main decision-making body and was led by the local parish priest. During the 17th and 18th centuries, local autonomy lost ground to the emerging centralised state; the regional administration based on the historical province (*landskap*) was overtaken by counties (*län*) ruled by regional representatives of the central government (*landshövdingar*).

During the 19th century local rule was gradually strengthened (Gustafsson 1996, pp. 14-15). The secular role of the parish was emphasised. In 1843, church and non-church affairs were formally separated. This was emphasised in the 1862 municipal reform, which made municipalities independent legal entities, within the context of the central state. A general clause defined municipal responsibilities as opposed to earlier detailed regulation. The taxation right of the municipality was reaffirmed.

The 1862 reform created five types of municipalities (Gustafsson 1996, p. 16). Towns and townships were primary civil municipalities. In the countryside parishes were divided into primary civil rural municipalities and primary ecclesiastical municipalities (*församling*; parish), both basically covering the same geographical areas. The county council (*landsting*) was created as a secondary civil municipality. The reform reaffirmed a geographical municipal division that by and large followed the old parish structure, which led to large variations in size, population and economic resources of the rural municipalities. By 1863 there were around 2 500 municipalities – 2 400 rural municipalities, 10 townships and 89 towns. The geographical division of the municipalities was durable, with few changes until a process of amalgamation of municipalities into larger units was initiated in the 1940's (Wångmar 2003, p. 72). The highest decision-making body in the rural municipality was the municipal council, with a right to vote which depended on income or wealth.

Somewhat oddly the 1862 reform gave responsibility for primary education to the ecclesiastical municipalities or parishes, not the civil municipalities. The parish was governed by a parish council (*kyrkostämman*), with the same voting rights as for the municipal council (SFS 1862:15). In terms of schooling the parish council was responsible for teachers and their wages, auditing school accounts, maintaining school buildings and, no less important, school fees. The council's decisions were implemented by the school board (*skoloråd*) in the case of primary education and the parish board in other areas. The law stipulated that the school board should be chaired by the local parish priest. School board members were elected by the parish council among its participants and had one vote each. In the case of equal votes the chair's vote was decisive. One important role of the board was to prepare the annual school budget and submit it to a vote in the parish council.

4.2.3 LOCAL DECISION-MAKING AND RIGHT TO VOTE

Local decision-making in Sweden has traditionally been based on majority voting and the one-man, one-vote principle for male land-owning individuals (Mellquist 1974, pp. 17-21). Increasingly the nobility and the church gained influence and both groups could overturn the opinions of local farmers in important issues such as elections of the clergy. The peasant estate raised the issue in parliament and in 1739 it was decided that the local clergy should be elected by majority voting and that the right to vote should be determined by wealth (ownership of land or blast furnace/mill). This was a compromise outcome between the peasantry and the nobility. The former preserved its influence through its land owning, while the latter secured majority voting. These rules were basically confirmed in the 1817 decision on voting in the parishes (Mellquist 1974, p. 36). It took time for the reforms to take hold at local level, but increasingly graded voting became the established way to distribute voting rights. In 1843 it was decided that not only land, but also income could be a basis for voting above a certain limit (Mellquist 1974, p. 45).

TABLE 1 VOTING RULES FOR RURAL MUNICIPALITIES INTRODUCED IN 1862

-
- Only men above the age of 21 had the right to vote.
 - The number of votes of an individual was based on land and income. Each unit of owned land (*mantal*) corresponded to 100 voting units (*fyrk*). Each *fyrk* represented one vote. The voting value of income was calculated based on the taxes paid. Income that required payment of taxes equal to the average amount of taxes paid on one *mantal* in the municipality was given 100 *fyrk*.
 - There was a minimum requirement of 10 *fyrk* to be allowed to vote. There was no maximum number of votes.
 - In addition, according to the tax laws no taxes were paid on income below 400 rd and on land valued to less than 100 rd, which implied a loss of voting rights below these levels.
 - The right to vote was extended to all tenant farmers without restriction.
 - Corporations were given the right to vote.
 - There were some geographical exceptions. In *Kopparberg* county the voting rights were based on monetary units instead of the *fyrk*, while earlier rules were maintained in the *Jämtland*, *Västerbotten* and *Norrbottnen* counties (Mellquist 1974, p. 114).
-

Source: Mellquist (1974, pp. 49-52)

The voting rules for rural municipalities established by the 1862 municipal reform are presented in Table 1. The reforms meant that formally around 10 per cent of the total rural population and 18 per cent of the urban population were given voting rights (BISOS R 1871, pp. 7-8). The system of graded votes created a situation, where in many municipalities a few individuals or corporations could dominate local politics. In more than half of the municipalities at least one individual or corporation had more than 10 per cent of the votes, a level that is considered to have given considerable influence on local affairs (Mellquist 1974, p. 127).

The formal rules are only one side of the story as voter turnout in both national and local elections was low. Möller (2010, p. 34) reports on a turnout of 10 per cent in local elections at the end of the 1800's and around three per cent in certain municipalities in the 1860's. He describes this as an apolitical culture. Lack of knowledge of local political rights may have been one explanation. Another reason was the disincentive for individuals with a few votes to vote, when there were individuals and corporations that held hundreds or thousands of votes. Another factor may be that municipal affairs were relatively apolitical and municipal activities limited during the 19th century. Schooling, limited care for the poor and infrastructure were the main issues. A more cultural explanation is the Lutheran based ideology that favoured contentment, obedience and faith in authorities (Möller 2010, p. 36).

