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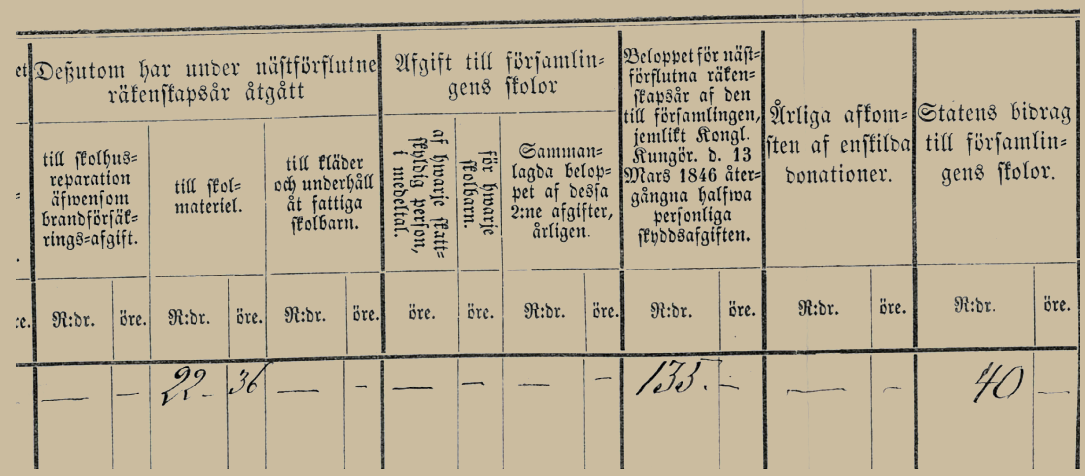

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SPECIAL ISSUE:
EDUCATIONAL
FINANCE REFORM

Edited by
Clémence Cardon-Quint & Johannes Westberg

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Vol. 8, no. 2 (2021) , Special Issue: Educational Finance Reform

The *Nordic Journal of Educational History* (NJEdH) is an interdisciplinary international journal dedicated to scholarly excellence in the field of educational history. The journal takes special responsibility for the communication and dissemination of educational history research of particular relevance to the Nordic region (Denmark, Finland, Iceland, Norway, Sweden and political and geographic entities including the Faroe Islands, Greenland, Sápmi and Åland), but welcomes contributions exploring the history of education in all parts of the world. The publishing language is English and the Scandinavian languages. The journal applies a double blind peer review procedure and is accessible to all interested readers (no fees are charged for publication or subscription). The NJEdH publishes articles as soon as they have been through the peer review and copy editing process, adding cumulatively to the content of an open issue each year. Special issues are normally published as the second issue of any given year.

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INTRODUCTION

Educational Finance in France and Sweden: A Historiographical Overview

Clémence Cardon-Quint & Johannes Westberg

A long way to the history of education finance

The funding of education (primary, secondary, technical or higher education) has been a divisive issue in European welfare states in recent decades, against a background of reduced economic growth, tightening budgetary constraints, the surge of neo-liberalism and a new rise in social inequalities, all trends whose precise characterisation is, in itself, a matter of debate.[1] Education expenditure is described both as a form of "social investment", and as a component of redistributive policies, a rationale used to justify increases in spending.[2] At the same time, attempts to "rationalise" public spending in education, linked with the expansion of New Public Management tools and policies, have bloomed; this trend is often decried as a threatening thrust

1 This article has benefited from numerous discussions: we would specially like to thank Pierre Caspard and the participants of the School Finance Reforms webinar (France, Sweden). We are solely responsible for the content of the article. This special issue was made possible thanks to the financial support of the University Bordeaux-Montaigne, the Centre d'études des mondes moderne et contemporain (CEMMC EA 2958), and the Swedish Research Council (dnr 2019-04425).
Peter H. Lindert, *Growing Public: Social Spending and Economic Growth Since the Eighteenth Century*, vol. 2 (Cambridge: Cambridge University Press, 2004); Thomas Piketty, *Capital et idéologie* (Paris: Éditions du Seuil, 2019).

2 Ben W. Ansell, *From the Ballot to the Blackboard: The Redistributive Political Economy of Education*, Cambridge Studies in Comparative Politics (Cambridge: Cambridge University Press, 2010); Marius R. Busemeyer, *Skills and Inequality: Partisan Politics and the PoliticalEconomy of Education Reforms in Western Welfare States* (Cambridge: Cambridge University Press, 2014).

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of neo-liberalism and criticised for its everyday consequences.[3] On these topics, the intertwining of technical and political dimensions is a breeding ground for controversies, that have local, national and also international dimensions. Efficiency and equity in the allocation of educational resources are questioned by international organisations, such as the OECD, and foreign examples are frequently invoked to promote changes.[4]

Sweden and France are no exception to this rule, and in those countries too, debates on school finance have been raging.[5] Two examples will suffice. In Sweden, the introduction of school vouchers in the early 1990s raised numerous discussions. With this internationally unique system of government funded school vouchers—where government funded school vouchers follow children either to public or private schools, where schools are not allowed to charge fees, and where private companies are allowed to make a healthy profit from the school vouchers—the role of private schools and private school companies in the school sector has remained high on the political agenda. In France, the funding of higher education has been a very sensitive issue for several years. The budgetary autonomy of the universities, decided in 2007, stirred up the debate. In 2022, an ambiguous statement by the President of the Republic about the low cost of education for students immediately sparked controversy in an academic community traditionally hostile to any tuition fee increase. Education finance thus encompasses a variety of questions that are of interest to diverse academic fields: public policy, economy, law, sociology, political science, and history.

Early promotors of historical approaches towards education finance were economic historians, following the rise of education economics on American campuses at the end of the 1950s.[6] Researchers in this field have addressed a wide variety of topics, from the relationship between human capital and economic growth, to the

3 Christian Laval, *L'École n'est pas une entreprise: le néo-libéralisme à l'assaut de l'enseignement public* (Paris: la Découverte, 2003); Ken Jones, Chomin Cunchillos, and RichardHatcher, *Schooling in Western Europe: the New order and its Adversaries* (Basingstoke: Palgrave Macmillan, 2008); Helen M. Gunter, ed., *New Public Management and the Reform of Education: European Lessons for Policy and Practice* (London: Routledge, 2016); Hélène Buisson-Fenet, *Piloter les lycées: le 'tournant modernisateur' des années 1990 dans l'Éducation nationale* (Grenoble: Presses universitaires de Grenoble, 2019).

4 Christian Ydesen, *The OECD's Historical Rise in Education: The Formation of a Global Governing Complex*, Global Histories of Education (Cham, Switzerland: Palgrave Macmillan, 2019); Peter Lindert, "Revealing Failures in the History of School Finance" (Cambridge, MA: National Bureau of Economic Research), November 2009; Edward N. Wolff, William J. Baumol, and Anne Noyes Saini, "A Comparative Analysis of Education Costs and Outcomes: The United States vs. Other OECD Countries," *Economics of Education Review* 39 (2014), 1–21.

5 For an overview of the French debates, Jacques Hallak, *À qui profite l'école ?* (Paris: Presses universitaires de France, 1974); Roger-François Gauthier and André Désiré Robert, *L'École et l'argent: quels financements pour quelles finalités?* (Paris: Retz, 2005); Commission du débat national sur l'avenir de l'école, *Les Français et leur école: le miroir du débat* (Paris: Dunod, 2004), chap. 4.3; Jean-Richard Cytermann, "Le Financement du système éducatif français et l'enjeu de la performance," *Revue internationale d'éducation de Sèvres*, no. 65 (2014), 121–31.

6 The economics of education is characterised in particular by the attention paid to the measurement of the effects of education, an issue that is also present in other fields of research (history, sociology, political science, psychology), but in a more diffuse manner. Christian Baudelot et al., *Les Effets de l'éducation: rapport à l'intention du PIREF* (La documentation française, 2005), https://halshs.archives-ouvertes.fr/halshs-00174936 (accessed February 23, 2022).

effects of education on social mobility, productivity, and the labour market.[7] To that intent, they mobilised a wide range of quantitative series (number of schools, enrolment rates, average years of schooling etc.), that sometimes included data related to educational expenditure, usually used as a proxy for investment in human capital.[8] Today, the interest among economic historians in education and human capital remains strong.[9]

In history of education, questions of educational finance have, however, only received intermittent attention.[10] In the 1970s and 1980s, several works addressing the social history of schooling have made extensive use of financial elements. These include the pioneering publications of, for example, Norman Morris on public educational spending in England during the 1860s, Mary Jo Maynes comparative local histories on schooling in France and Germany, and Ben Eklof's studies on schooling in Russia.[11] Studies examining the generation of revenues, the allocation and utilisation of resources in education from a historical perspective have, however, remained scarce.[12] The reasons for this are varying, and may be explored further. These nevertheless include the normative ideal that education should not be determined by economic issues and the distance that sometimes is created between education and its social and economic context.[13] This may also be linked, at least in some academic contexts, to certain strands of research in history and education that, following the linguistic turn, have paid less attention to realities, practices and contexts of schooling and to a larger degree have focused on the meaning of educational phenomena.[14] Finally, in France at least, this lack of interest in economic and financial issues is not specific to history of education but is also reflected, more broadly, in the themes dealt with by historians of the nineteenth and twentieth centuries, who, after the dawn of a

7 Michael Sanderson, "Educational and Economic History: The Good Neighbours," *History of Education* 36, no. 4/5 (2007), 429–45.

8 David Mitch, "The Economic History of Education," in *Routledge Handbook of Modern Economic History*, ed. Robert Whaples and Randall E. Parker (Routledge, 2013), 247–65; Claudia Goldin, "Human Capital," in *Handbook of Cliometrics*, ed. Claude Diebolt and Michael Haupert (Cham: Springer International Publishing, 2019), 147–77.

9 Martina Cioni et al., "The Long-Term Evolution of Economic History: Evidence from the top Five Field Journals (1927–2017)," *Cliometrica* 14, no. 1 (2020), tab. 3.

10 We might mention as an exception: Fletcher Harper Swift, *A History of Public Permanent Common School Funds in the United States, 1795–1905* (H. Holt and Company, 1911).

11 Ben Eklof, *Russian Peasant Schools: Officialdom, Village Culture, and Popular Pedagogy, 1861–1914* (Berkeley: University of California Press, 1986); Mary Jo Maynes, *Schooling for the People: Comparative Local Studies of Schooling History in France and Germany, 1750–1850* (New York: Holmes & Meier, 1985); Norman Morris, "Public Expenditure on Education in the 1860s," *Oxford Review of Education* 3, no. 1 (1977).

12 For this broad and preliminary definition of school finance, see Jennifer King Rice et al., "School finance: an overview," in *The Economics of Education (Second Edition)*, ed. Steve Bradley and Colin Green Academic Press, 2020), 333.

13 Marcelo Caruso, "Why Do Finance? A Comment About Entanglements and Research in the History of Education," *Nordic Journal of Educational History* 2, no. 1 (2015), 144.

14 For such research after the linguistic turn, see, e.g., Lynn Fendler, "New Cultural Histories," in *Handbook of Historical Studies in Education*, ed. Tanya Fitzgerald (Singapore: Springer, 2019).

certain type of a social and economic history, have rather focused on political, social and cultural issues.[15]

There are, nevertheless, good reasons for historians of education to study the history of educational finance. Since most decisions are, by extension, financial decisions, studies into funding, spending and distribution enable us to examine educational policies and practices in greater depth, including the goals that are sought after, the aims policies have been less concerned with, but also those matters that could not be funded. Educational expenditure can thus provide vital measurements on the development of the educational system, but also deepen our understanding of the visions and intentions of those who funded it.[16]

This is the rationale behind monographs or edited volumes, published during the last 10–15 years, that draw extensively on school finance. These include Nancy Beadie's monograph *Education and the Creation of Capital in the Early American Republic* (2010), R.D. Gidney's and W.P.J. Millar's chapter on school finance in *How Schools Worked* (2012), Ingrid Brühwiler's dissertation *Finanzierung des Bildungswesens in der Helvetischen Republik* (2014), and the special issue of *Paedagogica Historica*, edited by Michael Geiss and Carla Aubry Kradolfer, on the "entangled histories of funding and educational administration" (2016).[17]

Neither in Sweden nor in France are we the first to point out these crucial stakes among historians of education. In Sweden, early historical studies of school finance found a basis in the 1970s in social history addressing local cases. These include Bodil Wallin's study of political debate and the organisation and funding of the Swedish school system, which was part of a broader project on ideology and social policy.[18] Almost twenty years later, Mats Sjöberg's thesis on local conflicts over schooling in the south-west of Sweden, featured sections on school spending as well as revenues. Both studies may be compared, in the themes and theoretical approach,

15 Nicolas Patin, "Les thèse soutenues en histoire contemporaine (2014–2018). Un bilan," Billet, *Historiens contemporanéistes* (blog), https://ahcesr.hypotheses.org/2096 (accessed February 23, 2022).

16 Donald Warren, "Beginnings Again: Looking for Education in American Histories," *History of Education Quarterly* 43, no. 3 (2003), 405; R. D. Gidney and W. P. J. Millar, *How Schools Worked: Public Education in English Canada, 1900–1940* (Montreal: McGill-Queen's University Press, 2012), 151.

17 Nancy Beadie, *Education and the Creation of Capital in the Early American Republic* (Cambridge, 2010); R. D. Gidney and W. P. J. Millar, *How Schools Worked: Public Education in English Canada, 1900–1940* (Montreal: McGill-Queen's University Press, 2012); Ingrid Brühwiler, *Finanzierung des Bildungswesens in der Helvetischen Republik. Darstellung verschiedener Akteure sowie deren Einfluss und Wirkung in unterschiedlichen Regionen der Schweiz um 1800*, Studien zur Stapfer-Schulenquête von 1799 (Bad Heilbrunn: Klinkhardt, 2014); Carla Aubry Kradolfer and Michael Geiss, "The Backbone of Schooling: Entangled Histories of Funding and Educational Administration – Introduction," *Paedagogica Historic*a 52, no. 4 (2016), 315–24. See also Carla Aubry Kradolfer's dissertation *Schule zwischen Politik und Ökonomie: Finanzhaushalt und Mitspracherecht in Winterthur, 1789–1869* (Zürich: Chronos, 2015).

18 Bodil Wallin, "Att forma en skolform: Svensk folkskolepolitik vid mitten av 1800-talet," in *Ideologi och socialpolitik i 1800-talets Sverige: Fyra studier*, ed. Ingrid Hammarström, Väinö Helgesson, Barbro Hedvall, Christer Knuthammar and Bodil Wallin (Stockholm: Almqvist & Wiksell International, 1978); Mats Sjöberg, *Att säkra framtidens skördar: Barndom, skola och arbete i agrar miljö. Bolstad pastorat 1860–1930* (Linköping: Linköping University, 1996).

with research addressing issues on school finance published elsewhere in this vein of social history research.[19] However, the main efforts to examine the history of school finance was done starting in the 2010s. In 2015, the third issue of the *Nordic Journal of Educational History* was dedicated to the History of Educational Finance.[20] Far from being an isolated initiative, it preceded the publications of several books, addressing various aspects of school finance.[21] This special issue is part of this emerging field of research. In France, financial data—teacher salaries, cities' budgets, school fees—was commonly used in the first thorough studies in educational history, published in the 1960s and 1970s.[22] The aim was the development of a social history of education, that did not exist as a constituted field of research at that time.[23] School finance was just one aspect of a vast territory that had yet to be methodically explored by historians, and as such, attracted only limited attention. However, the subsequent development of history of education, and the relative specialisation of the research topics created a context more favourable to specialised studies.

As far back as 1993, Philippe Savoie—by then a researcher at the Service d'histoire de l'éducation (Institut National de Recherche pédagogique, Paris)—published a directory entitled *Un nouveau champ pour l'histoire: économie et finances de l'éducation*. His purpose was "to identify researchers, and through them the work of this type currently (or recently) conducted in France, in order to reveal the landscape of this composite and multidisciplinary research sector."[24] The aim of the publication was also to foster contacts and interdisciplinary exchanges between historians and economists—who counted for more than half of the researchers referenced. At that time, in relation with public debates about education governance, several local case

19 See, e.g., Maynes (1985); Eklof (1986).

20 Johannes Westberg (ed.), "Special issue: The History of Educational Finance," *Nordic Journal of Educational History* 2, no. 1 (2015).

21 See, e.g., Andreas Åkerlund, *Public Diplomacy and Academic Mobility in Sweden: The Swedish Institute and Scholarship Programs for Foreign Academics, 1938–2010* (Lund: Nordic Academic Press, 2016); Johannes Westberg, *Funding the Rise of Mass Schooling* (Palgrave Macmillan, 2017); Anne Berg and Samuel Edquist, *The Capitalist State and the Construction of Civil Society: Public Funding and the Regulation of Popular Education in Sweden, 1870–1991* (Basingstoke: Palgrave Macmillan, 2018); Madeleine Michaëlsson, *Privata bidrag till folkskolan: Järnbruken och det svenska folkskoleväsendet 1850–1930* (Uppsala: Uppsala University Library, 2016); Esbjörn Larsson, "'Cheap, efficient, and easy to implement'? Economic Aspects of Monitorial Education in Swedish Elementary Schools during the 1820s," *History of Education* 45, no. 1 (2015).

22 Maurice Gontard, *L'Enseignement primaire en France: de la Révolution à la loi Guizot (1789–1833): des petites écoles de la monarchie d'ancien régime aux écoles primaires de la monarchie bourgeoise* (Paris: les Belles Lettres, 1959); Raymond Oberlé, *L'Enseignement à Mulhouse de 1798 à 1870* (Paris: Les Belles Lettres, 1961); Antoine Prost, *Histoire de l'enseignement en France, 1800–1967* (Paris: Armand Colin, 1968); Françoise Mayeur, "L'Enseignement secondaire des jeunes filles: 1867–1924" (doctorat d'État, histoire, Paris 4, 1975).

23 Raymond Oberlé, "L'Histoire de l'éducation, contribution à l'histoire sociale: l'exemple de Mulhouse," *Annales* 15, no. 5 (1960), 963–73.

24 Philippe Savoie, ed., *Un nouveau champ pour l'histoire: économie et finances de l'éducation* (Paris: INRP, 1993).

studies in history or sociology shed light on the financial involvement of the cities in the development of various forms of schooling.[25]

Despite this early initiative, individual books in history of education that draw heavily on financial data have remained rare in France, compared with other countries.[26] In 2010 and 2011, the historian Jean-François Condette organised two conferences on the financial and economic aspects of education. The first one addressed "the cost of education and its academic, social and political implications."[27] The second one raised the question of education as a "good business", a set of profit-making activities.[28] The contributions eventually published cover a large variety of situations (from the sixteenth to the twentieth century), but for the majority of the authors, this plunge into education economics was an excursus from their main area of research. Other contributors drew on previously published work. Confirmed by an informal survey of colleagues specialised in different fields of educational history, a general pattern emerges: elements of funding or economic issues are found scattered throughout the research literature, but systematic studies are lacking. However, ongoing research—the 2019 conference about philanthropic activity in research and education, the works of Clémence Cardon-Quint, about the making of the French education state budget, or of Stéphane Lembré, about the funding of the apprenticeship—as well as this joint issue signal a new commitment to exploring this field.[29]

25 "L'Offre locale d'enseignement: les formations techniques et intermédiaires (XIXe–XXe Siècles)," *Histoire de l'éducation*, no. 66, numéro thématique (1995); Gérard Bodé and Philippe Savoie, "L'Approche locale de l'histoire des enseignements techniques et intermédiaires : nécessité et limites," *Histoire de l'éducation* 66, no. 1 (1995), 5–13; Marc Suteau, "Une ville et ses écoles. Nantes 1830–1940" (doctorat de sociologie, Paris 8, 1995); Marianne Thivend, "L'École et la ville : Lyon, 1870–1914" (doctorat d'histoire, Université Lumière (Lyon), 1997); Marianne Thivend, *L'École républicaine en ville: Lyon, 1870–1914* (Paris: Belin, 2006).

26 See this analysis of the PhDs defended in history of education, Solenn Huitric, "Les thèses françaises en histoire de l'éducation depuis 1990: un miroir de la discipline ?," *Histoire de l'éducation* 154, no. 2 (2020), 93–117.

27 Jean-François Condette, ed., *Le Coût des études: modalités, acteurs et implications sociales, XVIe–XXe siècle* (Rennes: Presses universitaires de Rennes, 2012).

28 Jean-François Condette, ed., *L'École une bonne affaire? Institutions éducatives, marché scolaire et entreprises, XVIe siècle–XXe siècle*, Histoire 29 (Villeneuve d'Ascq: Revue du Nord, 2013).

29 Conference "Dons et legs en faveur de l'enseignement, de la recherche et des institutions de conservation", 12–13 décembre 2019, https://pupitre.hypotheses.org/4887 (accessed February 23, 2022); Clémence Cardon-Quint, "State Education Budgets in the 20th Century: Literature Review and Research Perspectives on the French Case," *Rivista Di Storia Economica*, no. 2 (2020); Clémence Cardon-Quint, "Finances publiques et education, des années 1870 au début du XXIe siècle," in Fabien Cardoni, Michel Margairaz (ed.), *Dynamiques des dépenses publiques en France au XXe siècle*, (Vincennes, IGPDE, 2022); Stéphane Lembré, "Le Retour de l'apprentissage une institution du travail et son financement au XXe siècle: jalons pour l'histoire d'une voie française à l'aune des expériences européennes et mondiales" (mémoire d'HDR, histoire, Paris 1-Panthéon Sorbonne, 2022).

It echoes a growing interest, among historians, economic historians and political scientists, in the history of the management of public finance and its implications for sectoral policies.[30]

Crossing national and disciplinary borders

This special issue—published in cooperation between *Nordic Journal of Educational History* and *Histoire de l'éducation*—is intended to fill out the gap in our respective historiographies, but also to further research into the history of educational finance, by promoting methodological debates, beyond disciplines and national boundaries. In this sensitive area, it does not pretend to close scientific and political controversies, but rather to contribute to a more detailed understanding of the phenomena at stake, thanks to the plurality of perspectives.