It is difficult to make an across the board assessment of which individuals or groups that dominated local politics. There seems to have been large geographical variations and different issues were dealt with in different ways. The local councils can be described as unique political arenas where representatives of the different estates who were separated at national level met to defend their cause, and where the wealthy sometimes had to give in (Aronsson 2001, pp. 31-32, 61-62). Large corporations and landowners could dominate in parishes where they were present, thanks to their heavy voting rights, while peasants could

manage local affairs in parishes dominated by smallholders. In total corporations held 20 per cent of the votes (Möller 2010, p. 34) Large vote holders could pressure people in subordinate positions to vote for them and even if decisions were taken unanimously and not through a vote, people are likely to have been keenly aware of the distribution of voting power (Mellquist 1974, pp. 131-132, 149-150). Financing of railways was one issue where large corporations and landowners used their voting power to impose their will on the majority with fewer votes. It is difficult to empirically determine how decisions were actually made at the parish council since the names of the people present have rarely been documented in the protocols. A study of six parishes in the Stockholm area indicates that attendance varied depending on the matters at hand, but often seems to have been very limited. Unanimity seems to have been a shared ideal, but in practice the elites had the upper hand (Gustafsson 1989, pp. 78-87).

Local priests had great influence over school affairs as chairmen of the school council. This role was questioned in parliamentary debates from 1862 onwards (Sörensen 1942, pp. 32-37). One reason was the perceived need to increase the involvement of local citizens in schooling, to counter the prevailing view that the church was solely responsible for local schools. Another reason was a fear that the curriculum was focused on religious education under church tutelage to the detriment of secular knowledge. There was also a discussion regarding the competence of the priesthood to chair the school boards. Of these proposals came nothing, the administration of local schools was not transferred from the parishes to the civil municipalities until the 1930 municipal reform.

A case study of parish school boards in Bolstad in western Sweden shows that the school boards early on based their work on instructions issued by the regional government school inspectors, institutions that had been introduced in 1859 (Sjöberg 1996, pp. 47-55). However, the boards do not seem to have been very active in promoting school attendance. The chair of the school board, the priest, was the most active e.g. in visiting schools. The board members of the four studied parishes were almost exclusively land-owning and relatively well-educated men (Sjöberg 1996, pp. 173-177). The board met on average less than twice a year and focused mainly on school building and maintenance, which indicates that the parish council was more important than the school board in ruling over local schooling. [add: *Westberg on school building in Sundsvall*]

5 THE RISE OF SWEDISH PRIMARY SCHOOLING

5.1 DEVELOPMENT FROM BELOW AND CENTRAL REFORMS

The chronology of the rise of mass schooling has been extensively dealt with in the Swedish literature (Aquilonius 1942; Sörensen 1942; Thunander 1946; Boli 1989, ch. 10; Richardson 2010). In this section the focus is on developments until around the 1870's and geographical differences in order to situate the empirical chapter that follows. Some important milestones in terms of central reforms are worth mentioning.

Primary schools emerged in Sweden from the end of the 16th century and 40-50 schools were recorded by the end of the 17th century (BISOS P 1882, p. 2). These schools were financed by donations or by state or church taxes. Home instruction was promoted by the Church Law of 1686 that required catechetical household examinations (Sjöberg, 1996, p. 6). By the end of the 18th century the ability to read religious texts was widespread, but not necessarily the ability to write and read unknown texts (Nilsson and Pettersson, 2009, p. 2). As early as the 17th century, wealthy layers of society were willing to pay for their children's education and an extensive private school system emerged during the 18th century (Richardson 2010, pp. 37-38, 40). Studies of local school districts show that children's schooling were closely related to the economic and social conditions of their parents (Sandin 1986, p. 18).

There were continuous discussions at state level on how to improve education for the common people and a first official commission for education was established in 1768 (Klose, 1992, p. 57). Nevertheless, education

was considered a parental and local responsibility and no system of state support was established until the 1842 reform (Nilsson and Pettersson, 2009, p. 2). Meanwhile an educational system continued to develop from below and by 1839 half of all parishes are reported to have had at least one school (Sjöberg, 1996, p. 7), but only one out of seven children is estimated to have attended a school in that year and the regional variations were great (Aquilonius, 1942, p. 268). The existing schools were short of resources; facilities, teachers, teaching material and money were lacking (Schelin, 1978, p. 7). The City of Stockholm and Lund diocese appear to have been the leading localities in terms of having established permanent schools (BISOS P 1882, p. 7). The reasons for Lund's lead have not been systematically explored in the literature, but Thunander (1946, p. 30) finds explanations in Lund's proximity to Denmark, efforts of dedicated individuals, short distances and proletarianisation of the countryside.

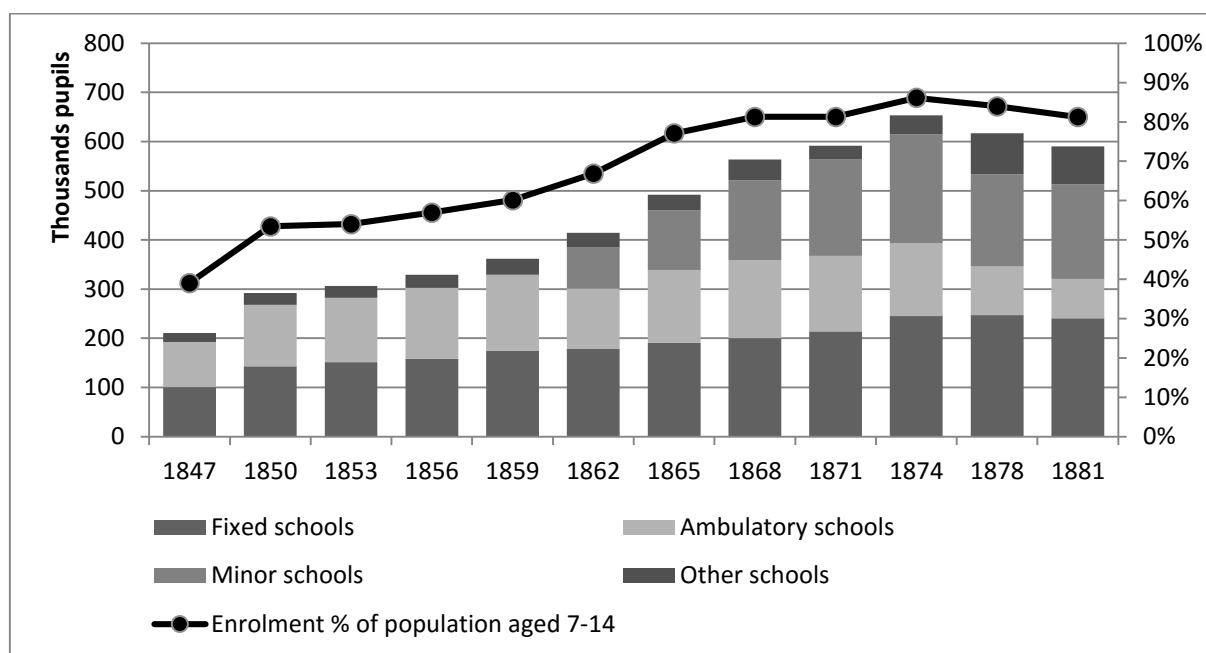
The 1842 reform introduced public mass schooling (*folkskola*) in Sweden, even though school attendance was not made mandatory (Pettersson 1992, p. 312). The majority of the peasantry opposed the decision and had rejected earlier proposals since they feared having to pay higher taxes to finance the reform (Nilsson and Pettersson 2008, p. 220-221). The 1842 reform therefore came with a minimal financial envelope from the state; it was up to the local school districts to fund their schools. The decision prescribed that every parish should have at least one school and established minimum knowledge requirements related to reading, writing, mathematics and the Scripture. No minimum requirement of attendance was stipulated and different forms of schools such as ambulatory and part-time schools were allowed. The state took responsibility for teacher training and a minimum wage for teachers was determined. The end result was that implementation of the reform was slow and that poor children were sent to school as little as possible.

Subsequent parliamentary decisions added important elements to the initial reform in order to address implementation challenges. In 1846 a public education tax was introduced by the conversion of half of an existing flat tax (*skyddsavgiften*) (Aquilonius 1942, p. 339). Minor schools, which were based on only three years of schooling usually staffed by less educated female teachers, were introduced in 1858 as a response to demands for more flexible, less burdensome schooling (Nilsson and Pettersson 2008, p. 222). A public schools inspectorate was introduced in 1860, against the will of the clergy that historically had been responsible for primary education (Aquilonius 1942, p. 415). In 1871 the state grant system was streamlined by merging various grants into a single budgetary item to be allocated proportional to the number of teachers employed in each school district (Wallin 1978, p. 382).

5.2 DEVELOPMENT OF SCHOOLING

It is a challenging task to measure the development of Swedish schooling in the 19th century. Schools came in many forms, pupils attended education to varying degrees and the statistics are unreliable (see discussion in next chapter). Using official statistics, Figure 3 shows that school enrolment rose steadily from below 40 per cent of all children in 1847 to a peak near 90 per cent in 1874, after which there was a reversal of the trend. This reversal is likely to be due to inconsistencies in the data in Schelin (1978), but some kind of levelling seem to have taken place since BISOS P 1882 (p. 4) reports enrolment rates of 87 per cent in 1876, 89 per cent in 1878 and 88 per cent in 1881. This stagnation also appears in Lindert (2004, pp. 91-92), which indicates a higher enrolment ratio in 1880 than in 1920. Other estimates speak of an enrolment rate in compulsory primary schools of 65 per cent in 1865, 73 per cent in 1890 and 75.3 in 1910 (Ljungberg and Nilsson 2009, p. 80). These differences between measures have not been explored here, but are likely to be due to differences in data sources on the number of pupils, the total number children in school age and the ways to classify schools. The stagnation or even decline in terms of school enrolment in the 1870s/1880s, may also be related to socio-economic factors, such as the changes in the agricultural market structure caused by competition of cheap grain from America and Russia (which was offset by a growing domestic market in Sweden) (Olsson 2005, p. 137).

FIGURE 3 SCHOOL ENROLMENT IN SWEDEN (RURAL AND URBAN) 1847-1881



Source: Enrolment data from Schelin (1978) and population data from Wilmoth and Shkolnikov (2011)

In an international perspective Sweden appears as relatively well advanced in terms of enrolment, even though international comparisons are hazardous to make because of the measurement difficulties just mentioned. In terms of pupils in public schools as a share of the 5-14 age group, Sweden was at around 60 per cent in 1870 and 70 in 1880, which was lower than in countries such as the US (78 and 80 per cent) and Prussia (72 and 74), but higher than in Norway (62 and 61) and Spain (40 and 52) (Lindert 2004, pp. 91-92).

One important driving force for increases in enrolment in Sweden was the development of the minor schools. The use of fully-fledged fixed primary schools, arguably a more advanced type of schooling than ambulatory and minor schools, evolved relatively slowly. Low attendance and a short effective school year contributed to a situation where the actual average schooling received by a pupil corresponded to only around two years in 1868 and 3.1 years in 1890 (compared to 7 years in 1950) (Ljungberg and Nilsson 2009, p. 80).

The expansion of resources dedicated to primary education can be seen in Table 2. Half of the parishes are reported to lack schools in 1839. Thirty years later the number of school buildings had quadrupled (around half likely to be minor schools), while the number of teachers was multiplied by seven. The table also indicates that the schooling system developed rapidly in the 1870's, with around 3 500 school buildings and 3 400 teachers added between 1868 and 1881. Overall spending on primary schooling more than tripled in real terms during this period, in spite of falling enrolment. Teacher salaries were by far the highest cost item, even though the share decreased between 1868 and 1876. Funding sources varied between school districts. Before 1842 schools were essentially paid for by the local population, through local taxes, fees and donations (Klose 1992/2010). State grants emerged slowly and covered around 30 per cent of total costs by around 1868, a share that was maintained in the years to come (Westberg 2011).

Around the time of the introduction of mass primary schooling in 1842, the far south of Sweden appears to have been well ahead of the rest of the country in terms of school development.