Educational finance is questioned in history of education as well as in economic history, both fields of research having their own dynamics, structuring debates, key references and national developments. With a large variety of topics in common, history of education and economic history certainly have the potential to be "good neighbours", as Michael Sanderson suggests.[31] However, that is not always the case. Interdisciplinary dialogue comes up against methodological differences: the use of qualitative evidence, the crafting and analysis of descriptive statistics, or the econometric treatment of already available statistical series are not necessarily incompatible, but they rely on different know-how. While these differences in methods can also be observed within each disciplinary field, when they cut across disciplinary boundaries they can lead to a total misunderstanding.

In the Swedish setting, the situation is certainly quite neighbourly. Although historians of education do not publish in economic history journals, it is not unusual that economic historians publish in educational history reviews and attend conferences in history as well as economic history.[32] This relationship might partly be explained by the strong tradition of historical methods within economic history in Sweden.[33] In the French context, however, the relationship between a certain type

30 Philippe Bezes and Alexandre Siné, eds., *Gouverner (par) les finances publiques* (Paris: Sciences Po, les Presses, 2011); Philippe Bezes, Florence Descamps, and Sébastien Kott, eds., *L'invention de la gestion des Finances publiques. Le Moment RCB ou le rêve d'un gouvernement rationnel 1963–1978* (Vincennes: Comité pour l'histoire économique et financière de la France, 2021); Fabien Cardoni, "Le Choix des futurs. La programmation des dépenses militaires en France 1945–1973" (mémoire inédit d'HDR, Paris, Paris 1, 2019). See the seminar of the *Groupe de recherche sur les affaires budgétaires*, Research Group on Budgetary Affairs led by Clémence Cardon-Quint and Thomas Hélie (https://grab.hypotheses.org/, accessed February 23, 2022).

31 Sanderson (2007).

32 See, e.g., Anders Nilsson, *Yrkesutbildningen i Sverige 1850–1910* (Uppsala: Föreningen för svensk undervisningshistoria, 2008); Sandra Hellstrand, "Attempting Institutional Change: Swedish Apprenticeship, 1890–1917," *Nordic Journal of Educational History* 3, no. 2 (2016); Tobias Karlsson et al., "Vocational Education and Industrial Relations: Sweden 1910–1975," *Nordic Journal of Educational History* 5, no. 1 (2018).

33 Still in the early twenty-first century, Swedish PhD programs in economic history stressed qualitative historical methods, rather than advanced quantitative analyses. Daniel Waldenström, "Is Swedish Research in Economic History Internationally Integrated?," *The Scandinavian Economic History Review* 53, no. 2 (2005), 64–66.

of quantitative economic history (written by economists) and the history written by historians has long been marked by misunderstanding or mutual ignorance.[34] Moreover, the debate on the proper use of quantitative history has been particularly intense in the history of education. The conception and reception of Grew and Harrigan's analyses on primary schooling in nineteenth-century France provides a good illustration of the difficulties raised by these questions back in the 1980s.[35] The reliability of the data used for regression analyses was at the heart of the controversy. This episode may thus be related to the collective effort made by French historians at that time to construct reliable statistical retrospective series on school attendance.[36] However, in the long term, the study of the production of statistics or of their use by the government and the authorities usually prevailed over the direct exploitation of statistical series by historians of education.[37] The combination of the two approaches, as implemented by Jean-Michel Chapoulie in various studies, remains the exception.[38] Finally, while a new generation of historians has been turning to the use of econometric methods applied to different subjects, this trend is still rather exceptional in history of education.[39] In this context, the inclusion of a cliometric article written by economists in this special issue is not self-evident.

We nonetheless consider this exchange between cliometric economic history and the history of education to be of vital importance. At a time when the internationalisation of research pushes toward the hyperspecialisation of methods, fields of investigation and the bibliographical references mobilised, this effort seems highly justified. Cliometrics—defined as "the quantitative projection of social sciences in the past"—is surely of interest to historians of education. It provides estimates of volumes, variations and trends that provide important historical context both to

34 Jean-Charles Asselain, "Le Projet français d'histoire économique quantitative: ambitions et résultats," *Économies et Sociétés. Serie AF. Histoire Économique Quantitative*, no. 36 (2007), 567–609.

35 In 1984, Raymond Grew, Patrick J. Harrigan and James B. Whitney published in the *Annales* (a leading review in the French historical field) an article which offered a first version of analyses developed in the book published in 1991, see Raymond Grew et al., "La Scolarisation en France, 1829–1906," *Annales* 39, no. 1 (1984), 116–57. The necessary methodological debate that ensued in the journal quickly became tense (Jean-Noël Luc, "L'Illusion statistique," *Annales* 41, no. 4 (1986), 887–911; Raymond Grew and Patrick J. Harrigan, "L'Offuscation pédantesque. Observations sur les préoccupations de J.-N. Luc," *Annales* 41, no. 4 (1986), 913–22. For the English language book, see Raymond Grew and Patrick J. Harrigan, *School, State and Society: The Growth of Elementary Schooling in Nineteenth-Century France- a Quantitative Analysis* (Ann Arbor: University of Michigan Press, 1991).

36 Jean-Noël Luc, *La Statistique de l'enseignement primaire, 19e–20e siècles politique et mode d'emploi*, L'école à travers ses statistiques (Paris: Economica INRP, 1985); Jean-Pierre Briand et al., *L'enseignement primaire et ses extensions: annuaire statistique, 19e–20e siècles* (Paris: INRP, Service d'histoire de l'éducation: Economica, 1987).

37 Luc (1985); Briand et al., *L'enseignement primaire et ses extensions*; Évelyne Barbin and Anne-Sophie Bruno, "Éducation : compter et décider," *Histoire & Mesure* XXIX, no. 1 (2014).

38 Jean-Michel Chapoulie, "Les Nouveaux spécialistes des sciences sociales comme « experts » de la politique scolaire en France 1945–1962," *Genèses* 64, no. 3 (2006), 124–45; Jean-Michel Chapoulie, *L'École d'État conquiert la France: deux siècles de politique scolaire* (Rennes: Presses universitaires de Rennes, 2010).

39 Karine Karila-Cohen et al., "Nouvelles cuisines de l'histoire quantitative," *Annales. Histoire, Sciences sociales* 73, no. 4 (2018), 771–83; Jérôme Krop, *La Méritocratie républicaine: élitisme et scolarisation de masse sous la IIIe République* (Rennes: Presses universitaires de Rennes, 2014); Jean-Paul Caille and Jérôme Krop, "Une source négligée de l'histoire des élèves: les panels d'élèves des années 1960 aux années 2000," *Histoire de l'éducation* 151, no. 1 (2019), 175–202.

studies of educational policy and local case studies.[40] In addition, such research helps formulate, question and test general assumptions that often underly qualitative analyses. In this respect, the significant interest in education among economic historians of education is certainly great news for qualitatively oriented historians of education.[41]

Economic historians also have a lot to gain from increasing exchanges with historians of education. Culture and institutions matter to economic historians, and studies into the history of education provides a wealth of insights into the policies, organisation and local realities of education. By exploring such features, historians of education offer economic historians plenty of hypotheses to be tested and insights into dimensions of educational systems that are difficult to quantify, including the role of in-kind benefits and social networks in the funding of primary schooling. So, while interdisciplinary work requires efforts when communicating research design and results, such cooperation certainly has a range of benefits.

In terms of the internationalisation of research, this special issue promotes a specific international cooperation by highlighting two cases—France and Sweden. While quantitative approaches allow for large cross-national comparisons—thanks to the progressive standardisation of statistical categories[42]—qualitative case studies require an effort in order to grasp the specificity of each national context. By restricting the issue to two countries, we had the opportunity—through a series of online workshops in preparing this special issue—to question and compare the national specificities.

The challenge of approaching the cases of France and Sweden is partly an issue of the publishing languages. In Nordic countries, the use of English as a standard language of scientific communication is a recent practice. In France, this move towards English exists too, but it is still heavily discussed and far from being generalised: in the humanities, the native language is commonly considered as an irreplaceable resource for nuance and precisions. That is one of the reasons why most French historians of education still favour writing in their native language.

The consequence of this language policy is that international research tends to be based on Anglo-Saxon publications, and that our knowledge of the history of education of a foreign country is often filtered through such books and reviews. The international success of Grew and Harrigan's analyses on the French case give a good illustration of this phenomenon, as does the impact of John Boli's monograph on the historiography of Swedish primary schooling.[43] These distortions may in turn lead to an impoverishment of the analyses, damageable to the dynamism and diversity of knowledge. There is no reason to believe that the most interesting studies on France or Sweden are necessarily those that are already available in English. This bilateral initiative is a result of these observations.

40 The quote is from Claude Diebolt, "Cliometrica After 10 years: Definition and Principles of Cliometric Research," *Cliometrica* 10, no. 1 (2015), 1.

41 Martina Cioni et al., "The Long-Term Evolution of Economic History: Evidence from the Top Five Field Journals (1927–2017)," *Cliometrica* 14, no. 1 (2020).

42 Alain Carry, "La Mesure de la dépense d'éducation. Entre comptes et mécomptes," *Cahiers de la recherche sur l'éducation et les savoirs*, Hors-série no. 1 (2005), 139–60.

43 John Boli, *New Citizens for a New Society: The Institutional Origins of Mass Schooling in Sweden* (Oxford: Pergamon, 1989).

As part of the affluent and influential global North, France and Sweden also offer two examples of European welfare states that faced very similar challenges at the crossroads of education and political economy dynamics. In that perspective, it is certainly interesting to note the overall convergence of the transformations experienced by these two educational systems in relation to their economic, political and social surroundings: the development of a dual educational system (for the people and the elite) in the nineteenth century, the rise of technical education in relation to industrialisation, and the profound organisational changes made to the school structure in the second half of the twentieth century in order to achieve school democratisation.[44] This of course does not minimise the differences that exist. This concerns not the least the radical introduction of a comprehensive school system in Sweden in the 1960s, when detracking in middle schools was implemented in France following the reform of 1975 (*collège unique*).

These complex similarities and differences are certainly part of the point with special issues such as this one. We agree with Thomas Piketty that "we must take seriously the ideological and institutional diversity of human society," and that "we must carefully study in detail the institutional arrangements and legal, fiscal and educational systems of other countries, for it is these details that determine whether cooperation succeeds of fail."[45] In that perspective, hamlet schools in Savoie or progressive schools in Göteborg are not just anecdotic declinations of an imaginary international standard case, but provide new and important contributions to our understanding of the history of education in its complex relationship with economic, politic and social dynamics.

Our call for proposals focused on changes in educational finance. Times of changes usually coincide with an intense production of studies, data, analyses that offer a rich material to understand the complex rationale that justifies the changes, the variety of stakeholders and also the immediate or more durable consequences of the new financial arrangements. It is therefore an entry that leads the researchers to examine the avowed objectives, the technical dispositions, and the effective results of the changes. However, to fully understand the significance of these studies, it is necessary to get a broader view of the context, and of the structural characteristics of each system. This is the purpose of the historiographical overview that follows.

This literature review cannot be exhaustive. The history of educational finance is not a structured field of research: financial issues are addressed or mentioned in a wide range of books and articles. As they often provide strikingly different perspectives, and sometimes express a very miniscule interest in financial issues themselves, they would be artificial to group together. The discrepancy in size of both academic communities is another source of difficulty when it comes to bibliographic synthesis. We have therefore chosen to focus here on the research findings that are necessary to make sense of the case studies discussed in this volume, as well as on the studies that draw heavily—and not occasionally—on financial data. Our purpose here is there-

44 Fritz K. Ringer, *Education and Society in Modern Europe* (Bloomington, 1979); Detlef K Müller, Fritz K Ringer, and Brian Simon, *The Rise of the Modern Educational System: Structural Change and Social Reproduction, 1870–1920* (Cambridge: Cambridge University Press, 1989).

45 Thomas Piketty, *Capital and Ideology* (Cambridge, MA: Belknap Press, 2020), 12. Original quote: Piketty (2019), 26.

fore methodological: to give an idea of the various uses made of financial sources, and of the way they have affected the interpretation of the past.

Education expenditure and educational statistics

For economic historians, as well as for researchers in comparative public policy and some historians of education, statistical aggregates on education expenditure constitute a fundamental material for scientific investigations. A good understanding of these sources, their origin and limits, is therefore a prerequisite to any interdisciplinary dialogue on educational finance.

The development of coherent systems of statistical data on various aspects of western societies dates back to the nineteenth century, in what Ian Hacking termed the "avalanche of printed numbers."[46] Along with national promoters of statistics, international congresses of statisticians contributed to the formulation of methodological guidelines intended to strengthen the comparability of the data retrieved. Statistics on school attendance, imbued with high political stakes, flourished pretty early on: series on primary school students started in the 1830s in France.[47] Financial data were occasionally published in the statistical compendiums of the French Ministry of Public Instruction/ National Éducation (*Statistique de l'enseignement primaire ; Statistique de l'enseignement secondaire*). In Sweden, local educational data were collected regularly from the 1840s, but were not published regularly before the 1880s.[48] Statistics on education enrolment and educational finance were compiled by different actors. During the nineteenth century, the ministry of education and ecclesiastical affairs (*Ecklesiastikdepartmementet*) regularly collected such data. In the period 1920–1960, educational statistics were produced by the Swedish National Board of Education (*Skolöverstyrelsen*), and thereafter by Statistics Sweden (*Statistiska centralbyrån*, SCB).[49]

However, the efforts to build standardised statistical series on financial aspects of the education system faced major methodological challenges. The plurality of public and private funders was definitely an issue, but even the financial contributions of public authorities were not easy to quantify in consistent series. Among the difficulties to be addressed: the classification of various and changing types of education expenditure, or the elimination of double counting occurring for example in France when the *départements* subsidised education in various municipalities. The use of financial data occasionally published in the nineteenth century therefore requires significant methodological precautions.[50] These challenges were also discussed on an

46 Alain Desrosières, *La Politique des grands nombres: histoire de la raison statistique* (Paris: Éditions la Découverte, 1993), chaps 5–6.

47 Ian Hacking, "Biopower and the Avalanche of Printed Numbers," in *Biopower: Foucault and Beyond*, ed. Vernon Cisney and Nicolae Morar (Chicago: University of Chicago Press, 2016). See also Luc (1985); Henrik Höjer, *Svenska siffror: nationell integration och identifikation genom statistik 1800–1870* (Hedemora: Gidlund, 2001).

48 SCB, *Elever i obligatoriska skolor 1847–1962* (Stockholm: Statistiska Centralbyrån, 1974), 11–14.

49 SCB (1974), 14–17.

50 Jacques Edmond-Grangé, *Le Budget fonctionnel en France* (Paris: Librairie générale de droit et de jurisprudence, 1963); Jean-Charles Asselain, *Le Budget de l'Éducation nationale: (1952–1967)* (Paris: PUF, 1969), 34–75; Alain Carry, "Le Compte satellite rétrospectif de l'éducation en France: 1820–1996," *Économies et sociétés* 33, no. 2–3 (1999), 79–107; Michaelsson (2016), 71–72; Westberg (2017), 118–21.

international level. In 1929, the International Statistical Institute addressed the topic of state financial statistics, and identified methodological prerequisites and general guidelines that needed to be applied to document the financial circuits linked to the social actions of states, in particular education.[51] But the implementation took a few more decades.

In France, the interest in statistical data on education expenditure took shape in the 1960s at the crossroads of three different strands. First, the rapid increase in education public expenditure—linked both to the baby-boom and to school massification—drew the attention of several French economists. At that time, the planning process offered a public forum to discuss the distribution of public investments, and the development of education economics in the US aroused the hope that economists might contribute to the making of sound choices as regards education expenditure. At the end of the 1960s, Pierre Daumard, Jean-Claude Eicher and Jean-Charles Asselain each tried to quantify education expenditure, adopting varying approaches.[52] The latter focused on the state budget, scrutinised from 1952 to 1967; Eicher and Daumard included other funders. At the same time, statisticians in the INSEE (*Institut national de la statistique et des études* économiques) considered the possibility of expanding the statistical system of national accounts to new sectors that were not correctly described by series primarily focused on market economy sectors. The initiative seriously took hold in 1974, with the first education satellite account published in 1976.[53] Similar initiatives have taken place, since then, in other countries (Australia, Netherlands, Italy) but until now, no conceptual framework has been officially developed and internationally agreed upon for satellite accounts on education and human capital.[54] To this day, the Swedish national accounts, just like in many other countries, do not include an education satellite account.

51 See Jan Piekalkiewicz, "Les Travaux préliminaires sur les statistiques des finances publiques," La Haye, *Bulletin de l'Institut International de Statistiques* 35, no. 3, (1931), 617–719, quoted by Carry (2005), 143.

52 Pierre Daumard, "Coût et financement de l'éducation" (thèse de sciences économiques, Université de Paris, 1968); Jean-Claude Eicher, *Analyse comparative des dépenses d'éducation en France de 1952 à 1967* (Paris: OCDE, 1969); Asselain, *Le Budget de l'Éducation nationale*. As a student of Theodore Schultz, Jean-Claude Eicher introduced education economics in France with an article published in 1960: Jean-Claude Eicher, "La Rentabilité de l'investissement humain," *Revue économique* 11, no. 4 (1960), 577–608. In 1971, he officially created the *Institut de recherche sur l'économie de l'éducation* at the University of Bourgogne.

53 Odile Carrère and Roland Daumont, "Le Compte de l'éducation et des formations: méthode et premiers résultats," *Economie et statistique* 75, no. 1 (1976), 39–53. Generally speaking, satellite accounts are intended to cover accounts specific to given fields. They are based on the concepts of the system of national accounts, but they differ from the standard system as they encompass a larger variety of elements for the sectors of interest. Each satellite account is therefore consistent with the central system, but different satellite accounts may not always be consistent with each other. European Commission, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank, *System of National Accounts 2008* (New York, 2009), 523.

54 Romina Boarini, Marco Mira d'Ercole, and Gang Liu, "Approaches to Measuring the Stock of Human Capital: A Review of Country Practices" (Paris: OCDE, 23 November 2012), 25–28; Fabiola Riccardini, "Towards Satellite Accounts on Education and Human Capital in OECD Countries," in *A New Research Agenda for Improvements in Quality of Life*, ed. Filomena Maggino, Social Indicators Research Series (Cham: Springer International Publishing, 2015), 205–30. See also the current version (dated 2008) of the system of national accounts, https://unstats.un.org/unsd/nationalaccount/sna2008.asp (accessed February 23, 2022).

A third contribution to the study of educational expenditure came from economic historians and from the new interest in quantitative history. Inspired by the works of the American economist Simon Kuznets, in 1961 Jean Marczewski and Jean-Claude Toutain launched a vast program of quantitative history, led by the *Institut de science* économique *appliquée*.[55] The products of agriculture and industry, artisanal and industrial income were at the focus of their historical inquiries. A shift occurred in the 1970s with Louis Fontvieille's series addressing the contribution of central and local administrations to the formation of national income, thus providing a first series of retrospective data on education expenditure.[56] At the same time, Christine André and Robert Delorme studied the expansion of public expenditure in France in the nineteenth and twentieth centuries and also offered a sectoral breakdown.[57] These statistical compilations were intended to shed light on the relationships between the state and the economy.

The interest of Louis Fontvieille for statistical series on education expenditure—both at national and departmental level—gained momentum in the 1980s and 1990s.[58] As a professor at the University of Montpellier, he directed several PhDs which included the elaboration of historical series on education expenditure, both in France and in other countries such as Germany, the United Kingdom, and Algeria.[59] For the French case, Alain Carry—who, at that time, was working as a research engineer in Montpellier—transposed the methods and categories of the education satellite account to build a whole set of retrospective series on French education expenditure from 1820 to 1996. This was published in the *Cahiers de l'ISMEA* in 1999.[60] To date, these represent the most detailed series on national aggregates related to education expenditure for the French case.

These financial data were used—in the team built around Louis Fontvieille—to document the relationship between economic growth and education expenditure. Fontvieille's framework of analysis combined the regulation theory of the

55 Jean Marczewski, *Histoire quantitative de l'économie française* (Paris, Institut de science économique appliquée, 1961).

56 Louis Fontvieille, *Évolution et croissance de l'Etat français: 1815–1969* (Paris: ISMEA, 1976); Louis Fontvieille, "Évolution et croissance de l'administration départementale française, 1815–1974," *Cahiers de l'ISMEA* 16, no. 1–2 (1982), 10–191.

57 Robert Delorme and Christine André, *L'État et l'économie : un essai d'explication de l'évolution des dépenses publiques en France, 1870–1980*, Économie et société (Paris: Éditions du Seuil, 1983).

58 Louis Fontvieille, "La Croissance de la dépense publique d'éducation en France: 1815–1987," *Formation Emploi* 31, no. 1 (1990), 61–71; Louis Fontvieille, "Croissance et transformation du système éducatif et de formation en France aux XIXe et XXe Siècles," in *Administrer, gérer, évaluer les systèmes éducatifs. Une Encyclopédie pouraAujourd'hui*, ed. Jean-Jacques Paul (Paris: ESF éditeur, 1999), 43–66.

59 Claude Diebolt, *Éducation et croissance économique: le cas de l'Allemagne aux XIXe et Xxe siècles*, Bibliothèque de l'éducation (Paris: Éd. L'Harmattan, 1995); Sandrine Michel, "Transformation de la relation de la formation à l'économie: Un processus d'autonomisation: une approche en termes de régulation" (Thèse de doctorat, Montpellier 1, 1996); Vincent Carpentier, *Système éducatif et performances économiques au Royaume-Uni, 19e et 20e siècles* (Paris: L'Harmattan, 2001); Azzedine Bouslimani, "Eléments pour une caractérisation économique du contenu qualitatif du développement. Une analyse à partir de la relation éducation-croissance en Algérie (1875–2000)" (PhD Thesis, 2003).

60 Carry (1999); Alain Carry, "La Dépense de l'État pour l'éducation secondaire professionnelle (France, 1820–1938)," ed. Gérard Bodé and Philippe Marchand, *Formation professionnelle et apprentissage. XVIIIe–XXe Siècles* Hors série, no. 17 (2003), 115–28.

Marxist economist Paul Boccara with the theory of economic cycles developed by Kondratieff.[61] Louis Fontvieille opposed two different stages: before the Second World War, public education expenditure followed a contra-cyclical pattern, rising more rapidly during economic slowdowns ; this pattern changes after the war into a pro-cyclical one, first in a context of rapid economic expansion and then during the economic slowdown that followed the oil crisis in the 1970s.[62] This articulation between the study of education expenditure and a broader reflection on the interdependence of public spending and economic growth constitutes a specificity in this area compared to the dominant approaches in education economics.

Claude Diebolt, a promoter of cliometrics in the French academic field, also made extensive use of education expenditure, along with other statistical data, to study both the impact of human capital on economic growth and the various factors, including fertility and politics, that may affect the development of human capital.[63] Along with Bruno Théret he also contributed to the statistical reappraisal of the consequences of the Ferry laws (1881–1882) on school public expenditure[64] and primary school expansion.[65] In this issue, the article written by Claude Diebolt, Magali Jaoul-Grammare and Faustine Perrin offers an illustration of the innovative methods that may be used to examine the relationship between education expenditure, economic growth and school enrolment: they confirm the central impulse given by political decisions to school expansion at the end of the nineteenth century. Recently, in a PhD defended in 2019, Adrien Montalbo made a decisive contribution to the field by studying the relationship between schooling and economic development in nineteenth century at municipal level, making intensive use of data related to local school fees and school subsidies.[66] He shows the contrasting effects of industrialisation; while it is true that industrialisation generates resources that can be used by the municipalities to develop education, the development of certain industrial sectors—especially textile and mining activities—is negatively correlated to lower school enrolment at the beginning of the nineteenth century.

Historical series on education expenditure have sometimes been used by economists in other perspectives, for example to document the concentration of education public expenditure on specific populations. In a master's thesis, Stéphane Zuber

61 For a brief presentation, see Fontvieille (1990).

62 For an actualised version of this approach, see Vincent Carpentier, "State Education, Crisis and Austerity: an Historical Analysis through the Lens of the Kondratiev Cycles," in *Education and the State: International Perspectives on a Changing Relationship*, by Carla Aubry et al. (Routledge, 2015), 78–102.

63 Claude Diebolt, *Dépenses d'éducation et cycles économiques en Espagne, XIXe et XXe siècles*, Logiques économiques (Paris Montréal (Québec): l'Harmattan, 2000); Claude Diebolt and Antoine Parent, *Essais cliométriques: capital humain, monnaie et finance, croissance et cycles* (Bern, Suisse, Allemagne, Belgique, 2011); Claude Diebolt, Audrey-Rose Menard, and Faustine Perrin, "Behind the fertility–education nexus: What triggered the French development process?," *European Review of Economic History* 21, no. 4 (2017), 357–92.

64 Bruno Théret, "Les dépenses d'enseignement et d'assistance en France au XIXe siècle : une réévaluation de la rupture républicaine," *Annales. Histoire, Sciences Sociales* 46, no. 6 (1991), 1335–74.

65 Claude Diebolt, Magali Jaoul, and Gilles San Martino, "Le mythe de Ferry: une analyse cliométrique," *Revue d'économie politique* 115, no. 4 (2005), 471–97.

66 Adrien Montalbo, "Primary Education, Industrial Activities and Economic Growth in Nineteenth-Century France" (These de doctorat, Paris, EHESS, 2019).

underlined both the progressive equalisation of education expenditure per capita in France over the twentieth century, as well as the extent of remaining inequalities.[67] However, among French education economists, the use of historical series on educational expenditure remains rare.

In Sweden, the research setting is quite different. Statistical data drew the attention of economic historians quite early on. The first attempts to create historical national accounts date backs to the 1930s. New work on these accounts was carried out in the 1950s, the 1970s and the 1980s-90s, with the most recent historical national account 1560–2010 published in 2015.[68] Interest in historical national accounts is thus an old and persistent feature of economic history. This data included both central and local government spending, and the estimates published in 1987 included statistics on primary school teachers' wages, building maintenance and the purchase of goods and services.[69] However, these historical accounts do not include exhaustive series on the financing of education, that would include both public and private funding.

Instead, the main contributions of economic historians to the study of education and economic growth in Sweden were not primarily based on historical series of education expenditure.[70] The relationship between economic growth and education was addressed on a different basis, as illustrated by the so-called Sandberg debate. While economic historians such as Lars Sandberg, Carlo Cipolla and David Mitch reasoned that literacy was of little use in early nineteenth-century agriculture, Anders Nilsson et al. argued the opposite. During this period, marked among other things by the partitioning and redistribution of land, literacy was an asset for literate farmers.[71] Another important contribution concerned the first estimate of long-term human capital development in Sweden. Based on analyses of enrolments, Ljungberg and Nilsson used this dataset to argue that human capital was a causal factor in Swedish economic growth since industrialisation.[72] Through these efforts, a firm foundation for further explorations into the economic history of education was thereby laid down. At Lund University, these have more recently included new

67 Stéphane Zuber, "L'inégalité de la dépense publique d'éducation en France, 1900–2000" (mémoire de DEA, Paris, EHESS, 2003); Stéphane Zuber, "Evolution de la concentration de la dépense publique d'éducation en France: 1900–2000," *Éducation & Formations*, no. 70 (2004), 97.

68 Håkan Lobell, Lennart Schön, and Olle Krantz, "Swedish Historical National Accounts, 1800–2000: Principles and Implications of a New Generation," *Scandinavian Economic History Review* 56, no. 2 (2008), 142–59; Lennart Schön and Olle Krantz, "New Swedish Historical National Accounts since the 16th Century in Constant and Current Prices," *Lund Papers in Economic History* no. 140 (2015).

69 Olle Krantz, *Historiska nationalräkenskaper för Sverige: Offentlig verksamhet 1800–1980* (Lund: Studentlitteratur, 1987), 88–106. The current estimates of the Swedish historical national accounts, which include local government education consumption, are available at https://lusem.lu.se/economic-history/databases/economic-history-data/swedish-historical-national-accounts (accessed January 28, 2022).

70 See, e.g., Anders Nilsson et al., "Agrarian Transition and Literacy: The Case of Nineteenth-Century Sweden," *European Review of Economic History* 3, no. 1 (1999); Lars Pettersson, "Reading and Writing Skills and the Agrarian Revolution: Scanian Peasants during the Age of Enclosure," *Scandinavian Economic History Review* XLIV, no. 3 (1996); Jonas Ljungberg and Anders Nilsson, "Human capital and Economic growth: Sweden 1870–2000," *Cliometrica* 3, no. 1 (2009); Anders Nilsson, "Vocational Education and Training – an Engine for Economic Growth and a Vehicle for Social Inclusion?," *International Journal of Training and Development* 14, no. 4 (2010).

71 Anders Nilsson et al., (1999), 79–82.

72 Ljungberg and Nilsson (2009).

detailed measurements of human capital using student grades, and explorations into the role of technical secondary schools for regional industrial development.[73]

While the literature on human capital did not draw primarily on financial data, the interest in the economic history of education was at times translated into studies addressing the history of education finance and educational expenditure. In the context of comparative education, Florian Waldow made a rare interdisciplinary contribution by discussing the challenges researchers face when using public statistics on educational expenditure in Sweden.[74] This critical examination later formed the background for his work on the relationship between economic growth and the politics of education.[75] Within the discipline of economic history, Anders Nilsson examined the relationship between social recruitment and the systems of student funding in higher education.[76] In Patrick Svensson's research, farmers' investments in schooling—including teacher wages and school building—were explored in terms of entrepreneurship.[77] Gunilla Klose's two-year thesis (1992, published in 2011)—mapping the funding of primary schools from 1768 to 1839 based on government reports—was an important result of this research context.[78] More lately Jens Andersson and Thor Berger have examined the role of elites in educational expansion using data on school districts' educational expenditure, and Erik Bengtsson and Svante Prado used data on teacher wages in Stockholm to study the rise of the middle classes.[79] Of particular interest in this respect is the extremely rich dataset on Swedish local governments 1860–1950 that Per Pettersson-Lidbom and his associates have compiled. Starting from this data, Pettersson-Lidbom and his co-authors have, for example, been able to examine the impact of direct democracy on public welfare

73 Nicholas Ford et al., "Leaving their mark: using Danish student grade lists to construct a more detailed measure of historical human capital," *Working Papers* European Historical Economics Society (EHES), no. 207 (2021); Fay Lundh Nilsson and Per-Olof Grönberg, "A technical workforce for regional industrial development? Origin and dispersion of graduates from the technical secondary schools in Malmö and Borås 1855–1930," *The Scandinavian Economic History Review* (ahead-of-print, 2021).

74 Florian Waldow, "The Suggestive Power of Numbers: Some Remarks on the Problem of the Accuracy of Quantitative Indicators in Comparative Historical Research," *Historical Social Research* 26, no. 4 (2001); Florian Waldow, "Measuring Human Capital Formation in Sweden in the Nineteenth and Early Twentieth Centuries," *Historical Social Research* 27, no. 4 (2002).

75 Florian Waldow, *Utbildningspolitik, ekonomi och internationella utbildningstrender i Sverige 1930–2000* (Stockholm: Stockholms universitets förlag, 2008).

76 Anders Nilsson, *Studiefinansiering och social rekrytering till högre utbildning 1920–1976* (Lund: Ekonomisk-historiska föreningen, 1984); Olle Krantz, *Historiska nationalräkenskaper för Sverige: Offentlig verksamhet 1800–1980* (Lund: Studentlitteratur, 1987).

77 Patrick Svensson, "Peasants and entrepreneurship in the nineteenth-entury agricultural transformation of Sweden," *Social Science History* 30, no. 3 (2006).

78 See Gunilla Klose, "Svensk 'folkskoleekonomi' före 1770," in *Utbildningshistoria 1992*, ed. Egil Johansson and Stig G. Nordström (Uppsala: Föreningen för svensk undervisningshistoria, 1992); Gunilla Klose, *Folkundervisningens finansiering före 1842* (Uppsala: Uppsala University, 2011).

79 Jens Andersson and Thor Berger, "Elites and the expansion of education in nineteenth-century Sweden," *The Economic History Review* 72, no. 3 (2019); Erik Bengtsson and Svante Prado, "The rise of the middle class: the income gap between salaried employees and workers in Sweden, ca. 1830–1940," *Scandinavian Economic History Review* 68, no. 2 (2020).

spending, and the causal effect of a weighted voting system on spending on primary education.[80]

In the field of economic history, financial data on education have thus been mobilised, in France as in Sweden, both by means of consolidated statistical series and by means of series, often of more restricted scope, reconstructed from the sources for the needs of a particular piece of research. The existence of a retrospective satellite account of education is specific to France but has had little impact on French work on the history of education.

Primary schooling and popular education: economy and politics

Historians of education have paid specific attention to local regional and governmental funding of primary schooling and popular education, trying to identify the main factors at work in school expansion. This line of research, which has solid foundations in social history research, has been sparse in Sweden. Apart from being addressed by the investigations of Sjöberg and Wallin, mentioned above, it was only during the last 10–15 years that some research has been done on this topic. Starting from the work done by the historians of education mentioned above—including Nancy Beadie, Carla Aubry and Ingrid Brühwiler—Johannes Westberg published investigations that addressed how nineteenth-century primary schools were funded as well as how this was motivated and understood by local and national government. The results indicate the wide range of reasons why populations were taxed and agreed to be taxed for schooling, and how the mobilisation and distribution of resources were understood in terms of the pursuit of a fair and reasonable school funding structure. Particular emphasis was placed on the role of in-kind funding. By using a wide set of source materials, Westberg can show that nineteenth-century schooling was not only built on monetary taxes, but on a wide range of in-kind items including grains, cow fodder and firewood.[81]

Other contributions to this line of research also include Madeleine Michaëlsson's dissertation on the private funding of primary schooling. With a focus on the contributions made by iron mills in rural areas, Michaëlsson provides a national statistical perspective on this issue as well as case studies which shed light both on the schools

80 Björn Tyrefors Hinnerich and Per Pettersson-Lidbom, "Democracy, redistribution, and political participation: Evidence from Sweden 1919–1938," *Econometrica* 82, no. 3 (2014); Erik Lindgren et al., "The causal effect of political power on the provision of public education: Evidence from a weighted voting system," *arXiv preprint arXiv:2106.00350* (2021).

81 See, e.g., Johannes Westberg, "'Freedom for all! Injustice for none!' The peasant estate and the funding of elementary schools in rural Sweden, 1840–41," in *Erziehung und Bildung in ländlichen Regionen – Rural Education*, ed. Claudia Gerdenitsch and Johanna Hopfner (Frankfurt am Main: Peter Lang, 2011), 2919–29; Johannes Westberg, "When teachers were farmers: teachers' allotted farms and the funding of mass schooling, 1838–1900," *Nordic Journal of Educational History* 2, no. 1 (2015); Johannes Westberg, *Funding the Rise of Mass Schooling: The Social, Economic and Cultural History of School Finance in Sweden, 1840–1900* (Cham: Palgrave Macmillan, 2017); Johannes Westberg, "A conflicted political will to levy local taxes: inequality and local school politics in Sweden, 1840–1900," *Nordic Journal of Studies in Educational Policy* 4, no. 1 (2018).

run by iron mills, but also the support iron mills gave to other primary schools, including provision in the form of gifts and donations.[82] In this respect, Michaëlsson's research is linked to the vast French historiography addressing the "industrial paternalism" that has underlined the efforts made by some employers to provide workers' children with schools. However, the quantification and economic appreciation of this effort is not central to an analysis driven mostly by social and political considerations.[83]

In France, in contrast, there is an abundant literature addressing primary schools in the eighteenth and nineteenth century, before the Republican laws of the 1880s transferred most of the primary school costs to the state budget. Researchers have scrutinised teachers' contracts and communal archives and have revealed great disparities in the material situation of schools and schoolteachers throughout the country.[84] For example, the recent study by Côme Simien gives us a clear picture of the *maître d'école* within rural communities in the second half of the eighteenth century. When there were fewer than 2,000 inhabitants, the local communities did not have the means to pay specialised staff. So, the *maître d'école* was generally the only employee of the *commune*, apart from the messenger guard (or shepherd). He was therefore made to cumulate several functions, both sacred as well as secular, and sometimes also receiving in-kind payment. This was analyzed by Côme Simien as an element of the "*empreinte domestique*" which weighed on the function of the village schoolmaster.[85] The multi-tasking of school teachers in rural areas persisted in the nineteenth century, long after the central state became directly involved in the organisation of primary schools for boys—with the Guizot law of 1833—and the introduction of legal minima for teachers' salaries. But this multi-faceted activity—progressively restricted to providing a town hall secretariat and land surveying—has received less attention for its economic dimensions than for what it reveals about the low status of schoolteachers before the Republican legislation of the 1880s.[86] In the French historiography, the economic perspectives of the families—examined for

82 Michaëlsson (2016). See also Madeleine Michaëlsson, "From tree felling to silver lining: Diverse ways of funding elementary schools among Swedish ironworking communities, 1830–1930," in *History of Schooling: Politics and Local Practice*, ed. Carla Aubry and Johannes Westberg (Frankfurt am Main: Peter Lang, 2012).

83 For a recent analysis of this rich historiography, Stéphane Gacon and François Jarrige, "Les Trois âges du paternalisme. Cantines et alimentation ouvrière au Creusot (1860–1960)," *Le Mouvement Social,* no. 247 (2014), 27–45. Studies specifically focusing on schools have remained rare: Donald Reid, "Schools and the paternalist project at Le Creusot, 1850–1914," *Journal of Social History* 27, no. 1 (1993), 129–43; Jacqueline Fontaine, *La Scolarisation et la formation professionnelle des filles au pays de Schneider (1844–1942)* (Paris, France: L'Harmattan, 2010).

84 For an overview of these financial elements, see Angélique Blanc-Serra, "Les Instituteurs à Briançon du XIVe au XIXe siècle : un statut précurseur ?," *Carrefours de l'education* 45, no. 1 (2 July 2018), 129–48.

85 Côme Simien, *Le Maître d'école du village, au temps des Lumières et de la Révolution* (Paris: CTHS, A paraître). I am grateful to Côme Simien who gave me a preliminary version of his text. For insights into the secondary occupations of teachers in Sweden, analyzed in terms of livelihood diversification, see Johannes Westberg, "How did teachers make a living? The teacher occupation, livelihood diversification and the rise of mass schooling in nineteenth-century Sweden," *History of Education* 48, no. 1 (2019).

86 Gilbert Nicolas, *Le Grand débat de l'école au XIXe siècle: les instituteurs du Second Empire* (Paris, France: Belin, 2004).

example by Pierre Caspard for the Swiss canton of Neuchatel—have rarely been at the heart of the discussion.[87]

In this issue, Jean-Yves Julliard studies the financial regime of the hamlet schools of Savoie, before and after the annexation of this territory by France, in 1860. The attention given to the population's habits and expectations, as opposed to the new requirements of the French government, offers an original vision of the families' appreciation of what was worth financing or not in this mountain area, and also demonstrates how the government was made to comply with these local financial habits. It thus contributes to the knowledge of an under-researched question in the French historical field.

What has thus far attracted the attention of French researchers has rather been the political dimension of the decisions regarding primary school funding at the beginning of the Third Republic.[88] In 1889, eight years after the generalisation of free education in public elementary schools (1881), school teachers' salaries were included in the central state budget. This centralisation certainly allowed for an overall increase in expenditure, and, as a result, an expansion of the schooling provided, as well as an improvement in attendance and in the quality of teaching. But this also made sense in the context of a struggle against denominational primary schools, deprived of any public subsidy since the Goblet law of 1886. This financial reorganisation was part of a school policy that aimed to establish the fledgling Republic through the school, and to counter the influence of the Catholic Church.[89] In her Ph.D dedicated to the study of Lyon's education policy regarding its elementary schools (1870–1914), Marianne Thivend has renewed an analysis traditionally focused on the policy led by the central government.[90] Studying the municipal expenditure and the debates raised by the budget, she convincingly shows how the secularisation policy began at the local level with financial decisions taken by municipalities in large cities like Lyon and Paris, even before governmental decisions. However, the increasing interventions of the central state—which set constraints, imposed expenses, and controlled the fiscal policy—reduced the room for maneuver of large cities and forced them to adapt to government decisions, whereas the financial support from the state budget was much more limited than for rural villages, or even small and medium-sized cities.

Let us note that seventy years later, in 1959, the Debré law authorising and regulating the public financing of private schools under contract to the state also owed little to economists' considerations of the supposed efficiency of market mechanisms. It was above all a political decision, a compromise with the defenders of educational freedom, facilitated by the change of political regime that occurred in 1958 and by the growth crisis that the French education system was experiencing at that time.[91]

In Sweden, this political stake of educational finance has also been pointed out, but mainly for the sector of popular education. Anne Berg and Samuel Edquist

87 Pierre Caspard, *La Famille, l'école, l'État. Un modèle helvétique, XVIIe–XIXe Siècles* (Bern: Peter Lang, 2021).

88 Théret (1991).

89 Mona Ozouf, *L'École, l'Église et la République: 1871–1914* (Paris: Armand Colin, 1963).

90 Thivend (2006).

91 Bruno Poucet, *La Liberté sous contrat: une histoire de l'enseignement privé* (Paris: Fabert, 2009).

have investigated how the Swedish government used government funding schemes, 1870–1991, to shape a sector of popular education (*folkbildning*)—including open lectures, folk high schools, study circles and libraries organised by associations and based on voluntary efforts. By analyzing educational funding, they are thereby able to go beyond traditional ways of understanding popular education as an independent sector based on self-improvement and empowerment, to show how popular education in fact was also a phenomenon constructed by the Swedish government.[92] In comparison, financial support for popular education by the state in France remained relatively limited until the financial measures decided upon by the anti-republican Vichy regime, then reorganised and extended after the Second World War.[93]

The complex intricacy of finance and teaching methods

Among all the sensitive issues surrounding educational finance, the relation between funding and the content and form of teaching is perhaps the most delicate. In France, the cost of educational renewal has been a tricky subject since the end of the 1960s, and the evolution of spending per pupil is often questioned. In the 1990s, the American economist Eric Hanushek was keen to demonstrate that the solution to the school's problems would not come from increased spending.[94] The unequal efficiency of school expenditure across countries is one of the targets of international comparisons.[95] Saying that more money does not necessarily translate into quality learning does not mean that finance does not matter to pedagogics, but rather that both the amount of money spent and the provisions that determine how the money is spent should be included in the analysis.

Studies that explore the financial conditions of pedagogic transformations are still rare, both in France and Sweden. One exception is the original work on the French secondary education in the nineteenth century by Philippe Savoie who studied the interdependence of finance and pedagogy in the *lycées* (relying on national grants) and the *collèges* (relying on local subsidies).[96] Using a precise knowledge of the salaries and careers of teachers, as well as a thorough analysis of the *lycées* and *collèges*' budgets and of the state's expenditure, he argues that the construction, then the transformation of the economic model of secondary education played a major role in its pedagogical and administrative changes.[97] At the beginning of that cen-

92 Anne Berg and Samuel Edquist, *The Capitalist State and the Construction of Civil Society: Public Funding and the Regulation of Popular Education in Sweden, 1870–1991* (Cham: Springer Palgrave Macmillan, 2017).

93 Laurent Besse, Emmanuel Porte, "Repères sur les enjeux socioéconomiques dans l'éducation populaire en France," in *Les Modèles socio-économiques des associations: spécificités et approches plurielles* by Mathilde Renault-Tinacci (Paris: La Documentation française, 2021), 51–66. Carole Christen, *À l'école du soir. Une histoire sociale et politique des cours d'adultes (1815–1870)* (Seyssel: Champvallon, to be published.

94 Eric A Hanushek, "Making America's Schools Work: This Time Money Is Not the Answer," *The Brookings Review* 12, no. 4 (1994), 10.

95 Lindert (2009).

96 Philippe Savoie, *La Construction de l'enseignement secondaire (1802–1914). Aux origines d'un service public* (Lyon: ENS, 2013).

97 Philippe Savoie, *Les Enseignants du secondaire, XIXe–XXe siècles: le corps, le métier, les carrières : textes officiels. Tome 1, 1802–1914* (Paris: INRP/Economica, 2000).

tury, the tradition inherited from the humanist colleges of the pre-Revolution era, characterised by the predominance of Latin and Greek, the alternation of *classe* and *étude*, and the role of boarding schools, seemed strong, even if it had been heavily discussed by the Enlightenment philosophers. It was indeed attractive for the paying students that were necessary to the financial viability of the *lycées*, along with the state-funded scholarship recipients. This economic model could progressively accommodate additions made to the cursus and the specialisation of teachers, albeit with great diversity in local situations especially in the locally funded *collèges*. After 1880, the massive financial investment by the republican state and the homogenisation of pedagogical norms contributed to the abandonment of this economic model, as did the discrediting of boarding schools and the competition of private and upper elementary schools. This is the background of the major reform—both pedagogic and administrative—that took place in 1902, and which marks the definitive abandonment of an age-old pedagogical tradition.