Figure 4 shows that over 40 per cent of children in school age attended fixed public schools by 1847 in Lund diocese (county level data is not available), with a total enrolment rate of close to 60 per cent. Visby diocese, on the Baltic island of Gotland, also had a relatively developed fixed school system. Enrolment of around 5 per cent is reported from the north (Härnösand diocese). By 1874 total enrolment rates had risen dramatically.

Härnösand diocese was still the worst performer, but enrolment had reached 68 per cent. However, not more than around 14 per cent of all children in school age attended fixed public schools in Härnösand diocese, while minor schools had emerged as an important type of schools. The pattern is the same for Kalmar and Växjö dioceses in the south-east and for Karlstad diocese in the mid-west in particular. It was only in Visby diocese and the city of Stockholm that fixed schools really predominated by 1874, in the case of Stockholm in the form of private and higher education schools.

Overall, the coefficient of variation for total enrolment at diocese level fell from 0.31 in 1847 to 0.08 in 1874, but the coefficient of variation for enrolment in fixed schools only fell from 0.60 to 0.49. *[More on convergence?]*

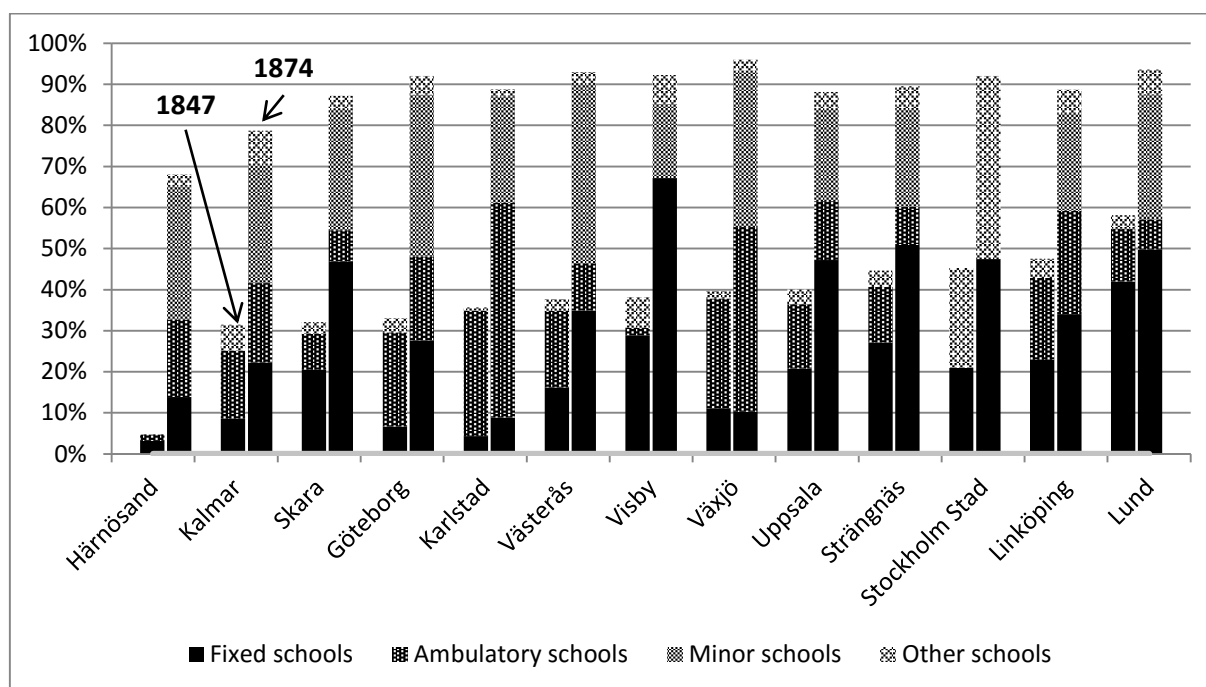
TABLE 2 TOTAL SCHOOL RESOURCES AND COSTS FOR SELECTED YEARS 1839-1881

	1839	1868	%	1876	%	1881	%
Resources (no)							
School buildings	1 009	3 976		5 427		6 535	
Teachers (primary and minor)	1 040	7 145		9 299		10 588	
Revenue (1914 thousand kronor)							
School districts	-	2 502	72%	6 127	72%	8 105	72%
State grants	-	968	28%	2 406	28%	3 109	28%
Total	-	3 470	100%	8 533	100%	11 214	100%
Costs							
Teachers	-	2 979	86%	5 676	67%	7 632	68%
Buildings and facilities	-	329	9%	1 831	21%	2 054	18%
Other	-	163	5%	1 026	12%	1 528	14%
Total	-	3 470	100%	8 533	100%	11 214	100%

Source: 1839 - BISOS P 1882, p. 5; 1868 - BISOS P 1868, p. XII, 66 and 67; 1876 and 1881 - BISOS P 1882, Tab 1.

Note: In 1868, 617 thousand SEK (in 1914 prices) of local taxes (*Folkskoleavgiften*) was counted as state grant, but was actually paid by the school district. If excluded, the state share corresponded to only 10 per cent that year. In 1876 and 1881, an additional 2 425 and 2 508 school buildings were rented by school districts. The amounts were transformed into 1914 prices by using the consumer price index of Sweden for the years 1830-2003 published in Statistics Sweden (2004).

FIGURE 4 SCHOOL ENROLMENT IN VARIOUS TYPES OF SCHOOLS PER DIOCESE IN 1847 AND 1874



Source: Enrolment data and number of children in school age in 1874 from Schelin (1978) and population data for 1845 mainly from Tabell-commissionen (1854) (see notes).

Note: The share of children in school age in each diocese in 1847 was estimated by multiplying total populations of each diocese by the share of children in school age from 1868 (BISOS P 1868). The total population of each diocese in 1847 was estimated by multiplying the 1845 data with the national rate of population growth between 1845 and 1847 calculated from the Swedish population for 1847 (BISOS A 1851/55, p. LVI).