For primary schools, researchers studying the monitorial education system in the nineteenth century also attempted to make a precise link between pedagogical choices and financial conditions. By studying school finance records, Esbjörn Larsson is able to show that the stated purpose of monitorial education to reduce the costs of popular education—mirrored in research literature arguing that monitorial education was a cheap and efficient method of education—was not necessarily correct. In rural areas, the introduction of monitorial education could imply increased school spending instead, because of the new expectations placed on school premises and school supplies.[98] This echoes the findings of Michel Chalopin, who noticed the same financial obstacles to the introduction of monitorial education in rural Brittany.[99] Of course, this interpretation has to be compared with other analyses of the factors driving the transformation in the organisation of schooling in the nineteenth century.[100]

In France, studies addressing the economics of school materials have primarily focused on school books. Jean-Yves Mollier and Bruno Dubot have written monographs on two major French publishers, Hachette and Larousse, both established in the nineteenth century and still active today.[101] Emmanuelle Chapron studied the functioning of schoolbook markets in various contexts in the eighteenth century.[102]

98 Larsson (2015).

99 Michel Chalopin, *L'enseignement mutuel en Bretagne: quand les écoliers bretons faisaient la classe* (Rennes: Presses universitaires de Rennes, 2011).

100 Marcelo Caruso, "The Slow Dichotomization of Elementary Classroom Roles. 'Grammar of Schooling' and the Estrangement of Classrooms in Western Europe (1830–1900)," *Paedagogica Historica* (ahead of print, 2021), 1–19.

101 Jean-Yves Mollier, *Louis Hachette (1800–1864): le fondateur d'un empire* (Paris: Fayard, 1999); Jean-Yves Mollier and Bruno Dubot, *Histoire de la librairie Larousse, 1852–2010* (Paris: Fayard, 2012).

102 Emmanuelle Chapron, "Des livres pour les écoles du peuple ? Économie et pratiques du texte scolaire en Champagne au XVIIIe siècle," *Histoire de l'éducation* 127 (2010), 7–34; Emmanuelle Chapron, "Écoles charitables et économie du livre au XVIIIe siècle: les livres à l'usage des élèves des Ursulines," *Revue d'histoire moderne et contemporaine* 59, no. 4 (2012), 33–49; Emmanuelle Chapron, "Collèges et librairie scolaire à Paris au XVIIIe Siècle: périmètre économique, activités induites et vie de quartier," in *L'Université dans la ville. Les espaces universitaires et leurs usages en Europe du XIIIe au XIXe siècle*, ed. Nathalie Gorochov, Boris Noguès (Rennes: Presses universitaires de Rennes, 2018), 161–74.

Similar comprehensive studies are still lacking for the following centuries, despite the development of this research field in France, following the pioneering work of Alain Choppin.[103] The growing interest for the materiality of school culture has drawn attention to other teaching devices, but so far economic and financial approaches are marginal.[104] As an exception, Johann-Günter Egginger studied the financial implications of agricultural, horticultural and science teaching in the North of France, for the schools but also for the companies involved.[105]

Studies that would question the financial aspects of the pedagogic transformations promoted by progressive education (*Éducation nouvelle; reformpedagogik)* are still scarce. For the Ecole des Roches—one of the first new French schools for future elites—Nathalie Duval has shown the extent of the financial difficulties the school faced recurrently from the 1960s to the 1980s, which finally led it to accept, in 1992, the system of a contract with the state, guaranteeing it public subsidies in exchange for an alignment with the national education programmes.[106] In this issue, the article of Samuelsson and Michaëlsson offers an original contribution to this controversial topic by studying the funding of two progressive schools, sustained both by private contributions, and by government grants. It also shows the involvement of local urban actors in the development of new types of schooling, a topic of interest for historians of education in both countries.

Little is known, however, about the budgetary implications of state-orchestrated pedagogical changes at the level of an entire education system. The financial implications of the great Swedish school reform of the 1960s have not been thoroughly examined. For the French case, Clémence Cardon-Quint showed that the argument of the financial cost was a reasoning explicitly mobilised at the end of the sixties by those—in the government—who opposed the spirit and purpose of the *renovation pédagogique*.[107] After 20 years of constant expansion, due to the baby-boom and school massification, they argued that the state education budget would not stand another increase justified by qualitative reasons. The slowdown in economic growth made subsequent pedagogic reforms even harder to fund.[108]

103 Alain Choppin, "L'Histoire des manuels scolaires. une approche globale," *Histoire de l'éducation* no. 9 (1980), 1–25; Alain Choppin, "Le Manuel scolaire, une fausse évidence historique," *Histoire de l'éducation* no. 117 (2008), 7–56.

104 Marguerite Figeac-Monthus (ed.), *Éducation et culture matérielle en France et en Europe du XVIe siècle à nos jours* (Paris: Honoré Champion éditeur, 2018).

105 Johann-Günter Egginger, "L'Introduction de l'enseignement des sciences à l'école primaire et ses implications financières dans les écoles normales rénovées de la France septentrionale (1881–1940)," in *Le Coût des études: modalités, acteurs et implications sociales, XVIe–XXe siècle*, ed. Jean-François Condette (Rennes: Presses universitaires de Rennes, 2012), 99–113; Johann-Günter Egginger, "L'Enseignement agricole et horticole dans les écoles normales de la France septentrionale: un marché lucratif pour un grand nombre d'entrepreneurs (1851–1923)," in *L'École une bonne affaire ? Institutions éducatives, marché scolaire et entreprises, XVIe siècle–XXe siècle*, ed. Jean-François Condette, Histoire 29 (Villeneuve d'Ascq: Revue du Nord, 2013), 147–67.

106 Nathalie Duval, *L'École des Roches* (Paris: Belin, 2009).

107 Clémence Cardon-Quint, "Quel financement pour l'école nouvelle? Le budget de l'Éducation nationale en débat en 1967–1968," in *Réformer le système éducatif. Pour une école nouvelle, Mars 1968*, ed. Julien Cahon and Bruno Poucet (Rennes: Presses universitaires de Rennes, 2021), 83–93.

108 For a short overview of these dynamics see Clémence Cardon-Quint, "Finances publiques et éducation, des années 1870 au début du XXIe siècle," in *Dynamique des dépenses publiques en France au XXe siècle*, ed. Fabien Cardoni and Michel Margairaz (Paris: IGPDE, 2022).

Extended schooling: local resources and national policies

The development of schooling followed different patterns throughout national territories. The varied needs of local economic actors, as well as the abundance of available fiscal resources, played a specific role in the growth of extended schooling.

Several French researchers have explored the investment of local actors in the development of various forms of schooling in urban areas. This strand of research was particularly blooming in the 1990s, in the aftermath of a complex movement of devolution to administrative and local authorities in various sectors including education. While the work of Marianne Thivend on Lyon primary schools, mentioned above, is part of this line of research, this local approach first contributed to the study of intermediate forms of schooling with a modern, "realistic" or practical emphasis, including the *enseignement primaire supérieur*, vocational and technical education.[109] By combining an analysis of the national policy with several in-depth local case studies, the history of upper primary schools (écoles *primaires supérieures)* published by Jean-Pierre Briand and Jean-Michel Chapoulie in 1992 has played a pioneering role in this field.[110] In 1999, a sociologist, Marc Suteau published a thorough study of the school policy of Nantes from 1830 to 1940, in which he scrutinises the material conditions for the creation and financing of educational institutions by the municipality. Thus, he shows how, during the nineteenth century, the local elite tried to develop and sustain technical or higher education schools, not with a systematic view of what a school system should be, but to meet specific needs, linked with the local economy.[111] In her Ph.D, defended in 2017, Solenn Huitric studied the process of transforming municipal secondary schools (*collèges*) into national secondary schools (*lycées*), which involved 45 *collèges* between 1830 and 1880. She examines the various issues, particularly financial, of a process seen as a "co-production of public action."[112]

On a different scale, Stéphane Lembré has studied the development of technical education in the industrial region of the North, from the beginning of the nineteenth century to the 1940s. He showed the role and diversity of local initiatives, and then the gradual involvement of the state in a sector where the needs of the regional economy remained decisive in structuring the offer.[113] However, he concluded that economic needs were not enough to explain why companies, the state and local authorities decided to commit themselves (including financially) to one school creation or another.

In the Swedish context, the history of intermediate and technical education has

109 See the special issue "L'Offre locale d'enseignement: les formations techniques et intermédiaires (XIXe–XXe siècles)," *Histoire de l'éducation*, no. 66, numéro thématique (May 1995).

110 Jean-Pierre Briand and Jean-Michel Chapoulie, *Les Collèges du peuple : l'enseignement primaire supérieur et le développement de la scolarisation prolongée sous la Troisième République* (Paris: Institut national de recherche pédagogique, 1992).

111 Marc Suteau, *Une ville et ses écoles: Nantes, 1830–1940* (Rennes: Presses universitaires de Rennes, 1999).

112 Solenn Huitric, "Transformer les collèges communaux en lycées. La coproduction d'une action publique (1830–1880)" (Doctorat d'histoire, sous la direction de Philippe Savoie, Université de Lyon, 2016).

113 Stéphane Lembré, *L'École des producteurs: aux origines de l'enseignement technique en France, 1800–1940* (Rennes: Presses universitaires de Rennes, 2013).

received increasing attention.[114] For example, Lars Edgren has examined the political argumentation of artisans on vocational education during the second half of the century; Jonas Olofsson and Sandra Hellstrand have explored apprenticeship training, and Åsa Broberg the educational debate on vocational training, 1918–1971.[115] In this issue, the article by Fay Lundh Nilsson and Per-Olof Blomberg explores the interaction between municipal and central government in the setting up and funding of an intermediate level of technical schools between 1850–1920, during the Swedish industrial expansion. They show that these schools were not only supported by educationalists, but they were also promoted both on the local level by politicians, industrialists and individual stakeholders, as well as on a national level by members of parliament. In terms of educational funding, they indicate the importance of private funding during the initial phase of the establishment of these schools, and that government grants thereafter became the main source of funding. Since these grants remained low, they also affected the debate surrounding these schools, and the reforms that targeted them. In the latter, the teachers' wages at these institutions became an important question.

In this special issue, Stephane Lembré explores the multiple reasons that led the French Parliament in 1925 to set up a new tax, the *taxe d'apprentissage*, in order to sustain the development of lower technical education. This new tax is interesting for two reasons. First, it clearly assigns the funding of technical education to the future employers, whereas ordinary fiscal revenues for the state and local authorities—as well as students' fees—provide for other types of education. Second, the mechanism adopted at that time included tax exemptions for training expenses directly incurred by employers. Far from being the exception, the amounts disbursed through this channel still represent a significant proportion of expenditure. This original financial construction allows for a supple and deconcentrated coordination between administrative authorities and local economic stakeholders.

Free education, scholarships and loans

Educational finance is not only about the costs and benefits to society, but also includes how education affects the individual. In this respect, research has explored how in the public domain school fees became increasingly unusual during the nineteenth century in Europe, but also how the costs of secondary and tertiary education were addressed during the nineteenth and twentieth centuries.[116] In European welfare states, free provision of schools and scholarship systems are commonly associated with the political aim of achieving equality or equal opportunity among

114 For a recent overview, see Sandra Hellstrand, *Lärlingsfrågan: institutionell förändring, ekonomiska föreställningar och historiska begrepp i den svenska debatten om lärlingsutbildningen, 1890–1917* (Stockholm: Stockholms universitet, 2020), 15–22.

115 Hellstrand (2020); Lars Edgren, *Lärling – gesäll – mästare: Hantverk och hantverkare i Malmö 1750–1847* (Lund: Dialogos, 1987); Jonas Olofsson, *Svensk yrkesutbildning: vägval i internationell belysning* (Stockholm: SNS förlag, 2005).

116 Regarding the costs of private education and secondary education in Sweden, see, e.g., Peter Bernhardsson, *I privat och offentligt: Undervisningen i moderna språk i Stockholm 1800–1880* (Uppsala: Acta Universitatis Upsaliensis, 2016), 78–81; Esbjörn Larsson, "Hyddans son i ett framväxande parallellskolesystem: Skolavgifter och försörjningskrav vid de svenska allmänna skolorna under 1800-talets första hälft," *Norsk pedagogisk tidskrift* 102, no. 2 (2018), 133–144.

various social groups in the schooling system. However, free education as well as scholarships already existed in various forms, and for various reasons, well before the clear formulation of this political aim.

On this issue, historians like Harvey Chisick first attempted, back in the 1970s, to document if and to what extent the scholarships were a lever of social mobility in the early modern period, in an academic context heavily influenced, in France, by the sociology of education.[117] Later works tried to delineate the logics and functioning of the various systems of scholarships, whose purposes were not primarily related to social considerations. The collective work edited by Jean-François Condette in 2012 made a useful contribution to this topic with seven chapters addressing various scholarship systems, from the sixteenth to the twentieth century, for different types of students (girls, boys, in private denominational schools as well as in publicly funded settings, in secondary or technical schools, as well as in higher education etc.).[118] Together with other books chapters and articles,[119] this literature now covers a wide variety of cases, both in the pre-modern and the modern era. Studies addressing the twentieth century—like that of Stéphane Lembré on technical education scholarship holders—are particularly interesting as they show that the wide heterogeneity of end purposes persisted well into the twentieth century, at a time when, officially, meritocratic considerations and social justice were invoked.[120]

In welfare states, the development of the state's fiscal capacity was followed by targeted supports being replaced with free provision for all, at least for primary and secondary public schools (respectively in 1881 and 1933 in France). Free secondary education and its potential effects on student enrolment was a heavily politicised topic in the 1920s and 1930s. These effects have been scrutinised by Philippe Hugot, and more recently by Antoine Prost, thus correcting the too uniform vision of the role played by the secondary education as a mere tool of social reproduction before the organisational reforms of the 1960s and 1970s.[121]

117 Harvey Chisick, "Bourses d'études et mobilité sociale en France à la veille de la Révolution. Bourses et boursiers du collège Louis-le-Grand (1762–1789)," *Annales* 30, no. 6 (1975), 1562–84. Emblematic of the influence of sociology on the history of education in the 1970s: Wilhelmus Theodorus Maria Frijhoff and Dominique Julia, *École et société dans la France d'Ancien Régime: quatre exemples, Auch, Avallon, Condom et Gisors* (Paris: A. Colin, 1975).

118 See the contributions of Véronique Castagnet, Dominique Picco, Jean-François Goubet, Arnaud Costechareire, Stéphane Lembré, Jean-François Condette ans Philippe Rocher, in Condette (2012), 245–407.

119 Marie-Madeleine Compère, "Les Boursiers nationaux," in *Lycées, Lycéens, Lycéennes, Deux Siècles d'histoire*, ed. Pierre Caspard, Jean-Noël Luc, and Philippe Savoie (Paris: INRP, 2005), 73–86; Jean Le Bihan, "Le Recrutement des boursiers des collèges royaux sous la monarchie de Juillet: nouveau regard à partir des ordonnances de nomination," *Histoire de l'éducation*, no. 144 (2015), 55–78; Jean Le Bihan, "Les Boursiers communaux de l'enseignement secondaire au XIXe siècle: un angle mort de l'historiographie des élèves," *Histoire de l'éducation*, no. 151 (2019), 147–74.

120 Stéphane Lembré, "Bourses et boursiers de l'enseignement technique dans le Nord et le Pas-de-Calais (1900–1940)," in *Le Coût des études: modalités, acteurs et implications sociales, XVIe–XXe siècle*, ed. Jean-François Condette (Rennes: Presses universitaires de Rennes, 2012), 315–31.

121 On the politics of free provision, see also: John E. Talbott, *The Politics of Educational Reform in France, 1918–1940* (Princeton, N.J.: Princeton University Press, 1969); Philippe Hugot, "La Gratuité de l'enseignement secondaire: l'application des premières mesures démocratiques dans l'enseignement secondaire, 1918–1939" (Paris, l'Harmattan, 2005); Antoine Prost, "Morphologie et sociologie des lycées et collèges (1930–1938)," *Histoire de l'éducation*, no. 146 (2016), 53–110.

Higher education is quite a different issue, as the funding models of higher education still diverge significantly among countries with similar levels of development, as highlighted by Julian Garritzmann.[122] Moreover, the redistributive dimensions of higher education funding is a thorny question. In comparative political economy, Ben Ansell as well as Marius Busemeyer have underlined the complexity of a problem that encompasses the questions of access to higher education, but also the capacity to value one's training for the job market, which depends on the level of technological development and on the openness of the economy.[123] Within some higher education systems—like the UK's, studied by Vincent Carpentier—a strong resource differentiation combined with mission and social differentiations tends to stratify social inequalities, in spite of a general expansion.[124] While the subject also attracts several economists, Vincent Carpentier's work is distinctive in that it attempts to weave together the history of education, economics and political economy.

Today, the French system combines low tuition fees (at least in universities) with relatively modest support mechanisms (scholarships, accommodation, catering etc.).[125] This increasingly controversial balance has not been fundamentally altered in response to the massification of higher education. In Sweden, higher education is free of charge, and students are supported by student aid, consisting of a grant and a repayable student loan. As Martin Gustavsson notes in this special issue, this system is often perceived in a positive light, as a generous Social Democratic reform that was unique at its introduction in the 1960s, and that remains one of the most successful post-war educational reforms. By examining the rise and fall of the student finance system that preceded it, he is, however, able to nuance such accounts. While the new student finance system was in line with other Social Democratic reforms, it was also compatible with the influential idea of the Chicago School that education was an investment in human capital. And although this system implies that the government certainly supports higher education, one of its main functions is that is transfers costs not only from students to the government, but from parents to their children.

In conclusion

The range of issues that can be analysed through the investigation of the economic aspects of education is obviously very broad. As is evident from above, these include not only the financial aspects of education or economic growth, but also the social, political and pedagogic aspects of education. Educational finance is therefore not only of interest to the economic historian, but also to social historians, cultural historians and, not least, historians of education.

122 Julian L. Garritzmann, *The Political Economy of Higher Education Finance: The Politics of Tuition Fees and Subsidies in OECD Countries,1945–2015* (Cham: Springer, 2016). See also Léonard Moulin, "Frais d'inscription dans l'enseignement supérieur et régimes d'État-providence: une analyse comparative," *Éducation et sociétés* 36, no. 2 (2015).

123 Busemeyer (2014); Ansell (2010).

124 Vincent Carpentier, "Three Stories of Institutional Differentiation: Resource, Mission and Social Inequalities in Higher Education," *Policy Reviews in Higher Education* 5, no. 2 (2021), 197–241.

125 French higher education is dual. Schematically, one contrasts the *grandes écoles* – selective on an academic and/or financial level – with the universities, accessible to all holders of the baccalauréat.

Nonetheless, statistics produced by governments, archives containing financial data or statistical series "reconstructed" by researchers still remain underused in most historical research addressing education. As shown above, and in the various articles in this issue, the analysis of these financial data requires both good knowledge of their context of production, and also the ability to make sense of the figures themselves, in particular by relating them to other financial and economic data. As it is, the growing body of work on these financial aspects of education will hopefully provide the terms of comparison that are often still lacking for the interpretation of the quantitative data.

In this area, more regular collaborations between economists, economic historians and historians would certainly open up new perspectives. The interest of a new generation of historians and historians of education for quantitative methods and reconstructed statistics is certainly a favourable development in this context. Another is the increasing interest in education among economic historians, along with the cliometricians' wide-ranging ambition to apply econometrics to historical settings. Finally, it is also likely that the "credibility revolution" that has reinforced the methodological precautions taken in econometrics in the analysis of causal imputation will facilitate dialogue with other fields of research.[126] These various shifts in methods and research interests certainly create a terrain favourable to a more intensive exploration of educational finance.

126 For the latter, see, e.g., Émilien Ruiz, "Retour sur « l'anachronisme des séries longues »," Billet, *Penser/Compter* (blog), 5 October 2014, http://compter.hypotheses.org/768 (accessed February 28, 2022); Joshua D. Angrist and Jörn-Steffen Pischke, "The Credibility Revolution in Empirical Economics: How Better Research Design Is Taking the Con out of Econometrics," *Journal of Economic Perspectives* 24, no. 2 (2010), 3–30.

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Cliometrics of Primary Education in the Long Nineteenth Century France

Claude Diebolt, Magali Jaoul-Grammare & Faustine Perrin

Abstract • The objective of this article is to study the links between the financing of primary education, schooling and economic growth in France in the nineteenth century. To do so, we use information on the financing allocated by the State, the departments, the municipalities, and households over the period 1820–1913. Our analysis is in two stages. First, we analyse the evolution of these different types of financing over time, relying on the outliers' methodology to detect the existence of possible breaks in the series. Next, we study the causal relationships between the different types of financing, the number of children enrolled in primary education and the gross domestic product. Over the period studied, our results confirm that mass schooling is primarily driven by political will, before being explained by the increase in wealth available in the economy.

Keywords • primary education; financing; nineteenth century; France

Introduction

This article is part of an evolving historiography that has often been the site of controversies: the methodological debate on the use of statistics and the conclusions that can be drawn from them, on the one hand,[1] and the debate on the impact of legislative changes, on the other.[2] Its primary ambition is, on the basis of a renewed and predominantly quantitative analysis, to provide new evidence[3] of the causal links between the financing of primary education, schooling and economic growth in France in the nineteenth century.

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1 Raymond Grew, Patrick Harrigan, James B. Whitney, "Scolarisation en France, 1829–1906," *Annales: Économies, Sociétés, Civilisations* 39, no. 1 (1984), 116–57; Jean-Noël Luc, "L'illusion statistique," *Annales: Économies, Sociétés, Civilisations* 41, no. 4 (1986), 887–911.

2 Claude Diebolt, Magali Jaoul, and Gilles San Martino, "Le mythe de Ferry: une analyse cliométrique," *Revue d'Economie Politique* 115, no. 4 (2005), 471–97; Bruno Théret, "Les dépenses d'enseignement et d'assistance en France au XIXe siècle: une réévaluation de la rupture républicaine," *Annales: Économies, Sociétés, Civilisations* 46, no. 6 (1991), 1335–74.

3 For the French reader interested in a brief introduction to the topic of evidence in economics, see Claude Diebolt: https://www.blog-afse.fr/billet/les-entretiens-de-lafse-2017-la-preuve-dans-les-sciences-economiques; http://www.touteconomie.org/node/15501 (accessed 15 August 2021).

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Berg, Edquist, Mays, Westberg and Åkerlund offer a stimulating reflection on the history of educational finance, especially the financing of primary and higher education and of popular education.[4] However, there is still a significant gap between the conceptual advance and the quantitative measurement of the effects that gave rise to these concepts. It is true that measurement is difficult and that the instruments available to us are far from adequate. However, this cannot be used as an argument to reject a quantitative approach to the evidence. A concept is, by nature, an abstract image of one or more phenomena, a construction of the mind; only measurement links it to its source. Without measurement, whether potential or actual, a concept must remain sterile, with no possibility of being transformed into action or fuel for the journey to new fields of knowledge.

After the Second World War, developments in school statistics advanced the field of measurement and undoubtedly led to further progress in theory.[5] Nevertheless, progress in observation has all too often been concerned with the present alone. The analysis of very long-term developments, which has rarely led to a corresponding amount of statistical production, has had to make do with existing indicators, which are often very far removed from the theoretical concepts that were sought by this approach. The statistical production of the post-World War II period obviously offers significant hindsight, but this is not enough to confidently cover a period over fifty years long. As regards the historical analysis of the causal relations between education and the economy, for example, statistical production provides very powerful tools for studying the period from 1970 to the present day,[6] but it does not allow for a precise analysis of previous periods and especially of the breakdowns caused by wars, institutional changes or crises, whether economic, demographic, health-related, or anything else. But, since we are examining the past, new statistical constructions can only use the materials bequeathed to us by the past, even though these materials were constructed to meet the needs and issues of enquiries which, by definition, have nothing to do with the questions we are asking ourselves today.

4 Anne Berg, Samuel Edquist, Christin Mays, Johannes Westberg, and Andreas Åkerlund, "The History of Educational Finance," *Nordic Journal of Educational History* 2, no. 1 (2015), 3–22.

5 See especially Theodore W. Schultz, "Investment in Human Capital," *American Economic Review* 51, no. 1 (1961), 1–17; Theodore W. Schultz, *The Economic Value of Education* (New York: Columbia University Press, 1963); Edward F. Denison, *The Sources of Economic Growth in the United States and the Alternatives Before Us* (New York: Supplementary Paper, No. 13, Committee for Economic Development, 1962); Gary S. Becker, *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (New York: Columbia University Press, 1964); Jacob Mincer, "Investment in Human Capital and Personal Income Distribution," *Journal of Political Economy* 66, no. 4 (1958), 281–302; John W. Meyer and Michael T. Hannan eds., *National Development and the World System. Educational, Economic, and Political Change*, 1950–1970 (Chicago: The Chicago University Press, 1979).

6 We are thinking in particular of the work of the *Direction de l'évaluation et de la prospective* of the Ministry of National Education in the form of satellite accounts: Dep/Insee, *Le compte de l'éducation. Principes et méthodes*, 7 (Paris: Les dossiers Éducation & Formations, 1990).

Hence, cliometrics is brought in to construct the new observations that we need.[7] The method itself implies limits, which are the traces left by past generations, which remain discernible. However, much material is available and the question is how it can be exploited. Cliometrics is based on the methods of retrospective national accounting (in particular the drawing-up of satellite accounts).[8] It aims at representing the economy of a country in a simplified form. This approach aims first to observe and measure socio-economic facts. This allows us to break down the complex set of phenomena that compose economic and social activity. Finally, it allows us to make socio-economic facts comparable, in order to classify them in a limited number of categories, so that they can be studied as elements of a homogeneous whole (i.e. in aggregate).

By producing organised knowledge, cliometrics generates its own theoretical field, the adequacy of the two-fold link between the measurement and the theoretical concept on which it is based and the link between the concept and the evidence that gives rise to it. When we wish to observe a historical phenomenon over the long term, we must recognise that our know-how, the instruments we have at our disposal, lag considerably behind the questions we are asking. What does it mean, for example, to juxtapose the instantaneous measurements of a time series, when the object observed is itself continuously evolving? The comparison of levels measured at two somewhat distant dates is certainly not very meaningful. Still, movement that is described in this way has some value. It lets us measure trends, cycles, shocks or crises, setting up a kind of communion between facts and stylised facts.

This research approach, applied to the comparative analysis of educational expenditure in France, Germany, Spain and the United Kingdom,[9] enabled Claude Diebolt and Louis Fontvieille[10] to formulate, on the basis of reconstructed statistical sets,

7 Claude Diebolt, "L'évolution de longue période du système éducatif allemand: 19ème et 20ème siècles," Special Issue of the journal *Economies et Sociétés*, Series AF, no. 23 (1997); Claude Diebolt, "Cliometrica after 10 Years: Definition and Principles of Cliometric Research," *Cliometrica* 10, no. 1 (2016), 1–4; Claude Diebolt, Gabriele Franzmann, Ralph Hippe, and Jürgen Sensch, "The Power of Big Data: Historical Time Series on German Education," *Journal of Demographic Economics* 83, no. 3 (2017), 329–76; Claude Diebolt and Michael Haupert, eds., *Handbook of Cliometrics*, 2nd Edition (Berlin, Springer, "Springer Reference" Collection, 2019). For the French reader interested in a brief introduction to cliometrics, see Claude Diebolt: https://www.blog-afse.fr/billet/la-cliometrie-un-defi-la-mesure-du-temps (accessed 15 August 2021).

8 Jean Marczewski, "Histoire quantitative, buts et méthodes," *Cahiers de l'ISEA*, Série AF, no. 1 (1961), III–LIV.

9 Louis Fontvieille, "Education Growth and Long Cycle:. The Case of France in the 19th and 20th Centuries," in *Education and Economic Development since the Industrial Revolution*, ed. G. Tortella (Valencia: Generalitat Valenciana, 1990), 317–35; Claude Diebolt, *'Education et croissance économique: Le cas de l'Allemagne aux 19ème et 20ème siècles*, (Paris: Bibliothèque de l'Éducation, L'Harmattan, 1995); Diebolt (1997); Claude Diebolt, "Die Erfassung der Bildungsinvestitionen im 19. und 20. Jahrhundert. Deutschland, Frankreich, Großbritannien und Spanien im Vergleich," *Zeitschrift für Erziehungswissenschaft* 3, no. 4 (2000a), 517–38; Claude Diebolt, *Dépenses d'éducation et cycles économiques en Espagne aux XIXe et XXe siècles*, Logiques Economiques, L'Harmattan, Paris, (2000b); Alain Carry, "Le compte satellite rétrospectif de l'éducation en France (1820–1996)," Special issue of the journal *Économies et Sociétés*, Série HEQ, 25, (1999); Vincent Carpentier, *Système éducatif et performances économiques au Royaume-Uni*, 19ème et 20ème siècles (Paris: Logiques Économiques, L'Harmattan, 2001).

10 Claude Diebolt and Louis Fontvieille, "Dynamic Forces in Educational Development: A Long-Run Comparative View of France and Germany in the 19th and 20th Centuries," *Compare* 31, no. 3 (2001), 295–309.

a theoretical explanation of the dynamic relations between education and economic growth in the nineteenth and twentieth centuries, synthesising a decade of collective work in this field. This work led to the hypothesis of a periodic structural transformation of the social system linked to that of the economic system. Education, having been seen as an accompanying investment, formalised by a Keynesian-inspired[11] mathematical model from the end of the Second World War, was presented as one of the causes, if not the determining factor, of economic growth, at least for the most developed countries. This was synonymous with a new mode of regulating the economic and social system in which the accumulation of physical capital remained important, but, in line with the teachings of endogenous growth[12] theorists, became subsidiary to the accumulation of human[13] capital. For Diebolt and Fontvieille, education in the most advanced countries no longer intervened as an exogenous element, helping to correct the imbalances of the economic system, but became an integral part of the economy, perhaps constituting one of the main factors of growth.

In fact, education develops its action at two levels: on the one hand, by raising the productive capacities of the economic system; on the other, as a final consumption good corresponding to a strongly increasing demand linked to the transformations of lifestyles (increase of free time, access to culture and leisure). The phase of economic prosperity from 1945 to 1973 should therefore be studied as a period of extensive development for the education and training system, particularly at secondary and higher levels. As a corollary, the depression phase of the 1970s should be considered a period of intensive development and a search for efficiency characterised by a qualitative improvement in training and in the search for new forms likely to increase the economic yield of the education/economy relationship. Extending this idea, the development of continuous training (by instituting lifelong learning), plays a role in this transformation, developing at the same time the aspect of education and training that is not directly productive.[14] These results have a powerful impact on the most recent work in terms of human capital accumulation. In practice, the

11 Claude Diebolt, "Government Expenditure on Education and Economic Cycles in the Nineteenth and Twentieth Centuries. The Case of Spain with Special Reference to France and Germany," *Historical Social Research. An International Journal for the Application of Formal Methods to History* 24, no. 1 (1999), 3–31.

12 Paul M. Romer, "Increasing Returns and Long-Run Growth," *Journal of Political Economy* 94, no. 5 (1986), 1002–37; Paul M. Romer, "Endogenous Technological Change," J*ournal of Political Economy* 98, no. 5, Part 2 (1990), 71–102; Robert E. Lucas, "On the Mechanics of Economic Development," *Journal of Monetary Economics* 22, no. 1 (1988), 3–42. For a synthetic presentation of endogenous growth theories, see Claude Diebolt and Charlotte Le Chapelain, "Human Capital and Economic Growth," in *Encyclopedia of International Higher Education Systems and Institutions*, ed. P. Teixeira and J. Shin (Springer, Dordrecht, 2019) (Living Online Edition).

13 As an original illustration, we think of the considerable impact of the Sputnik project on the development of education and research and development spending, especially in the United States: "The Sputnik effect of 1957 led to a major expansion of education in the United States, as the forced expansion of the Soviet Union's education system was blamed for the fact that the USSR had operational intercontinental missiles and had surpassed the United States in some important areas despite its much lower capitalisation. Economic models of education, and in particular the theory of human capital, suddenly attracted the keen interest of policymakers and became the basis for economic planning, even supranational planning." Claude Diebolt, Ralph Hippe, and Magali Jaoul-Grammare, *Bildungsökonomie: Eine Einführung aus historischer Perspektive* (Wiesbaden: Springer-Gabler, 2017), V–VI (our translation).

14 Diebolt and Fontvieille (2001), 295–309.

contribution of education to the growth process remains, paradoxically, subject to many uncertainties. A precise understanding of it is almost systematically hampered by the difficulty of assessing human capital endowments in a relevant manner.[15] This difficulty has been the stumbling block of the human capital project since its inception in Chicago by Schultz and his colleagues. Today, this difficulty has led to a severe criticism of its research programme, if not to its being existentially called into question.[16]

The present article is part of this momentum, while returning to its starting point in the nineteenth century in order to fully grasp the complexity of the process. It aims to study how far the evolution of the French education system, in particular the centralisation of the financing of primary education, contributed to the process of massification and democratisation of access to school and primary education in the nineteenth century. A second objective of this article is to analyse how far the beginning of an economic take-off, which occurred in parallel with an increase in educational investment, may have contributed to fostering and feeding this process. To do this, the article uses retrospective national accounts of the primary education funding allocated by the State, departments, municipalities and households over the period 1820–1913, in order to capture what is commonly referred to as the long nineteenth century. To conduct our analysis, we proceeded in three stages. First, we described how the financing of primary education in France worked and the main changes that occurred during the period under study. Second, we analysed the evolution of the different sources of financing by using the outlier detection techniques developed by Darné and Diebolt to detect the existence of possible breaks in the series.[17] Finally, we studied the causal relationships between the different sources of financing and schooling. In doing so, we also tested for causal links with the country's economic growth.

With this in mind, our ambition is to better understand when and how schooling developed in France, what the main stages were and how they should be explained (i.e. what forces drove these developments). Through the results of our analysis, we show the usefulness of statistical tools in understanding the evolution of primary education in the nineteenth century.[18] Our analysis thus contributes to providing new answers to some of the debates and controversies of past decades.

The article is organised as follows. The first part presents the context of our analysis. It recalls the major changes in primary education in France during the nineteenth century, based on the use of graphs to show school enrolments and the various financial sources for primary education controlled by the actors concerned. The second part studies the existence of breakpoints in the series of expenditures (public

15 Nadir Altinok, Claude Diebolt and Jean-Luc Demeulemeester, "A New International Database on Education Quality: 1965–2010," *Applied Economics* 46, no. 11 (2014), 1212–47.

16 Claude Diebolt and Charlotte Le Chapelain, *Le Capital humain: perspectives historiques et cliométriques*, eds., Special issue of the *Revue d'Économie Politique* 130, no. 1, (2020); Eric Hanushek and Ludger Woessmann, *The Knowledge Capital of Nations: Education and the Economics of Growth* (Cambridge, MA: MIT Press, 2015).

17 Olivier Darné and Claude Diebolt, "Unit Roots and Infrequent Large Shocks: New International Evidence on Output," *Journal of Monetary Economics* 51, no. 7 (2004), 1449–65.

18 We are, of course, aware that "quantification, statistics and econometrics may not bring everything to a certainty, but it can give to many historical debates a perspective that would otherwise be completely lacking." Diebolt (2016), 3.

and private) dedicated to the financing of primary education and discusses the results in the light of the major political events of the nineteenth century. The third part analyses the causal relationships between primary education and its financing and questions the role played by economic growth. The final part recalls and discusses the main results highlighted by the analyses undertaken in them.

Financing of primary education and schooling in the nineteenth century

The statistical information analysed in this article comes, first, from the report of the Minister of Public Instruction and Fine Arts, Jules Ferry, to the President of the Republic on 25 January 1880.[19] A permanent statistical commission had been set up by the previous minister in order to clarify everything to do with popular education by providing the most reliable data possible. It should be remembered that in France the first official records on education date back only to 1829, that the statistics were disparate and that the accounts of situations at the communal or departmental level could be very different both from the actual situations (whether or not there were boys' and girls' schools, for example) and from the statistical census. Thus, while we know that the figures published are as accurate as possible, we can tell from comparing the statistics that changes were made from time to time to correct errors or supply missing information.[20] For our cliometric treatment, the data on primary school enrolment in France come exclusively from Briand, Chapoulie, Huguet and Prost.[21] The data on its financing come from Carry, as an extension of the founding work of Fontvieille.[22] The purpose of these statistics is to bring together in a series of coherent tables all the financial flows involved in education, in order to evaluate the cost of education to the national community as a whole, to study its financing and to de-

19 Cf. Diebolt, Jaoul, and San Martino (2005), 471–97.

20 Thus, we may quote a sentence by the chairman of the Commission which produced the 1879 report on education, Emile Levasseur, "Incorrect on many points when examined in detail, these statistics give a fair idea of the great changes which have taken place in our schools over the last half century; they show the progress made over the years and reveal the main influences which have determined it." As a significant example, we mention here the educational statistics of Germany, and more particularly those of the period of the Third Reich. Indeed, from 1936 onwards, the reconstruction of the education account confronts the researcher with a Gordian knot that is difficult to cut. Was the expenditure allocated to the Hitler Youth part of educational expenditure or was this so-called educational investment of a completely different nature and should it be accounted for elsewhere than in the financial resources of education? This is an important question, since, over the period under consideration, the addition or absence of this expenditure determines the direction of the upward or downward trend in educational expenditure. For the interested reader, see in particular Diebolt (1997); Diebolt, Franzmann, Hippe, and Sensch (2017), 329–76.

21 Jean-Pierre Briand, Jean-Michel Chapoulie, Françoise Huguet, Jean-Noël Luc, and Antoine Prost, *L'enseignement primaire et ses extensions. Annuaire statistique, 19ème–20ème siècles. Écoles maternelles, primaires, primaires supérieures et professionnelles* (Paris: Economica/Inrp, 1987).

22 Alain Carry, "Les indicateurs monétaires du volume de l'éducation en France," in *Éducation et croissance économique : évolution de longue période et prospective. Une analyse comparée des systèmes éducatifs allemand, espagnol et français*, ed. Alain Carry, Claude Diebolt, Louis Fontvielle, Clara Núñez, and Gabriel Tortella, Stimulation Plan for Economic Science, European Union, 1, Brussels (1995), 207–310; Carry (1999). We also refer to the State accounts for education as established by Louis Fontvieille, *Évolution et croissance de l'État français: 1815–1969*, Special issue of the journal *Économies et Sociétés*, Série AF, no. 13 (1976), and Louis Fontvieille, *Évolution et croissance de l'Administration Départementale Française 1815–1974*, Special issue of the journal *Économies et Sociétés*, Série AF, no. 14, (1982); based on the financial records of the Compte Général de l'Administration des Finances.

termine the costs of the various levels and activities of education and activities.[23] The field of education is defined by a list of educational activities, ancillary activities and goods and services related to education. The education account considers two categories of economic agent involved in the field: financing units, which bear the educational expenditure, and production units, which carry out the teaching or related activities from the resources made available to them by the financing units.[24] The data used thus have the advantage of correcting the data of the *Statistical Yearbooks* and the *Primary Education Statistics* for double counting.[25] These data have been analysed in numerous previous[26] publications. None of these publications, however, has attempted to study the question of educational expenditure from the angle defined in the present article.

Enrolment

In a context of relative stability in the potential population for primary education, there was throughout the nineteenth century a marked increase in the number of students enrolled in schools. This phenomenon has been observed in all European countries.[27] During the period 1850–1876, there was a dramatic increase in the number of pupils enrolled in primary schools. In 1850 3,321,423 pupils were enrolled in France, that is 51.5 per cent of the population aged 5–15; in 1867, 4,515,967 pupils were enrolled (i.e. 68.6 per cent) and their number rose to 4,716,935 in 1876 (i.e. 73.6 per cent of the age group).

The change in enrolment is even more impressive if one refers to the 1837 pupil census, the first complete census available, when only 2,690,035 schoolchildren attended; the increase over forty years was 75 per cent (Figure 1). By the 1880s, more than 5.5 million children were enrolled in nursery, primary, and upper primary

23 Education expenditure represents the total final expenditure by funders on teaching activities, the organisation of the school system, and activities ancillary to school attendance. Expenditure may be public (financed by municipalities, departments, the State and other public administrations) or private (financed by households).

24 It is plausible to infer that the costs before 1880 were underestimated, perhaps even more so before 1850. Indeed, the salaries of teachers in religious and private schools are probably only partially included in the accounts. In making this inference, we are also aware that "the most beautiful of statistics" can only give what it has. The general account of the finance administration and the ministers' accounts on which we have worked are obviously not immune to occasional omissions. Nevertheless, this does not change the long-term dynamics, nor the breaks that we obtain and compare to legislative changes and innovations.

25 These are possible errors related to the work of recording and processing the accounts: arithmetical errors, imputation errors, non-exhaustiveness and double recording. The analysis of historical archives, in this case the in-depth study of the General Account of the Administration of Finance in the nineteenth century, occasionally reveals poor accounting organisation and, more often, human error through input errors.

26 For example, Diebolt (2000a), 517–38; Diebolt, Jaoul, and San Martino (2005), 471–497; Théret (1991), 1335–74; Sandrine Michel and Delphine Vallade, "Une Analyse de long terme des dépenses sociales," *Revue de la régulation. Capitalisme, institutions, pouvoirs* 1, (2007); Stéphane Zuber, Antoine Bommier, Jérôme Bourdieu, and Akiko Suwa-Eisenmann, "Le développement des transferts publics d'éducation et d'assurance vieillesse par génération en France: 1850–2000," *Économie & prévision* 4, no. 180–181 (2007), 1–17.

27 Peter Flora, *State, Economy and Society in Western Europe 1815–1975: A Data Handbook in Two Volumes* (London: MacMillan Press, 1983).

schools.[28] At the same time, the number of children who could not read or write declined from 6.95 per cent of the population enrolled in primary education in 1834 to less than 1 per cent in the mid-1870s, and to 0.13 per cent in 1912. The period under study is characterised by an almost constant increase in the number of children enrolled in school. It is highly probable that this increase in school enrolment is linked both to a change in the attitude of families, who increasingly entrusted their children to the school institution, and to the sharp increase in the material and human resources made available to primary education.

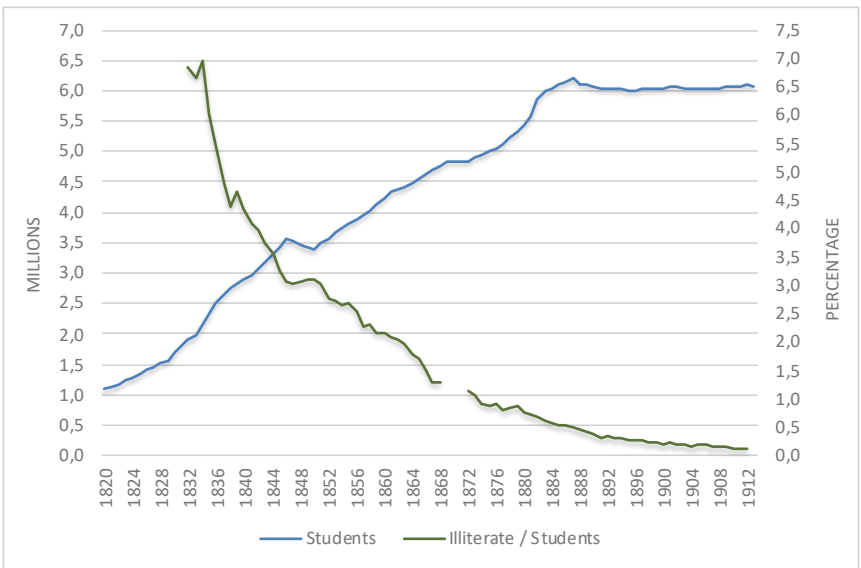

Figure 1. Number of children in school (millions) and share of illiterates (%), 1820–1913
Source: Authors' calculations based on sources cited in the article

If we refer to the graph, the Ferry laws seem to have had very little effect on enrolment rates. The graph does not seem to show any quantitative break in the rate of enrolment but, on the contrary, seems to mark the completion of a process of mass enrolment. Numerous authors have noted the early development of French schooling and the scale of the achievements made even before the Ferry laws were introduced.[29] The question of the effect of the Ferry laws is not a recent one and continues to stimulate debate. Long over-valued for political reasons, the quantitative effects of these laws have been questioned successively, notably by Furet and Ozouf; Théret;

28 In 1880, there were 621,177 pupils (girls and boys) enrolled in nursery schools (public and private) and 5,049,363 pupils (girls and boys) enrolled in primary and upper primary schools (public and private). This makes a total of 5,670,540 pupils enrolled. Authors' calculations based on Briand, Chapoulie, Huguet, Luc, and Prost (1987).