6 DETERMINANTS OF SCHOOL DEVELOPMENT IN THE 1870S

6.1 GEOGRAPHICAL VARIATIONS AT COUNTY LEVEL

In the 1870s Sweden had 24 counties (see map in the Appendix), which can be divided into the three traditional Swedish lands (*landsdel*), covering the North (*Norrland*), Middle (*Svealand*) and the South (*Götaland*) of Sweden. The North (Jemtland, Vesternorrland, Vesterbotten and Norrbotten) is scarcely populated and traditionally the land of the sami. The Middle (Kopparberg, Vermland, Örebro, Gävleborg, Vestmanland, Uppsala, Stockholm, Södermanland) includes Stockholm and the historical mining heartland of Sweden. The South (Blekinge, Elfsborgs, Göteborgs och Bohus, Halland, Jönköping, Kalmar, Kristianstad, Kronoberg, Malmöhus, Östergötland, Gotland) includes both good agricultural land, forested areas and areas with a Danish history.

Figure 5 shows that it is difficult to discern any obvious relationship between school spending per capita in rural areas and the share of the population with voting rights if all Swedish counties are considered, casting doubt on Hypothesis 1. The association between school spending and the value of land, which relates to Hypothesis 2, is more evident in Figure 6. From Figure 6 one may distinguish two groups of counties. There are the wealthy high spenders encompassing the extreme south of Sweden (Malmöhus and Kristianstad) and a number of counties covering a good part of mid-Sweden from Uppsala and Stockholm to Skaraborg and Östergötland. These two

geographical areas correspond well to historical centres of power and good farm land. The other group consists of the northern counties, the west coast and south-east, which were poorer and in some cases settled later. Thus, there seems to be an interplay of factors related to geographical location, wealth and spending on public schools.

FIGURE 5 SCHOOL SPENDING (1874) AND VOTE RATE (1871) PER COUNTY IN RURAL MUNICIPALITIES

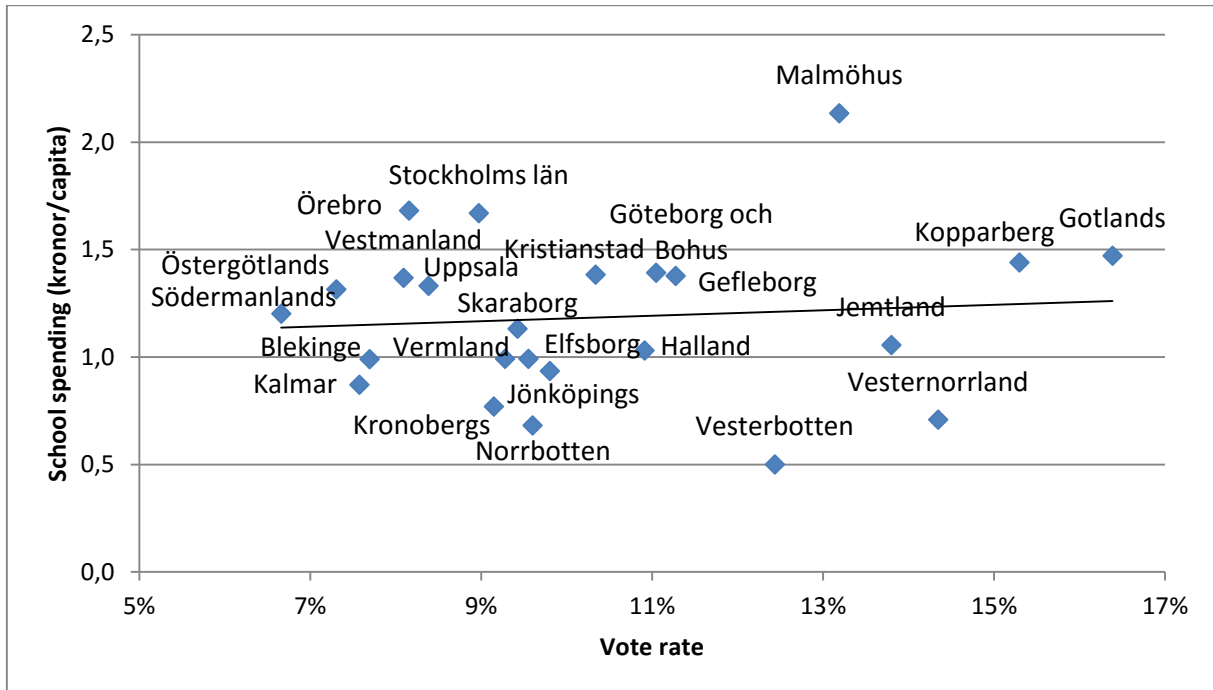
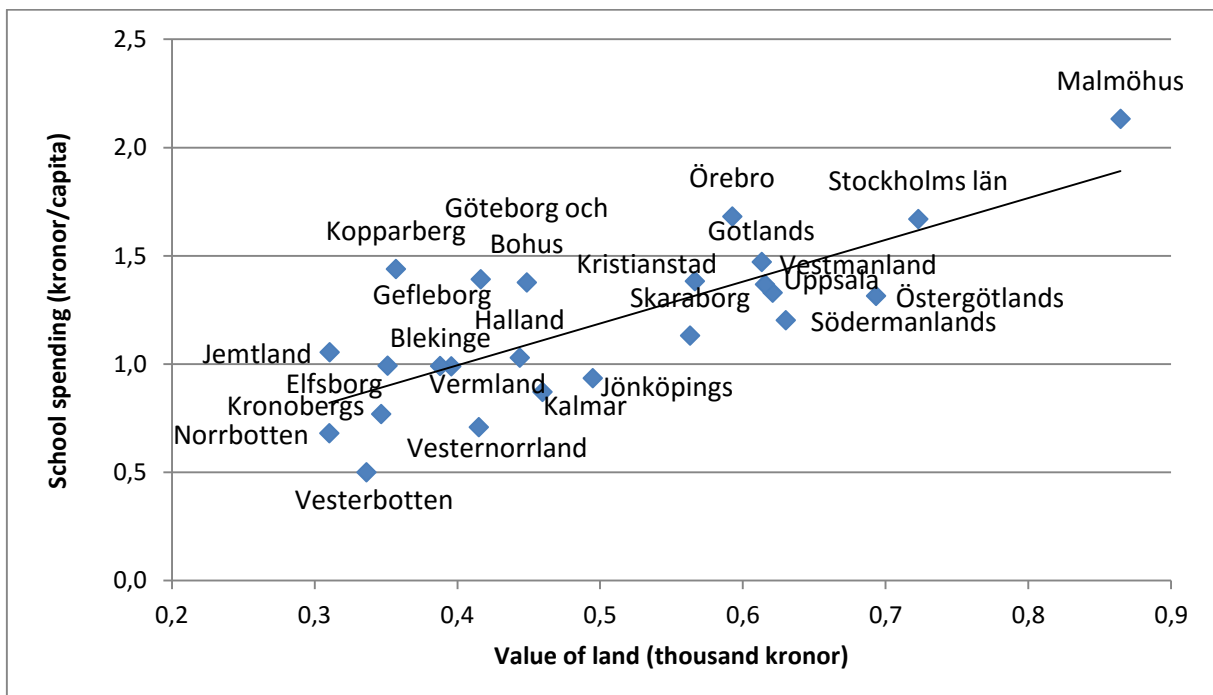