29 For example, Maurice Gontard, *L'Enseignement Primaire en France de la Révolution à la loi Guizot* (1789–1833) (Paris, Les Belles Lettres, 1959); Antoine Prost, *Histoire de l'enseignement en France 1800–1967* (Paris, Armand Colin, 1968); Pierre Chevalier, Bernard Grosperrin, and Jean Maillet, *L'Enseignement Français de la Révolution à nos Jours*, (Grenoble: Université des Sciences Sociales de Grenoble, Série Histoire Institutionnelle, 1968); Françoise Mayeur, *Histoire Générale de l'Enseignement et de l'éducation en France*, Tome 3: De la Révolution à l'École (1789–1930) (Paris: G.-V. Labat, 1981).

Diebolt, Jaoul, Martino, and more recently Chapoulie.[30]

Funding for primary education

The resources made available for primary education progressed rapidly over the period studied. In order to analyse the financing of primary education, it is first necessary to recall its operation and the main changes that occurred during the period under review. The operating costs are essentially represented by the commune's provision of suitable accommodation and a salary for the teacher (as established by the laws of 28 June 1833 and 15 March 1850). In fact, the teachers had to confine with the housing provided by the commune and a fee paid by the parents.

The Guizot law of 28 June 1833 made it compulsory for all municipalities with more than 500 inhabitants to maintain a school and it provided some regulation by determining a financing procedure and a minimum fixed salary for teachers of 200 francs.[31] Thus, the municipalities without sufficient ordinary resources had to vote three additional centimes to the taxes on land, individuals and property. The departments also had to mitigate the possible insufficiency of ordinary communal resources by voting to add two extra centimes on the same taxes. If the communal and departmental resources were insufficient, the State had to contribute to the fixed salaries of primary school teachers.

In fact, when the Falloux law was introduced in 1850, most of the burden fell directly on the municipalities. Thus, out of a total cost of 3.32 million francs (expressed in constant francs), the municipalities contributed 1.1 million francs, the families 796,000 francs, the *départements* 557,000 francs, the State 476,000 francs, and other public administrations 397,000 francs (see Figures 2 and 3).[32] Because of this direct or indirect financing by parents, the highest rates of school attendance were found in areas of rapid economic development and a certain wealth, both because of the need to have a workforce with some education and the obligation to finance the costs of this education. The Falloux law, which established freedom in secondary education, encouraged the growth of congregational or religion-based schools. It also contributed to the growth of girls' schooling by requiring municipalities with more than 800 inhabitants to maintain a girls' school.

30 François Furet and Jacques Ozouf, *Lire et écrire alphabétisation des Français de Calvin à Jules Ferry*, 2 volumes, (Paris: Éditions de Minuit, 1977); Théret (1991); Diebolt, Jaoul, and San Martino (2005), 471–97; Jean-Michel Chapoulie, *L'École d'État conquiert la France. Deux siècles de politique scolaire* (Rennes: Presses universitaires de Rennes, 2010).

31 Jérôme Louis, "L'école primaire pour tous? La loi Guizot du 28 juin 1833," in Enseignants et enseignements au cœur de la transmission des savoirs [online] (Paris: Éditions du Comité des travaux historiques et scientifiques, 2021), http://books.openedition.org/cths/14522.

32 The calculations in constant francs at 1913 prices were based on the methodology presented by Diebolt (1995), which is repeated in Carry (1999): "The choice of the price index poses [...] a major problem: should we choose an index closely linked to educational activity or, on the contrary, favour an index that is as broad as possible [...]. A weighting by wholesale prices would give a volume that is more representative of investment and equipment purchases, while a weighting by consumer prices would be more representative of changes in the volume of wages. [...] We finally chose a compromise by using, until 1913, a two-thirds weighting by consumer prices and the remaining third by wholesale prices. [...] The choice of this weighting is justified only by the fact that wages account for the largest part of educational expenditures." Diebolt (1995). For data, see Carry (1999).

Laws passed from 1867 onwards, and in particular the Duruy law (10 April 1867), greatly modified funding by enrolment. The Duruy law encouraged free education by giving the municipalities the option of levying an additional tax to finance it (article 8) and by supporting poor municipalities in the form of subsidies from the department or the State. Between 1863 and 1869, the overall budget for public education rose from 26 to 37 million francs, reflecting the importance of the policies pursued during this period in a period of overall price stability.[33]

The Republic's laws, (i.e. national legislation) of Ferry (16 June 1881 and 28 March 1882) and Goblet (30 October 1886) contributed to increase in the demand and supply of education and the growth of schooling. In addition to instituting free, secular public primary education and compulsory schooling from the ages of 6 to 13, the Ferry laws also regulated the methods of financing primary education by the municipalities, *départements* and the State, and provided a framework for teachers' salaries. Ferry insisted in particular on the role to be played by the school funds. In addition to the granting of scholarships, which had already been discussed in 1867, each commune was required to set up a school fund to provide financial assistance to pupils from needy families. The Duruy law had already opened up this possibility, which was transformed into an obligation by the Ferry law. The Goblet law specified the structure of primary education and its organisation into three distinct levels: nursery schools and kindergartens; elementary primary schools; and higher primary schools and complementary courses. It also followed on from the Ferry laws by excluding religious personnel from public education. The law of 19 July 1889 on primary education dealt with the distribution of ordinary educational expenses between the State, the *départements* and the municipalities, and in particular made the salaries of teachers the responsibility of the State.

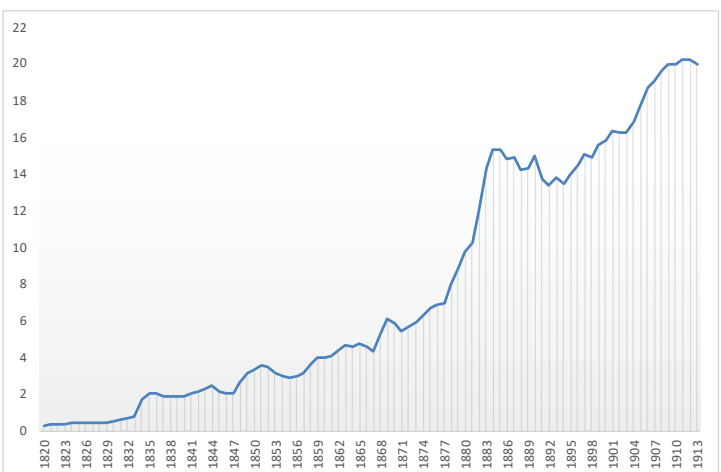

Figure 2. Financing of primary education, 1820–1913 (millions of constant francs)
Source: Authors' calculations based on sources cited in the article
Note: Expenditure on education corresponds to the total final expenditure by public financers (municipalities, départements, State, other public administrations) and private households.

33 Jean-Charles Geslot and Victor Duruy, *Historien et ministre (1811–1894)* (Villeneuve d'Ascq: Presses universitaires du Septentrion, 2009).

One of the objectives of the Third Republic was to make school accessible to all. In addition to the objectives of training and educating the population, the Republican laws aimed to transmit Republican ideals and values and to reduce the influence of the Church (an objective later reinforced by the anti-clerical laws of 1904 and 1905). The massification of access to education was accompanied by a reorganisation of the methods and means of financing and a reallocation of expenditure in parallel with the introduction of the laws. The priority given to primary education in the nineteenth century thus transformed its financing both in volume (Figure 2) and in structure (Figure 3).

The very significant growth in the resources made available to primary education was naturally accompanied by a very sharp increase in operating costs, which increased by a factor of 2.7 in the space of 20 years (i.e. an average annual rate of just under 5 per cent). The operating costs of primary education were financed mainly by the municipalities and households, but also by the State and the *départements*, and to a much lesser degree by donations and legacies. This funding changed significantly over the period 1820–1913 as shown in Figure 3.

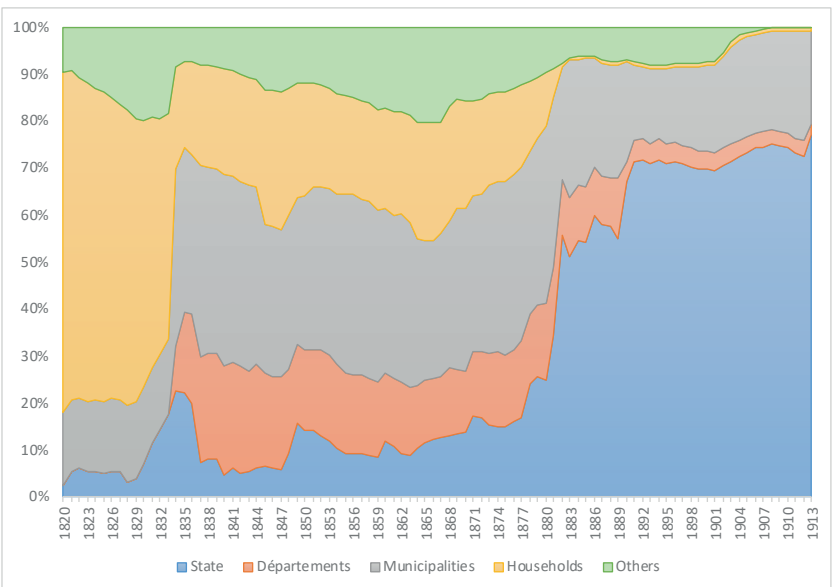

Figure 3. Structure of primary education funding, 1820–1913 (in percent)
Source: Authors' calculations based on sources cited in the article

Several shocks can be observed in this graphic presentation. From 1877 onwards, there was a very steep and rapid increase in state funding and participation. The increase in public investment occurred in the period preceding the implementation of the Ferry laws. 1880 saw a sharp and drastic drop in household funding; 1889 saw a similar drop in funding for the *départements* and municipalities, most likely due to teachers gaining the status of civil servants. The 1890s were at the same time characterised by a steady increase in funding from the municipalities and the State.

While recent historiography has tended, on the margins, to acknowledge the quantitative effect of the Ferry laws (in the wake of Prost's work[34]), it tends to highlight the extent of the qualitative effects of these laws, in particular through the transfer to the State of the effort previously imposed on the local authorities and the growth in educational expenditure financed by the latter.[35]

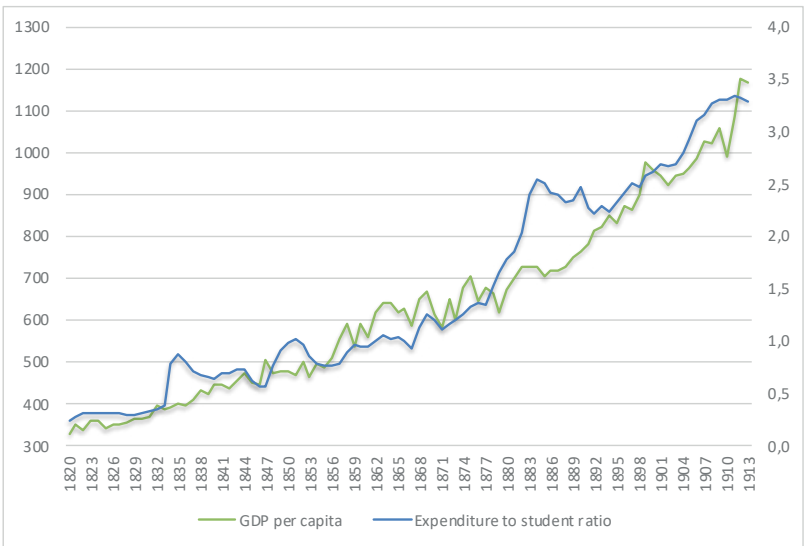

Figure 4. GDP per capita and expenditure per pupil, 1820–1913
Source: Authors' calculations based on sources cited in the article
Note: GDP per capita in millions of new constant francs (left axis)

In parallel with the increase in educational expenditure, France's wealth also increased steadily from 329 million francs per capita in 1820 to 1,167 million francs per capita at the beginning of the First World War (Figure 4). Public expenditure was increasing much faster than the number of pupils enrolled. This growth in French wealth, combined with a growth in educational expenditure and enrolment, raises the question of the impact of economic growth on schooling.

From a purely statistical point of view, the number of pupils enrolled in school is significantly and positively correlated with public expenditure, more specifically with municipal expenditure (Table 1). In concrete terms, this means that when the expenditure on primary education financed by the municipalities' increases, the number of pupils enrolled also increases. Similarly, GDP per capita is significantly correlated with public spending, this time mainly with government spending.

34 Prost (1968).

35 Théret (1991).

Table 1. Correlations between enrolment, GDP per capita and expenditure on primary education

	Expenses					
	Total	(b) State	(c) Départements	(d) Municipalities	(e) Admin Pub	(f) Households
Pupils in school	0.89	0.77	0.71	0.91	0.66	-0.09
GDP per capita	0.96	0.92	0.42	0.89	0.37	-0.28

Note: The correlation coefficient measures the direction and strength of a linear relationship between two variables. It ranges from -1 (strong negative linear relationship) to 1 (strong positive linear relationship). Between -0.5 and 0.5, the relationship is weak.

Breakpoints in primary education and schooling expenditure

With reference to statistical, institutional and legal benchmarks, our approach to the detection of possible breaks in the series aims to show that rare events and crises have varying effects on the time series of the expenditure on primary education in France. The analysis of atypical points (or *outliers*) makes it possible to confirm the existence of changes and of breakpoints that do not appear either graphically or in the descriptive statistics.

Outlier Detection Method

The *outlier* methodology consists in detecting atypical points affecting the evolution of a series.[36] Some breakpoints, on the one hand, may appear graphically; in this case, the application of the method will confirm or deny a graphical intuition. But on the other hand, other breakpoints, not visible graphically, may prove significant. The challenge of this new method is to identify these points, their possible causes and their effect on the series. We consider that an observation is exceptional when its value (positive or negative) is very high and when its frequency is low. Although subjective from a literal point of view, this definition allows us to classify these values into two categories: as rare, isolated events, characterised by a value deviating from the mean by more than three standard deviations; or as extreme, clustered events, characterised by a value deviating from the series mean by two to three standard deviations. In this work, we are interested exclusively in rare events—or atypical values.

The literature identifies four categories of atypical points: IO (Innovative outliers), AO (*Additive outliers*), TC (*Temporary changes*) and LS (*Level shifts*). The first two can be considered temporary changes, the remaining two structural changes. If the IO is seen as a temporary change that can be assimilated to "noise", the AO represents a temporary exogenous change. Although both reflect structural changes, the TS is considered temporary whereas the LS is considered permanent. In this work, we are more specifically interested in *outliers* of types AO, TC and LS, which are more suitable for historical analysis. They can be schematised as shown in Figure 5. An AO is generally considered to affect only one observation in the series but not its future values. A TC causes a rapid change in the level of the series, which quickly

36 Olivier Darné, Claude Diebolt, "Unit Roots and Infrequent Large Shocks: New International Evidence on Output," *Journal of Monetary Economics* 51, no. 7 (2004), 1449–65.

returns to its evolutionary path. Finally, an LS affects the level of the whole series from a certain point and in a definitive way.

These observations that something is unusual may be related to errors in recording or data entry. They can also be associated with specific climatic, natural, political, economic or financial events. The analysis of atypical points thus makes it possible to associate atypical observations with educational, economic, political or financial events, and so on. The economic, financial and/or political events that affect the observations do not all behave in the same way. These events can have various effects on the time series: one-off, permanent or enduring. For example, when we look at the evolution of the proportion of girls in higher education, we expect a significant influence of the Veil law on abortion or of the decrees implementing the Haby law, which made co-education in public schools compulsory. Surprisingly, these laws had only a temporary effect, whereas the Berthoin reform of 1959[37] and the Fouchet-Capelle reform of August 1963[38] have had a permanent effect on the enrolment of girls in higher education.[39]

First, we tested the existence of breakpoints in the time series of primary education expenditures, as financed by the State, départements, municipalities, households, and other public administration expenditures.[40] In a second step, we determined the breakpoints for the series related to schooling and GDP per capita.

37 Ordinance of 6 January 1959 on compulsory education up to the age of 16; decree of 6 January 1959 on the reform of public education.

38 Decree of 3 August 1963 on the pedagogical organisation of secondary schools.

39 Magali Jaoul-Grammare, "L'évolution des inégalités dans l'enseignement supérieur universitaire français. L'influence des réformes institutionnelles et des ruptures économiques," *Économies et Sociétés* 7, no. 46 (2013), 1105–30.

40 General government is divided into three categories: central government (the State, various central government bodies controlled by the State), local government (local authorities, groups of municipalities with their own tax system and "various local government bodies") and other general government entities. This last group includes social security bodies, unemployment insurance and other similar bodies.

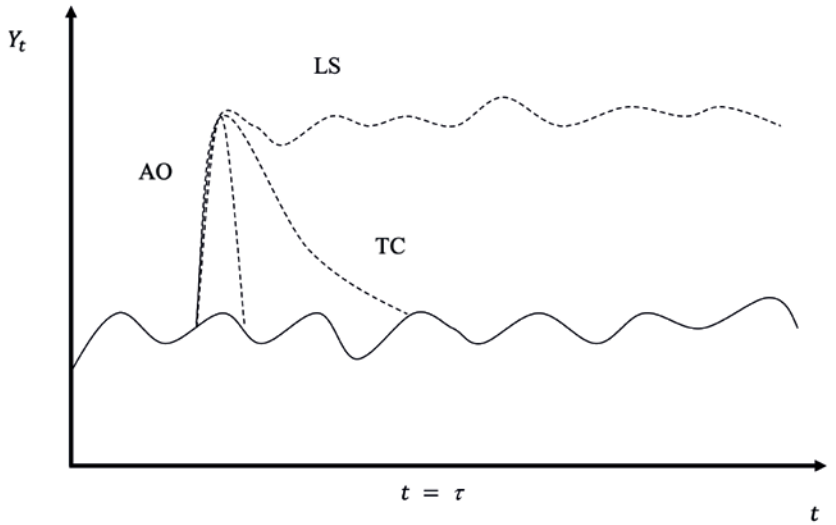

Figure 5. The various types of atypical points

The breakpoints

Until now, historiography has focused mainly on the institutional breaks (regulatory and legal) specific to the dynamics of the French education system. Our ambition is to extend the work of the founding authors and, in so doing, to highlight the quantitative ruptures generated by these institutional changes (*ex post*) or fundamentally causing them (*ex ante*) in the long term. We therefore focus mainly on the TC and LS breakpoints, both of which can be considered structural changes.

Breakpoints in spending

The detection of *outliers* in the various education expenditures for the primary level thus highlights permanent breakpoints in the expenditure structure. The analysis confirms several graphical findings discussed in part 1. It brings out new ones and questions certain others.

Analysis of the breakpoints reveals the importance of the Ferry Laws (1881 and 1882) and the permanent effect that they had on the financing of primary education in France. The Ferry laws mark breakpoints in each of the series studied.[41] Our results confirm Théret's observation that the State was replacing households and municipalities in the financing of primary education (Table 2).[42] It should be noted, however, that it was mainly the laws of 1886 and 1889 that marked permanent breaks in the transfer of primary education funding from the municipalities to the State, while the Ferry laws had only a one-off negative effect on this type of funding.

The Goblet law of 1886 complemented the Ferry laws by entrusting teaching in public schools to exclusively secular staff, thus replacing the religious teachers and reinforcing State intervention. In terms of figures, the implementation of this law led

41 The purpose of the Acts of 2 August 1881 and 20 March 1883 was to increase the endowment funds of the Primary Schools Fund in the form of expenditure from State funds, subsidies and advances from the State to the *départements* and municipalities.

42 Théret (1991).

to a permanent reduction in the weight of primary education expenditure borne by the *départements* and municipalities, which had hitherto contributed to the financing of this type of education, and increased expenditure on the part of the State.

Table 2. Breakpoints in primary education funding

Year	Type	Value (units of standard deviation)	Duration of Effect		Event
Total Expenditures					
1882	LS	3,89	Permanent	(+)	Ferry Law 1881
1883	LS	5,65	Permanent	(+)	Ferry Law 1882
1891	LS	-3,83	Permanent	(–)	Act of 1889
Status					
1878	LS	5,26	Permanent	(+)	Act of 1878
1881	LS	7,02	Permanent	(+)	Ferry Law 1881
1882	LS	17,31	Permanent	(+)	Ferry Law 1882
1884	TC	5,57	Temporary	(+)	Act of 1883
1886	TC	5,16	Temporary	(+)	Goblet Law 1886
1890	LS	21,6	Permanent	(+)	Act of 1889
1906	LS	6,75	Permanent	(+)	Laws of 1904 and 1905
Départements					
1845	LS	-4,35	Permanent	(–)	//
1868	LS	4,7	Permanent	(+)	Duruy Law 1867
1880	AO	5,43	Ponctual	(+)	Bert Law of 1879
1883	TC	11,05	Temporary	(+)	Act of 1883
1886	LS	-8,53	Permanent	(–)	Goblet Law 1886
1890	LS	-27,37	Permanent	(–)	Act of 1889
Municipalities					
1882	AO	-11,87	Ponctual	(–)	Ferry Laws 1881-1882
1886	LS	-5,73	Permanent	(–)	Goblet Law 1886
1891	LS	-6,64	Permanent	(–)	Act of 1889
Households					
1845	TC	5,05	Temporary	(+)	//
1848	LS	8,03	Permanent	(+)	Second Republic
1863	LS	5,62	Permanent	(+)	Order of June 1862
1867	AO	-13,26	Ponctual	(–)	Duruy Law
1871	TC	-11,9	Temporary	(–)	War of 1870
1881	LS	-18,3	Permanent	(–)	Ferry Law 1881
1882	LS	-21,92	Permanent	(–)	Ferry Law 1882

Like the Ferry laws, the Act of 19 July 1889 marked a breakthrough in the financing of public education. This law dealt directly with the ordinary expenses of public primary education and the salaries of its staff. Under this law, the ordinary expenses of public primary education were to be borne by the State, the *départements* and the municipalities. It stipulated that most of the expense, including staff salaries, was to be now borne by the State, thus relieving municipalities of this burden. Analysis of the breakpoints by type of funder confirms, as a permanent positive effect, the transfer to the State of spending not only from the municipalities, as previously mentioned, but also from the *départements* (both permanent negative effects).[43] This transfer reflects the political will to reduce inequalities at the national level through the centralisation of education expenditure at the national level.

Beyond the school laws of the 1880s, other laws and events marked permanent breakpoints in the series of expenditures on public education. Among these breaks, the Duruy law of 1867 (which allowed for the generalisation of schooling in France, lowered the threshold for opening girls' schools to municipalities of 500 inhabitants and accelerated the expansion of girls' education) accompanied the transfer of primary education funding from households to the *départements*.

The law of 1 June 1878, which concerned the resources allocated to the construction of school buildings and the school construction fund, also marked a permanent break in State expenditure. This law, reserved 60 million francs to the Minister of Public Instruction. The law of 20 March 1883 subsidising municipalities from State funds supplemented the laws of 1 June 1878 and 2 August 1881, which allocated subsidies to primary schools. In addition, the law granted an extraordinary credit of more than 13 million francs to the funding for primary schools, junior high schools and high schools (article 3) and authorised the departments to contribute to the advances in order to provide the municipalities with the subsidies allocated to them from the departmental budget for the construction of their school buildings (article 5). The 1883 law thus helps to account for the temporary shocks observed in *département* and State spending in 1883 and 1884.

The anti-clerical laws of 7 July 1904 (the Combes law) and 9 December 1905 (on the separation of Church and State) also marked a permanent break in the series of State expenditures. The Combes law, which prohibited teaching by religious denominations, required the reorganisation of denominational education by the secular clergy and profoundly modified the school map while reinforcing the secularisation of education in France.[44]

While some breaks can be easily interpreted in the light of different laws that came into force during the nineteenth century, other permanent breaks detected in the

43 The permanent negative effect of the 1889 law on total expenditure shows the usefulness of analysing the series in a disaggregated manner, i.e. by type of funder. The effect observed on total expenditure reflects the negative effect of the law on the expenditure of the *départements* and municipalities and conceals the positive effects of the law on State expenditure.

44 Several temporary and one-time breaks also affect the primary education expenditure series. Among these breaks, the Bert law of August 9, 1879, had a one-time effect on departmental expenditures. The law stipulated that all *départements* should have a teacher training college for men and a teacher training college for women. The law stipulates that the school expenses of the primary teacher training colleges should be met by special sums allocated to the primary education service. The Franco-Prussian war of 1870–1871 marked a temporary negative break in household expenditure on primary education.

series are more difficult to explain. For example, the permanent negative break observed in 1845 in *département* spending cannot be linked to the implementation of a particular law at the time in question. However, it does confirm the existence of a budgetary change linked to a transfer of primary education expenditure from the *départements* to households, for which we have no relevant explanatory scheme at present. This break may also be inherent in the construction of the Carry[45] series.

Interpreting the permanent positive break observed in household spending in 1863 is also more complex. A possible explanation, and a line of thought, can be established with the application of the June 1862 decree on school libraries, under which families provided for the loan or rental of a school's books.[46]

Breakpoints in schooling

A more surprising result in the light of current historiography, however, is the positive and permanent effect of the Ferry laws in themselves on primary schooling (Table 3). In fact, this result refines our knowledge of the schooling process in France. We support the hypothesis that, before the Ferry laws, the enactment of various laws led to a steady increase, with an evolutionary dimension, in primary school enrolment. Yet it was the Ferry laws alone that represented a major breakthrough, in particular by promoting public education, and more particularly the public education of girls.[47] It is the purpose of our most recent research on the feminisation of primary education to provide evidence for this intuition, the in-depth quantitative analysis of which remains, to our knowledge, still unfortunately neglected.[48]

Table 3. Breakpoints in primary schooling

Year	Type	Value (units of standard deviation)	Duration of Effect		Event
Number of students					
1882	LS	5,23	Permanent	(+)	Ferry Laws 1881–1882

Note: The *outlier* analysis on the pupil to population ratio reveals the same permanent outlier: 1882 (LS).

Breakpoints in economic growth

The analysis of breakpoints in GDP per capita does not reveal any break over the period studied. The break observed in the financing of schooling is therefore not linked to

45 Carry (1999).

46 Indeed, the establishment of these school libraries relied largely on additional funding from families: "I have attached to the formation of the school library the provision of textbooks for all pupils. A voluntary contribution, or rather a subscription taken out by well-to-do families, will not only provide the children of these families with the books they need to be able to usefully follow the exercises in class, but will also make it possible to put, on loan, works of the same kind into the hands of the children received free of charge in the schools … The Departmental Council […] will fix this contribution each year […] His Excellency the Minister of Finance has been kind enough to authorize the municipal collectors to collect it at the same time and in the same form as the school fees […]." (Circular from the Minister of Public Education, M. Rouland, 24 June 1862).

47 Françoise Mayeur noted in particular in her book (1981): "[…] the work of Jules Ferry was being illuminated in a complementary light: in short, to 'plug the holes in schooling' that had already been established. Girls' schools were opened where they were lacking, precisely in the West and South-West, and the system of hamlet schools was extended." Mayeur (1981).

48 Claude Diebolt, Magali Jaoul-Grammare, Faustine Perrin, "Retour sur les fondamentaux de la féminisation de l'éducation primaire en France," *Miméo*, February (2020), 30 pages.

any break in economic growth. This point will be analysed in greater detail in our third part, which looks at the causal relations between the financing of primary education and schooling, on the one hand, and schooling and economic growth, on the other.

The various analyses of turning points carried out in this section reveal the importance, both quantitative and qualitative, of the role played by the Ferry laws in the financing of primary education. The Ferry laws mark the transition from financing primary education by the municipalities to the public financing of education at all levels by the laws. Our cliometric results indicate the importance of the role played by the Republic's legislation and suggest that the Ferry laws did play a central role, both in the structure and centralisation of primary education funding and in the enrolment of pupils in primary education.[49]

Primary education expenditure, enrolment and economic growth

The evolution of the various indicators shows an upward trend in GDP per capita, in the number of pupils enrolled and in education expenditure. This parallel evolution of the series suggests common correlations, mere graphical intuition of which is not sufficient to confirm the existence of a causal influence from either on the other. The analysis of breakpoints is completed by an analysis in terms of causality with a view to studying the relationships between variables.

Causality analysis

In general, a statistical causal relationship is deemed to exist between two variables if the predictability of one improves when information about the other is included in the analysis. In statistical terms, it is essential to distinguish correlation from causation. The main difference between correlation and causation here is temporality. Causality is based on the fundamental axiom that *"the past and present can cause the future, but the future cannot cause the past."*[50] It is the temporal order that makes it possible to interpret dependence as a causal relationship.[51] Thus, correlation is a symmetrical concept which is silent about the direction of influence, whereas causal direction is established along the *"arrow of time."*[52]

Granger causality analysis is part of the framework of non-structural VAR (*Vector AutoRegressive*) models, to our knowledge introduced into historical research by Eckstein, Schultz and Wolpin.[53] Unlike a non-vector model, which describes the evolution of a single variable in the form of an equation, vector models are composed of several equations. Each equation describes the evolution of a variable according to

49 The analysis of the breakpoints does not, however, reveal any effect of the Guizot law of 1833, in contradiction of the graphic observations and the existing literature on the subject.

50 Clive W.J. Granger, "Tests for Causation: A Personal Viewpoint," *Journal of Economic Dynamics and Control* 2 (1980), 330.

51 Guido M. Kuersteiner, "Granger-Sims Causality," in *Macroeconometrics and Time Series Analysis*, ed. Steven N. Durlauf, Lawrence E. Blume, The New Palgrave Economics Collection, (London: Palgrave Macmillan, 2010).

52 Granger (1980), 334.

53 Zvi Eckstein, Theodore P. Schultz, Kenneth I. Wolpin, "Short-Run Fluctuations in Fertility and Mortality in Pre-Industrial Sweden," *European Economic Review* 26, no. 3 (1984), 295, "The methodology of vector auto-regression appears useful for studying historical series on climatic, economic and demographic variables where we do not yet have a sufficient theoretical foundation for specifying and estimating structural models."

its past values and the past values of the other variables in the system.[54] Thus, all the variables are both exogenous and endogenous, which makes it possible to consider all the possible relationships between the variables without any preconceived notion of their possible endogeneity. The use of these models thus enables us to detach ourselves from those theoretical models, which postulate the endogeneity of one or other of the variables. Furthermore, taking into account a number of time lags allows us to analyse the temporality with which the relationships between the variables take place; in other words, when one variable affects another, how long does it take? The analysis itself can take two non-exclusive directions: the study of causal relationships (short-term relationships) and the study of the dynamics of the model.

Dynamic analysis, for its part, consists of studying the effects of variations in one variable on the variations in the other variable. To do this, crises are simulated via the residual elements of each variable in order to observe how (impulse response function) and in what proportion (variance decomposition) the other variables in the system are affected.

First, we tested the Granger causal relationships between the different primary education expenditure series and schooling. Next, we went on to study the causal relationships between: (*i*) GDP per capita and expenditure; and (*ii*) GDP per capita and enrolment, so as to be able to assess whether the effects we observed stemmed from political will, economic necessity or some need felt by the populations, independently of the wealth created.

Causal relationships

The objective of causality analysis is to determine the direction and sign of a causal relationship. The first step is to assess whether it is the increase in expenditure that led to an increase in enrolment or whether the action took the opposite direction. Second, we assessed how far the level of national wealth, as measured by GDP per capita, caused a change in primary education expenditures and in the number of children enrolled in school. The literature suggests that the relationship between human capital and economic growth is complex and reciprocal.[55] As a premise for

54 See Magali Jaoul-Grammare, Faustine Perrin, "A Gendered Approach of Economic and Demographic Interactions: Evidence from France," *Revue d'Économie Politique* 127, no. 6 (2017), 1083–108, for a detailed presentation of the methodology.

55 The process of human capital accumulation is a key ingredient in the growth process that has enabled economies to move from a long period of stagnation to a state of sustained economic growth; see Oded Galor, David Weil, "Population, Technology, and Growth: From Malthusian Stagnation to the Demographic Transition and Beyond," American Economic Review 90, no. 4 (2000), 806–28; Oded Galor, Omer Moav, David Vollrath, "Inequality in Landownership, the Emergence of Human-Capital Promoting Institutions, and the Great Divergence," *Review of Economic Studies*, 76, no. 1 (2009), 143–79; Claude Diebolt, Audrey-Rose Menard, Faustine Perrin, "Behind the fertility-education nexus: What triggered the French development process?" *European Review of Economic History* 21, no. 4 (2017), 357–92; Claude Diebolt, Faustine Perrin, "From Stagnation to Sustained Growth: The Role of Female Empowerment," *American Economic Review* 103, no. 3 (2013), 545–49; Claude Diebolt, Faustine Perrin, "A Cliometric Model of Unified Growth. Family Organization and Economic Growth in the Long Run of History," in *Cliometrics of the Family: Global Patterns and Their Impact on Diverging Development*, ed. C. Diebolt, S. Carmichael, S. Dilli, A. Rijpma, C. Störmer Studies in Economic History (Cham: Springer, 2019a), 7–31, Claude Diebolt, Faustine Perrin, "Cliometrics of Growth," in *Handbook of Cliometrics*, ed. C. Diebolt and M. Haupert (Berlin: Springer Publishing, 2019b), 403–21; Claude Diebolt, Tapas Mishra, Faustine Perrin, "Gender Empowerment as an Enforcer of Individuals' Choice between Education and Fertility: Evidence from 19th Century France," *Journal of Economic Behavior and Organization*, 188 (August 2021), 408–38; Faustine Perrin, "On the Origins of the Demographic Transition. Rethinking the European Marriage Pattern," *Cliometrica*, in press (2021).

our analysis, we assume that schooling causes growth and, in turn, growth causes schooling.[56]

Expenditures and enrolment

Beyond a change in the funding structure, the various expenditures affected the number of children enrolled in primary school (referred to here as 'enrolment'), as shown by the results of the causal analysis presented in Table 4. Our results demonstrate that any increase in municipal, departmental, or state spending favoured the development of enrolment. When a change occurred, the response time in the number of pupils enrolled depended on the type of expenditure. While a change in state expenditure led to an immediate response in enrolment, the time lag for decentralised expenditure at the commune level was greater. Thus, it took three years for municipalities to notice an increase in enrolment.

We also note the existence of a retroactive loop between *département* expenditure and schooling: an increase in *département* expenditure led to an immediate increase in the number of pupils, which in turn led to an increase in departmental expenditure. In this case, the reaction took place within three years.[57]

Unlike public expenditure (State, *départements*, municipalities) which as ever caused an increase in schooling, the expenditure borne by households created a burden for them, which tended to slow down schooling. The reaction of households to an increase in the burden of primary education expenditure led to an immediate reduction in schooling.

Table 4. Causal relationships between type of expenditure and schooling

	Number of pupils	**Response time** *	**Percentage of dependence** **
States	Expenditure $\xrightarrow{+}$ Number of pupils	Immediate	20%
Département	Expenditure $\xrightarrow{+}$ Number of pupils	Immediate	Δ pupils = 5% Δ expenses
	Number of pupils $\xrightarrow{+}$ Expenditure	3 years	Δ expenses = 10% Δ pupils
Municipalities	Expenditure $\xrightarrow{+}$ Number of pupils	3 years	12%
Households	Expenditure $\xrightarrow{-}$ Number of pupils	Immediate	16%

Note: * Reaction time of one variable to a change in the other variable; ** Percentage change in one variable due to changes in the other variable. The results of the econometric analyses are available in a separate appendix upon request.

Economic growth and the spread of primary education

Analysis of the causal relationships between GDP per capita and the various types of primary education financing rather surprisingly reveals no causal relationship.

56 Claude Diebolt, "Croissance économique et éducation," in *Dictionnaire de l'éducation* , ed. A.Van Zanten (Paris: Presses Universitaires de France, Collection "Quadrige," 2008), 89–93.

57 Further analysis of the number of illiterates, on the other hand, shows no change attributable to increased funding for primary education.

Furthermore, no causal relationship is discernible between GDP per capita and the number of pupils enrolled in primary education.

As mentioned at the beginning of this article, the theoretical literature has long been interested in the role of human capital as an engine of economic growth, in particular by insisting on the role played by public spending.[58] As regards the empirical analyses, they highlight mixed results: some of them find the impact of education spending on economic growth to be weak.[59] Others highlight the central role played by human capital and the centralisation of primary education in the process of economic growth. We are thinking here of the case of Italy, as well as France.[60] At this stage of our knowledge, we believe that the differences observed and the resulting divergence of conclusions could be explained by different contexts and/or scales of analysis.

We know that the causal relationship between economic growth and public spending on education can be affected by many factors and by the context in which these events take place.[61] It may also be the case that primary education alone is insufficient to generate growth and that we may find clearer results using secondary and tertiary education series. It would also be interesting to study the question of educational finance over other periods, with an analysis of government spending on education in the twentieth century.[62]

In fact, our results show two things. On the one hand, they show that it is public expenditure on education that causes the increase in enrolment, and that enrolment may also cause the need for increased public expenditure on education in the *départements*. On the other, they show that the methods of financing, as measured by GDP per capita, do not cause an increase in primary school expenditure, nor do they cause an increase in enrolment. The combination of these results leads us to defend the hypothesis that the increase in investment in primary education is above all the result of a political will, to allow all French children, both girls and boys, to have access to public primary education. This clearly stated objective of the Third Republic of making school accessible to all, in particular with the intention of transmitting Republican ideals and values and reducing the influence of the Church, is confirmed by our cliometric analysis.

58 Lucas (1988), 3–42; Robert J. Barro, "Government Spending in a Simple Model of Endogenous Growth," *Journal of Political Economy*, 98, no. 5 (1990), 103–25; David de la Croix and Matthias Doepke, "Inequality and Growth: Why Differential Fertility Matters," *American Economic Review*, 93, no. 4 (2003), 1091–113.

59 Examples include David A. Aschauer, "Public Investment and Productivity Growth in the Group of Seven," *Economic Perspectives* 13 (1989), 17–25; Robert J. Barro, "Economic Growth in a Cross-Section of Countries," *Quarterly Journal of Economics* 106, no. 2 (1991), 407–43; William Easterly and Sergio Rebelo, "Fiscal Policy and Economic Growth," *Journal of Monetary Economics* 32, no. 3 (1993), 417–58; S. Deverajan, V. Swaroop, and H.F. Zou, "The Composition of Public Expenditure and Economic Growth," *Journal of Monetary Economics* 37, no. 2 (1996), 313–44; Kevin Sylwester, "Income Inequality, Education Expenditures and Growth," *Journal of Development Economics* 63, no. 2 (2000), 379–98; David de la Croix and Catherine Delavallade, "Growth, Public Investment and Corruption with Failing Institutions," *Economics of Governance* 10, no. 3 (2009), 187–219.

60 Adrien Montalbo, "Primary Education and Economic growth in Nineteenth-Century France," *Cliometrica*, in press (2021).

61 See Lant Pritchett, "Mind your P's and Q's: The Cost of Public Investment is not the Value of Public Capital," *Policy Research Working Paper*, no. 1660 (1997).

62 Clémence Cardon-Quint, "State Education Budgets in the 20th Century: Literature Review and Research Perspectives on the French Case," *Rivista di Storia Economica* 2 (2020), 175–221.

The absence of a stable long-term relationship, highlighted by the cointegration tests between enrolment, education financing and economic growth, reflects the importance of the historical and economic context in the evolution of the series, the context generating the events conditioning the evolution of economic growth.[63]

Conclusion

In France, mass schooling is a race in stages. The detection of breakpoints in the financing of primary education clearly points to the importance of the various laws enacted in the course of the nineteenth century. In summary, we can say that the democratisation of primary education was accompanied by a reorganisation of the system, of the modes and means of financing from private to public, together with a strengthening of the role of the State following the adoption of the 'great laws' of the 1880s.

With the introduction of these major laws, our causal analysis suggests that the State replaced households and municipalities in financing primary education. Moreover, in addition to a change in the funding structure, the various expenditures also affected enrolment rates. But the analysis also fails to reveal a causal relationship between GDP per capita and the number of pupils enrolled in primary education, and between GDP per capita and education expenditure. Our results thus suggest that mass schooling in France in the nineteenth century was more the result of a genuine political will than of the increased wealth available in the economy. Our future research will aim to validate or invalidate this result. Indeed, like Alfred Marshall, we believe that ... *it is not the effects of the most obvious causes, nor the causes of the most obvious effects, that usually matter most.* 'What is not seen' is often far more worthy of study than 'what is seen'.[64]

We have deliberately chosen to study the situation at the national level, in order to better understand the way in which formal institutions have allowed the process of massification to take hold. Although the Ferry laws had only a relatively limited effect on the process of mass schooling, they did have a profound effect on the structure of funding and on the reduction of inequalities, by reducing the burden of funding previously borne mainly by the municipalities and by centralising the expenditure at State level. Our results thus reveal a qualitative as well as quantitative effect of the Ferry laws. In so doing, they contribute to the state of knowledge by showing, from new evidence and a cliometric treatment of the field, the full complexity of the schooling process. Our work also points to the need for a renewed and deeper analysis of the role of feminisation. At the same time, our results stress the value of linking historical, theoretical and statistical analysis more firmly together, with the aim of producing advances in knowledge at the frontiers of a discipline and, in so doing, making progress in the common, interdisciplinary if not multidisciplinary knowledge of the structural and spatial dynamics of schooling in France.

The available statistics show the constant progress that was made during the nine-

63 Olivier Darné and Claude Diebolt, "Chocs temporaires et permanents dans le PIB de la France, du Royaume-Uni et des Etats-Unis," *Revue d'Economie Politique* 116, no. 1 (2006), 65–78.

64 "[…] ce ne sont pas les effets des causes les plus connues, ni les causes des effets les plus manifestes, qui ont d'ordinaire le plus d'importance." Ce que l'on ne voit pas "mérite souvent beaucoup plus d'être *étudié* que" ce que l'on voit." Alfred Marshall, *Principes d'économie politique*, Tome Premier (Paris: V. Giard & E. Brière, 1906), 136.

teenth century. Analysing the numerical information allows a better understanding of the general trends and the major efforts and improvements made by the French State during the century. However, there was great diversity at the regional level. As highlighted by Westberg in the case of Sweden, and more particularly Sundsvall, in the second half of the nineteenth century, there were local diversities and varying attitudes to the financing of primary education.[65] Understanding the determinants at the disaggregated level therefore becomes an urgent task for future research. Indeed, geographically speaking there were very different funding structures from one region to another. If we consider the geographical level of the *département*, we find extreme situations where the State's share could be less than 1 per cent or, in contrast, more than 50 per cent. In fact, there was often a kind of compensation between the percentages of the State and the *départements*, so that the *départements* receiving most of their funding from the State were among the least endowed by their departmental assembly. This raises such questions as "What were the 'leading' or dominant geographical areas in the nineteenth century in terms of funding for primary education?"; "Were disparities observed and maintained throughout the period studied?"; "On the contrary, was there a process of convergence and catching up during the nineteenth century?"

All these questions deserve to be studied in detail. Spatial analysis is, in fact, a valuable analytical tool for gaining a better understanding of the structural and spatial dynamics of the French *départements*. This is also what our future research will focus on.

Appendix 1—Atypical points

The methodological approach used in our article was developed by Olivier Darné and Claude Diebolt.[66]. It shows that rare events and shocks can have various effects on the time series studied.

Generally speaking, when economic history is concerned with the analysis of crises, two econometric methodologies are possible. Either, following the traditional approach, such shocks can be studied in terms of impulse response functions. In this case, the analysis is based on the estimation of a VAR model, and is essentially part of an analytical and forecasting approach, since the shocks considered are simulated and therefore fictitious. Or, following the example of the most current cliometric work, the shocks can be analysed in the form of atypical points or *outliers*. In this case, the analysis of shocks is part of an analytical and historical approach, since the shocks were historical events. Our research approach was in line with this second research approach. In other words, we used the outlier detection method.

How can we identify whether exceptional events are rare or extreme? In statistical theory, when an observation deviates significantly from its mean value or trend, it is considered exceptional. It is therefore defined by a particular, non-representative value, and the number of exceptional observations generally does not exceed 1 per cent of the total observations. However, the definition of these values based solely on

65 Johannes Westberg, *Funding the Rise of Mass Schooling: The Social, Economic and Cultural History of School Finance in Sweden, 1840–1900* (London: Palgrave Macmillan, 2017), 242 pages.