FIGURE 6 SCHOOL SPENDING (1874) AND VALUE OF LAND (1873) PER COUNTY IN RURAL MUNICIPALITIES



6.2 DESCRIPTIVE STATISTICS OF PARISH DATA

Table 3 gives descriptive statistics for the 1 093 municipalities in the sample. It shows that the average municipality had a population of 1 575 inhabitants, spent 1.2 kronor per capita of local resources on public primary schooling and received 0.4 kronor in state grants per capita. The average rate of franchise was 10% and on average 1.9% of the individuals/organisations with voting rights had a voting share of between 5-10%. The variation in all variables is quite large. Some extremes affect the distribution. Three municipalities had populations above 7 000 people, while one had less than 200 inhabitants. One municipality had a franchise rate above 23 per cent, while one was below 2.5 per cent. A few municipalities had a very high concentration of votes; one had 10 voters with *VoteShare5-10*, five municipalities had five voters with *VoteShare10-25*, and three municipalities had two voters with *VoteShare25-50*, in all cases implying that a handful of individuals or corporations had more than half of all votes (there are also cases of one individual or corporation having more than half of the votes). 141 municipalities did not have any voters with voting shares in the 5-50 per cent spectrum, thus indicating that they had a more equal distribution of resources and voice. *TaxValue* was much higher than *TaxIncome* and the higher difference between the average and the median indicate that *TaxIncome* was more unevenly distributed than *TaxValue*.

TABLE 3 DESCRIPTIVE STATISTICS FOR THE SAMPLE (N=1 093)

	Average	Standard deviation	Median	Minimum	Maximum
Population	1 575	1 090	1 282	136	8 827
SchoolSpend	0.87	0.54	0.69	0	3.04
VoteRate	10%	3.5%	9.6%	1%	26%
VoteShare5-10	1.9%	3.3%	1%	0	58%
VoteShare10-25	0.8%	1.6%	0	0	17%
VoteShare25-50	0.2%	0.9%	0	0	20%
TaxValue	579	296	504	47	1 915
TaxIncome	9.1	12.6	5.8	0.2	153

A first sense of geographical differences at county level is given in Table 4, which also includes population density. The counties vary in terms of the number and average population size of the municipalities. Malmöhus includes densely populated plains in the extreme south-west, with the highest average value of land. In fact 77 out of the 100 wealthiest municipalities in terms of *TaxValue* were located in Malmö. School spending is by far the highest in Malmöhus and bordering Kristianstad. Jönköping, Kronoberg, Kalmar and Elfsborg in particular are more characterised by poorer less populated forested areas. The municipalities in Göteborg county have the highest average taxable income seemingly because of a couple of high earning municipalities close to the city of Göteborg. Östergötland also stands out as relatively wealthy in terms of both taxable income and value of land, thanks to the inclusion of Motala municipality, which had by far the highest total taxable income in the sample.

TABLE 4 CHARACTERISTICS OF THE SAMPLE BY COUNTY

County	No obs	Average population	Average pop. density	Average School-spend	Average VoteRate	Average TaxValue	Average Tax-Income
Östergötland	127	1 544	27	0.74	7%	734	11.0
Jönköping	119	1 346	15	0.61	10%	500	6.6
Kronoberg	70	2 007	17	0.52	9%	363	8.0
Kalmar	92	2 209	23	0.64	8%	477	7.4

Blekinge	31	3 243	39	0.79	8%	423	6.3
Kristianstad	138	1 501	43	1.03	10%	616	7.0
Malmöhus	202	1 121	65	1.40	13%	943	11.8
Halland	76	1 407	30	0.78	11%	473	6.7
Göteborgs och Bohus	71	2 043	55	0.75	11%	443	15.8
Elfsborgs	167	1 406	25	0.76	10%	341	8.7
Total	1093	1 575	36	1.23	10%	581	9.2

Plots of relationships between local school spending and the key independent variables are included in Annex 2. In Panel 1 it is difficult to discern a clear relationship between SchoolSpend and VoteRate, while there seems to be a clear positive relationship between SchoolSpend and TaxValue in Panel 2. Panel 3 shows that TaxIncome still plays a modest role in most parishes.

6.3 MODEL RESULTS

The results of the model specified above are shown in Table 5. All variables are significant at 95% level. Both TaxValue and TaxIncome are positive, indicating that more wealthy parishes spend more on schooling. The coefficient of TaxValue is much higher, showing that land wealth counts more than taxable income at this early stage of industrialisation. The coefficient of VoteRate is positive, showing that the more widespread voting rights are, the higher is spending on schooling, also what could be expected. Interestingly, the VoteShare variables are also positive, indicating that the presence of dominating individuals or organisations is actually positive for school spending.

TABLE 5 REGRESSION OUTPUT

Source	SS	df	MS			
Model	95.7789619	6	15.9631603	Number of obs =	1092	
Residual	276.452438	1085	.254794873	F(6, 1085) =	62.65	
Total	372.231399	1091	.341183684	Prob > F =	0.0000	
				R-squared =	0.2573	
				Adj R-squared =	0.2532	
				Root MSE =	.50477	

lnLocalSpendCap	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnTaxValueCap	.3682243	.0338674	10.87	0.000	.3017712	.4346773
lnTaxIncomeCap	.0602312	.0165616	3.64	0.000	.0277348	.0927275
VoteRate	4.293313	.4807522	8.93	0.000	3.350004	5.236623
Andelrstegandemed510	1.583811	.531091	2.98	0.003	.5417297	2.625893
Andelrstegandemed1025	2.613992	1.148348	2.28	0.023	.3607589	4.867226
Andelrstegandemedver25	3.521254	1.80317	1.95	0.051	-.016841	7.059349
_cons	-3.199285	.1965268	-16.28	0.000	-3.5849	-2.813669

7 CONCLUSIONS

This is still work in progress, but some preliminary conclusions can be drawn. The first point is that it is important to recognise the specificity of Sweden, when studying determinants to school spending. Unlike the US, Sweden was an elite democracy for which it is difficult to separate political influence and economic wealth because of the graded voting system. Yet, the regression results indicate that higher shares of individuals and organisations with voting rights had a positive effect on local school spending. Is this indicative of a bottom-up

movement in the form of a middle-class that was favouring education because it had use for it? This interpretation would lend support to Lindert's arguments about the beneficial spread of democracy. However, a more traditional elite-control interpretation seems more plausible. The share of franchised around the 1870s was still limited and a few wealthy individuals or organisations could dominate local politics, even though we know relatively little about this worked in practice. Industrialisation was in its early stages and "old" land wealth counted more than "new" income. Somewhat surprisingly the regression results show that the presence of dominating voters was positive for local school spending. This would be indicative of a top-down process, where the established landed elite for various reasons had an interest in providing the less fortunate with a modicum of schooling. What seems clear is that even though the number of schools and enrolment increased during the second half of the 19th century, the primary school system in Sweden was still far from fully developed by the turn of the century, over fifty years after the *folkskole*-reform. Could it be that there were limits to what an elite democracy could deliver in terms of providing high-quality and equal primary schooling? In order to understand that we need to study what happened to school spending when democracy really spread among the general population, but that was well into the 20th century.

8 REFERENCES [INCOMPLETE]

- Acemoglu, Daron, Simon Johnson, and James Robinson. 2004. *Institutions as the Fundamental Cause of Long-Run Growth*: National Bureau of Economic Research.
- Benos, Nikos and Stefania Zotou. 2014. "Education and Economic Growth: A Meta-Regression Analysis." *World Development* 64: 669-689.
- Bessen, James. 2003. "Technology and Learning by Factory Workers: The Stretch-Out at Lowell, 1842." *The Journal of Economic History* 63 (1): 33-64.
- Björklund, Anders, 1950, Mikael Lindahl 1967, Albert Tuijnman 1959, Expertgruppen för studier i samhällsekonomi, and Sverige. Finansdepartementet. 2005. *Education and Economic Development: What does Empirical Research show about Causal Relationships?*. Stockholm: Fritze [distributör].
- Boli, J. 1989. *New Citizens for a New Society. the Institutional Origins of Mass Schooling in Sweden*. London: Pergamon Press.
- Boot, H. M. 1995. *How Skilled were Lancashire Cotton Factory Workers in 1833* Blackwell Publishers.
- Cappelli, Gabriele. 2013. *Escaping from a Human Capital Trap? Italy's Regions and the Move to Centralized Primary Schooling, 1861 - 1936* : Università di Siena.
- Cinnirella, Francesco and Erik Hornung. 2015. *Landownership Concentration and the Expansion of Education*: Max Planck Institute for Tax Law and Public Finance.
- Clark, Gregory and Rowena Gray. 2014. "Geography is Not Destiny: Geography, Institutions and Literacy in England, 1837–63." *Oxford Economic Papers* 66 (4): 1042-1069.
- Cvrcek, Tomas and Miroslav Zajicek. "School, what is it Good for? the Politics and Economics of Public Education in 19th Century Habsburg Empire."
- de Carvalho Filho, Irineu and Renato P. Colistete. 2010. "Education Performance: Was it all Determined 100 Years Ago? Evidence from São Paulo, Brazil."

- Dickson, M. and C. Harmon. 2011. "Economic Returns to Education: What we Know, what we Don'T Know, and Where we are Going-some Brief Pointers." *ECONOMICS OF EDUCATION REVIEW* 30 (6): 1118-1122.
- Elis, Roy. "Redistribution Under Oligarchy: Trade, Regional Inequality, and the Origins of Public Schooling in Argentina, 1862-1912."
- Erlingsson, Gissur Ó. 2009. "Sociala Konflikter Och Politisk Förändring." In *Reform : Förändring Och Tröghet i Välfärdsstaterna*, edited by Peter Santesson-Wilson and Gissur Ó Erlingsson. Stockholm: Norstedt.
- Gao, Pei. "The Uneven Rise of Modern Education in China in the Early 20th Century."
- Go, S. and P. Lindert. 2010. *The Uneven Rise of American Public Schools to 1850*. Vol. 70.
- Go, S. and Ki-Joo Park. "The Elite-Biased Growth of Elementary Schooling in Colonial Korea."
- Goldin, Claudia Dale and Lawrence F. Katz. 2008. *The Race between Education and Technology*. Cambridge, Mass.: Belknap Press of Harvard University Press.
- Jonsson, P., F. Sandgren, E. Lindberg, and T. Snäll. 2009. "Towns and Rural Industrialisation in Sweden 1850-1890: A Spatial Statistical Approach." *Scandinavian Economic History Review* 57 (3): 229-251.
- Lindert, Peter H. 2004. *Growing Public: Social Spending and Economic Growth since the Eighteenth Century*. Cambridge, UK ; New York: Cambridge.
- Magnusson, L. 1996. *Sveriges Ekonomiska Historia Tiden*Athena.
- Mitch, D. 1990. "Education and Economic Growth: Another Axiom of Indispensability? from Human Capital to Human Capabilities." In *Education and Economic Development since the Industrial Revolution*, edited by G. Tortella. Valencia: Generalitat Valenciana.
- Mokyr, Joel. 2005. "The Intellectual Origins of Modern Economic Growth." In , 17-80. Heidelberg: Physica-Verlag HD.
- Nilsson, Anders and Lars Pettersson. 2008. "The State of the People? Government Policies and Population Movements in Education and Training in 19th Century Swedish Agriculture." In *The State and Rural Societies Policy and Education in Europe 1750-2000*, edited by N. Vivier. Brepols: Turnhout.
- Nilsson, Anders, Lars Pettersson, and Patrick Svensson. 1999. "Agrarian Transition and Literacy: The Case of Nineteenth Century Sweden." *European Review of Economic History* (1): 79.
- North, Douglass C., John Joseph Wallis, and Barry R. Weingast. 2006. *A Conceptual Framework for Interpreting Recorded Human History*: National Bureau of Economic Research.
- Richardson, Gunnar. 2010. *Svensk Utbildningshistoria : Skola Och Samhälle Förr Och Nu*. 8. rev. uppl ed. Lund: Studentlitteratur.
- Rosés, Joan R. 1998. *Measuring the Contribution of Human Capital to the Development of the Catalan Factory System (1830-61)* Cambridge University Press.
- Rowan, Brian. 2006. "Lessons Learned and Future Directions." In *The New Institutionalism in Education*, edited by H. -D Meyer and Brian Rowan. Albany: State University of New York Press.
- Shammas, Carole. "Did Democracy Give the U.S. an Edge in Primary Schooling?"

- Stava, Per. 2001. "Deltagande i Lokalval i Norden i Ljuset Av Demokratiteori." In *Rösträtten 80 År : Forskarantologi*, edited by Christer Jönsson, 169-182. Stockholm: Justitiedepartementet.
- Stoddard, Christiana. 2009. *Why did Education Become Publicly Funded? Evidence from the Nineteenth-Century Growth of Public Primary Schooling in the United States* Cambridge University Press.
- Tapia, Francisco J. Beltrán and Julio Martínez-Galarraga. 2015. "Land Access Inequality and Education in Pre-Industrial Spain."
- Vollrath, Dietrich. 2013. "Inequality and School Funding in the Rural United States, 1890." *Explorations in Economic History* 50: 267-284.
- Westberg, Johannes. 2014. *Att Bygga Ett Skolväsende : Folkskolans Förutsättningar Och Framväxt 1840-1900*. Lund: Nordic Academic Press.

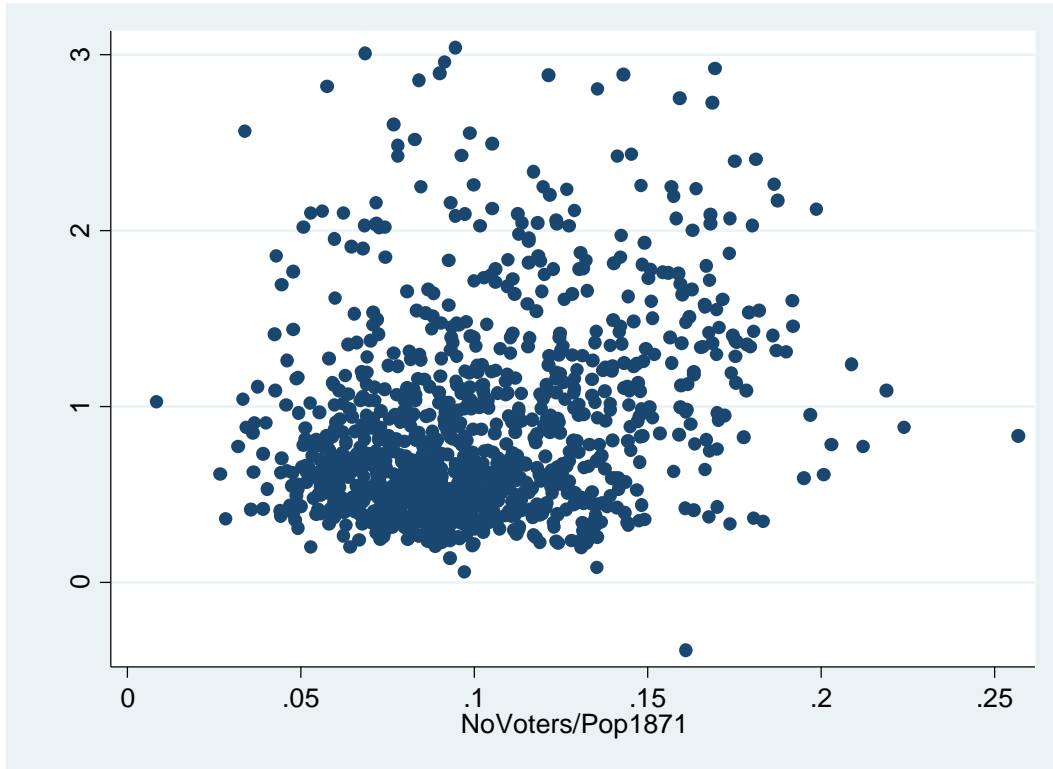
ANNEX 1 MAP OF SWEDISH COUNTIES



Source: Högman (2010)

ANNEX 2 PLOTS OF PARISH SPENDING

Panel 1 – SchoolSpend by VoteRate



Panel 2 – SchoolSpend by TaxValue



Panel 3 – SchoolSpend by TaxIncome