66 For the reader interested in other cliometric applications or a complete mathematical and statistical presentation of the *outlier* methodology, see Darné and Diebolt (2004), 1449–65.

their size and rarity is not operational. It is too vague and requires the prior establishment of size and frequency thresholds at which a value can qualify as exceptional.

In this article, after specifying the measurement scale and the reference period, we consider an observation to be exceptional when its value (positive or negative) is very high and its frequency is low. Although subjective from a literal point of view, this definition allows us to classify these values into two categories: rare events and extreme events. A rare event, also called an atypical value, an aberration or *outlier*, is distinguished from an extreme event by its frequency of occurrence. While extreme values appear in groups, atypical values are isolated from each other. Moreover, an atypical value is defined by a value clearly higher than three times the standard deviation of the series, whereas an extreme event represents only a value of two to three times the standard deviation of the series. In this article, we focus exclusively on atypical values.

How to detect atypical values? Rare or atypical observations, other than extreme ones, are defined as such in relation to a standard distribution or model. Let's assume a Gaussian (or even "normal") distribution: the bell curve. In this case, observations that are not compatible with an assumption of the normality of this distribution can be considered atypical values. But not all distributions are normal. When researchers work on a series of data, they will first try to describe the distribution of these data by means of a model, using two parameters, the skewness coefficient and the kurtosis coefficient. These coefficients tell us about the "shape" of the distribution curve, which may be skewed or flatter or sharper than a normal distribution. Atypical events are those that are not consistent with the distribution corresponding to these coefficients.

These atypical events fall into two groups. They may be related to errors in recording or data entry. They can also be associated with climatic, natural, political, economic or financial events. Should these observations be retained or eliminated? Neither of these solutions appears to be universally satisfactory. Keeping the atypical values means taking the risk of selecting a model that does not describe either the whole data set or the exceptional values. Conversely, if the choice is made to eliminate these observations, then it is possible that part of the information contained in the data series will be eliminated. It is therefore important to identify the source of the outlier. Thus, if the event responsible for the outlier occurs only rarely and is therefore unlikely to recur, the removal of this observation will not have any untoward consequences for estimating the underlying model. Conversely, if this event is likely to recur, it should under no circumstances be deleted. The choice to keep certain atypical and isolated observations is particularly justified when it is possible to link this value to an event which is economic, political financial, and so on. However, not all economic, financial and/or political events that affect the observations behave in the same way. These events can have various effects on the time series: one-off, permanent or lasting over time.

Appendix 2—VAR Models

Proposed by Christopher Sims,[67] VAR modelling was initially opposed by "classical" economists. The latter, who tended to be followers of theory (in the sense of the Cow-

67 Christopher Sims, "Macroeconomics and Reality," *Econometrica* 48, no. 1 (1980), 1–48.

les Commission[68]), based their models on theoretical foundations and considered that it was essential to make assumptions about the relationships between the variables. For the more empirical approach, the model had to be based on solid statistical results, which in economics made it possible to reveal the structure of the markets.

VAR models extend the work of Clive Granger[69] on the causal relationship between two variables. Taking this perspective, Sims proposed a model extending the analysis of causality to a system of several variables. He proposed to treat all variables identically, without making any exclusion or exogeneity conditions, by selecting an identical lag for each of them in all equations. The advantages of non-structural VAR modelling over classical modelling are twofold. On the one hand, it allows a better dynamic analysis of the systems by taking into account the intrinsic structure of the series and the dynamic effects between the variables. On the other, it allows all the causal relations between two variables to be considered without any a priori on the exogeneity of one of them.[70]

However, VAR models have limitations. First, there is the problem of the number of variables to be included in the model and the resulting estimation problem. Indeed, VAR models differ from structural models (based on theory) in that they leave more room for empiricism. But, in such cases, how many variables should be chosen? The number of variables to be included in the model thus raises the problem of vanishing degrees of freedom. If, for example, we consider 20 variables and 4 lags, this leads to the estimation of 80 coefficients per equation, and very often the number of unknown coefficients is close to the size of the sample analysed. Another criticism often levelled at VAR models is linked, as already mentioned, to the few theory to which they refer, which regularly qualifies them as a-theoretical models. This theory versus measurement debate had already divided economists in the 1920s, at the time of the creation of the National Bureau for Economic Research (NBER), for example, and resurfaced in the 1980s with the work of Sims and still the debate is far from over. If VAR models are criticised for their lack of theory, the theoretical models of the Cowles Commission supporters have long been criticised for their lack of flexibility.[71] Faced with this Gordian knot, our cliometric approach proposes to reconcile theory and measurement in proportions that offer both the theoretical and the empirical debate necessary for the development of science. Thus, in this article, we draw on the lessons of theoretical models of economic growth and aim to test the possible links with the development of primary education in France via VAR modelling and the analysis of causal relations in the statistical sense of the term.

68 https://cowles.yale.edu/sites/default/files/files/pub/rep/r1932-52.pdf (accessed 15 August 2021)

69 Clive Granger, "Investigation Causal Relations by Econometric Models and Cross-Spectral Methods," *Econometrica* 37, no. 3 (1969), 424–38.

70 For the French reader interested in a presentation of VAR models, we suggest reading Catherine Doz and Pierre Malgrange, "Modèles VAR et prévisions à court terme," *Économie & Prévision* 106 (1992), 109–22.

71 As early as 1976, Lucas, as a precursor, argued that these models are fundamentally flawed in assessing the consequences of alternative economic policy outcomes. Cf. Robert Lucas, "Econometric Policy Evaluation: A Critique" in *The Philips Curve and the Labor Market*, ed. Karl Brunner and Allan H. Meltzer (Amsterdam: North-Holland, 1976), 19–46.

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Between Popular Demand for Education and Budgetary Constraints: The Example of the Organisation of Hamlet Schools in Savoy (1860–1880)

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Abstract • In the early nineteenth century, the populations of the former Duchy of Savoy increased the number of hamlet schools. These schools were integrated into the mountain socio-economic system and mainly financed by private funds, but were considered by the Sardinian monarchy as public establishments. This was not the case in France where hamlet schools were mostly established as private schools. After 1860, their integration into the French school system posed difficulties for the French government which intended to develop schooling but to contain public expenditure. Several statutes were granted to them before the law of 1867, inspired by the Savoyard example, legalised these schools. Although the government planned to rationalise their establishment, financial logic and popular demand for education led to the maintenance of this local, public school service. However, the way in which the schools were taken into account in ministerial statistics, invites us to question the evolution of their numbers and more generally that of primary education expenditure at the end of the Second Empire.

Keywords • Elementary schools, hamlets, foundations, school consortiums, Savoy

Introduction

On 8 March 1867, before the legislature, the Minister of Public Instruction Victor Duruy (1863–1869) declared that the future law on primary education[1] would be applied "in the most liberal sense, I might say in the most Savoyard sense, since it was the example of Savoie (Savoy) that inspired the provision [...]"[2] concerning hamlet schools (*écoles de hameau*). These hamlet schools were presented as a 'local' schooling offer, with a lower level of requirements in terms of teacher qualifications and remuneration. Established in villages more or less distant from the main town, they were most frequently located in departments where mountains dominated.[3] Victor Duruy's statement testifies to the specific role played by the department of Savoie in the organisation of these hamlet schools during the Second Empire.

This role was due to the political change this region had experienced seven years earlier, in a context marked by the affirmation of nation-states and the questioning

1 It was promulgated on the following 10 April. Octave Gréard, *La législation de l'instruction primaire en France de 1789 à nos jours,* t. 4 (Paris: Delalain Frères, 1896), 133–36.

2 *Corps législatif. Session 1867. Séances des 8 mars, 9 avril et 13 juillet 1867. Discours de M. Bérard* (Paris: Imprimerie L. Poupart-Davyl, 1867), 9–10. All translations from French into English are by the author of this chapter.

3 Ministère de l'Instruction publique et des Beaux-Arts, *Statistique de l'enseignement primaire 1876–1877* (Paris, Imprimerie nationale, 1878), 18–21.

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of the map of European states resulting from the Treaty of Vienna of 1815.[4] In 1860, the King of Piedmont-Sardinia and future King of Italy, Victor-Emmanuel II (1849–1878), consented to the "reunion"[5] of the former Duchy of Savoy, the cradle of the reigning dynasty, with France, administered by Emperor Napoleon III (1852–1870). This transfer of sovereignty was primarily the price of France's support for Italian unification. It also met the wishes of the Savoyard ruling class, which was Catholic, hostile to Italian politics and opposed to the secularisation of their Piedmontese state.[6] Finally, it reflected the "Frenchness of Savoie" based on "geographical contiguity, the age and intensity of relations and exchanges, materialized by seasonal or permanent emigration, and belonging to the same linguistic and cultural area."[7] The former duchy, with a surface area of about 10,400 square kilometres, was then divided into two French administrative entities, the departments of Haute-Savoie, to the north, and Savoie, to the south (see map).

Until 1860, the development of primary schooling in Savoie thus conformed to the organisational framework set by the Sardinian monarchy, which was more favourable to hamlet schools than French legislation. In France, following the 1833 legislation on primary education the State favoured the financing of local schools by the *communes* (lowest administrative division in France) and prescribed minimum requirements in terms of the pedagogical qualifications of teachers. Conversely, the Kingdom of Piedmont-Sardinia encouraged the communes to seek private funding—including donations and legacies from families—and, consequently, reduced the administrative and pedagogical requirements for low-cost schools. The methods of financing and the structure of operating costs are therefore at the heart of the specific nature of these hamlet schools, which proliferated in Savoie in the first half of the nineteenth century. Their integration into the French legislative framework from 1860 onwards raised the question for the French government of the structure of their financing and their role in the schooling process. Because of the differences in the educational situation between the two Savoie departments at the time of the Annexation (Haute-Savoie was characterised by a smaller number of hamlet schools and a greater presence of ecclesiastical[8] and congregational schools), this question was only particularly acute in the department of Savoie, which is the focus of this study.

This study is part of the history of elementary schooling in the nineteenth century and focuses on the following aspects: literacy and schooling in the mountains in France and Italy, the specificity of hamlet schools, and the development of primary education in Savoie. French and Italian historiography have long given priority to the

4 Paul Guichonnet, *Histoire de l'annexion de la Savoie à la France: les véritables dossiers secrets de l'annexion* (Montmélian: La Fontaine de Siloé, 3ème éd., 2003).

5 First Article of the Treaty of Turin of 24 March 1860 in Paul Guichonnet and Christian Sorrel (eds.), *La Savoie et l'Europe 1860–2010. Dictionnaire historique de l'Annexion* (Montmélian: La Fontaine de Siloé, 2009), 6.

6 Sylvain Milbach, *Entre Piémont et France: la Savoie déroutée, 1848–1858* (Chambéry: Université de Savoie, 2008).

7 Paul Guichonnet, "De la mémoire à l'histoire," in Guichonnet and Sorrel (2009), 10, 16.

8 Jean-Yves Julliard, "Les régences vicariales en Savoie dans la première moitié du XIXe siècle: une institution scolaire ecclésiastique originale?" in *États de Savoie, Églises et institutions religieuses des réformes au Risorgimento*, ed. Marc Ortolani, Christian Sorrel and Olivier Vernier, PRIDAES (Nice: Serre éditeur, 2017), 275–88.

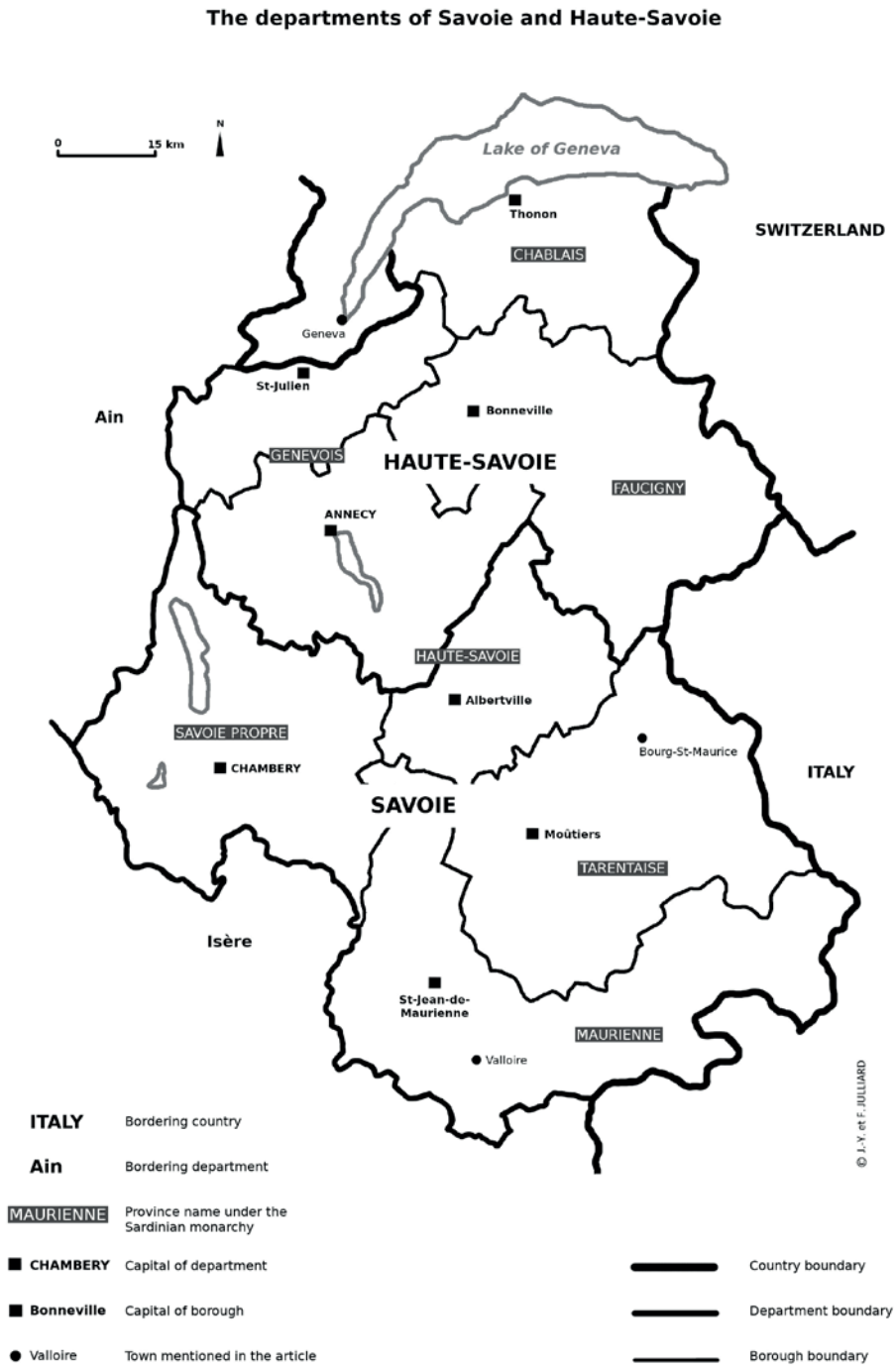

Figure 1. Map over Haute-Savoie and Savoie.

study of schooling in the countryside and industrial regions.[9] For mountain areas, Italian historiography, which is more developed, reveals an apparent paradox, that of a more developed schooling in the mountains than in the countryside.[10] In comparison, French historiography is still incomplete, studies being limited mainly to five departments: Doubs, marked by an early development of education,[11] Creuse, Basses-Pyrénées and Alpes-Maritimes, which are characterised by late development.[12] notably, for these last two departments, because of weak use of the French language, and Hautes-Alpes, more particularly the Briançonnais region.[13] The latter had similarities with the Italian Alps, namely the early development of literacy through the joint action of families and village schools.[14] This study on the Savoie department therefore fills a gap.

Regarding hamlet schools, like informal schooling, little is known about their history and their role in the schooling process in France. There is no specific study on the subject. The reason for their low visibility lies in their status, which was mostly private, as this type of school organisation often does not allow historians to have access to sources. An exception is the emblematic case of the Béates in the Haute-Loire department, these "pious girls" who, at the request of the inhabitants who supported them, taught catechism and the rudiments of reading, as well as lace-making.[15]

The development of primary education in Savoie has been dealt with mainly in two works: Jacques Lovie's thesis on *La Savoie dans la vie française de 1860 à 1875 (Savoie in French life from 1860 to 1875)*[16] and our study on Les écoles élémentaires

9 Notably François Furet and Jacques Ozouf, *Lire et écrire. L'alphabétisation des Français de Calvin à Jules Ferry,* vol. 1 (Paris: Éditions de minuit, 1977); René Grevet, *École, pouvoirs et société (fin XVII*[e]*–1815), Artois, Boulonnais/Pas-de-Calais* (Villeneuve d'Ascq: Université de Lille 3, 1991); Marc Loison, *École, alphabétisation et société rurale dans la France du Nord au XIX*[e]*siècle* (Paris: L'Harmattan, 2003).

10 Pier Paolo Viazzo, *Upland Communities. Environment, Population and Social Structure in the Alps since the Sixteenth Century* (Cambridge: Cambridge University Press, 1989); "Le paradoxe alpin", *L'Alpe,* no 1 (1998), 28–33; Xenio Toscani, *Scuole e alfabetismo nello Stato di Milano da Carlo Borroméo alla Revoluzione* (Brescia: La Scuola, 1993); Maurizio Piseri (a cura di), *L'alfabeto in Montagna. Scuole e alafabetismo nell'area alpina tre età moderna e XIX secolo* (Milano: Franco Angeli, 2012).

11 Jacques Gavoille, *L'école publique dans le département du Doubs (1870–1914)* (Paris: Les Belles lettres, 1981).

12 Daniel Dayen, *L'enseignement primaire dans la Creuse 1833–1914* (Clermont-Ferrand: Institut d'études du Massif Central, 1984); Pierre Hourmat, *L'enseignement primaire dans les Basses-Pyrénées au temps de la Monarchie Constitutionnelle (1815–1848)* (Anglet: IPSO, 1973); Hervé Barelli, "*L'*école primaire comme instrument d'*intégration du Comté de Nice dans la France 1860–1914*," (Thèse, Science politique, Nice, 1991).

13 Nadine Vivier, *Le Briançonnais rural aux XVIII*[e] *et XIX*[e] *siècles* (Paris: L'Harmattan, 1992). Schooling has only been studied in detail in four of the nine French Alpine departments (Haute-Savoie, Savoie, Hautes-Alpes and Alpes-Maritimes).

14 Anne-Marie Granet-Abisset, "Entre autodidaxie et scolarisation: les Alpes briançonnaises," *Histoire de l'éducation*, no. 70 (1996), 111–41.

15 Auguste Rivet, "Des 'ministres' laïques au XIX[e] siècle? Les Béates de la Haute-Loire," *Revue d'histoire de l'*Église de France, t. 64, no. 172 (1978), 27–38; Robert Lagier, "Une institution vellave: Les Béates," *Cahiers de la Haute-Loire* (1979), 131–67; Jean-François Chanet, *L'école républicaine et les petites patries. Enseignement primaire et sentiment d'appartenance en France sous la Troisième République (1879–1940)*, (Thèse de doctorat, histoire, Université Paris I Panthéon-Sorbonne, vol. 1, 1994), 71–76.

16 Jacques Lovie, *La Savoie dans la vie française de 1860 à 1875* (Paris/Chambéry: Presses universitaires de France/Imprimeries réunies, 1963).

en Savoie de l'Ancien Régime à la Première Guerre mondiale (*Elementary schools in Savoie from the Ancien Régime to the First World War)*.[17] We have recently returned to and developed the analysis of the hamlet schools in our thesis by underlining the specificity of their financing (in particular with regard to the importance of the contributions of the village populations) and of their functioning (recruitment of peasant school teachers, subjects taught, sometimes adapted to the local context).[18]

The historian of hamlet schools in Savoie is able to draw on relatively numerous administrative sources, whereas these are lacking for the rest of French territory. This is due to the fact that these schools were considered by the Piedmontese State, and then by the Second French Empire between 1860 and 1867, as belonging to the public sphere.[19] In particular, other sources have been used such as administrative surveys of hamlet schools before 1860, censuses of elementary schools and the minutes of meetings of provincial (before 1860) or departmental (after 1860) school authorities, the archives of territorial State administrations, both general and academic), as well as the registers of the deliberations of certain mountain municipalities under the Sardinian and French regimes.

Based on these sources, studying the particular moment of the integration of the hamlet schools of Savoie into the French legislative framework and the financial choices made on that occasion, provides an opportunity to examine lesser-known aspects of the development of elementary schooling. Firstly, our study highlights the motives and the specificity of schooling in the mountains, particularly with regard to its financing methods. In the Alps, in particular, where societies have long been regarded as archaic and closed, through their practices and way of life, they have nonetheless shown an unusual openness towards the outside world.[20] This has been reflected in the scale of migration and the spread of a relatively high level of education, thanks to a fairly dense school network. While these characteristics have already been highlighted, French and Italian historiography have paid less attention to the differences between these mountain territories regarding education. These differences are most often related to the cost structure, i.e. the respective shares of private and public funding, and, for each of them, of the different contributors and their forms of intervention. For example, families may have contributed through donations and bequests. There may have been voluntary, annual or capitalized contributions, school fees set by municipalities, or even in-kind donations, particularly in the form of food. This case study shows how the funding structure of hamlet schools may have affected the development of schooling in Alpine territories.

17 Jean-Yves Julliard, "Les écoles élémentaires en Savoie de l'Ancien Régime à la Première Guerre mondiale," *L'Histoire en Savoie*, no. 22 (2011).

18 Jean-Yves Julliard, *Ecoles, pouvoirs et sociétés. Les écoles élémentaires en Savoie au XIX^e^ siècle (1815–1880)*, (Thèse de doctorat, histoire, Université Grenoble Alpes, 2019). In Italy, especially for the Piedmontese Alps, the issue of hamlet schools has been mainly addressed from the perspective of funding sources: Elio Reinotti, "*L'istruzione elementare in valle d'Aosta dal 1678 al 1822*" (Tesi di Laurea, Universita' degli studi di Torino, corso di laurea in pedagogia, anno academico 1973–1974); Monica Dufour, "Alfabetismo, scuole e maestri nella comunità Montana Evançon tra 1770 e 1859," in Piseri (2012), 159–81.

19 After 1867, the archives of the territorial administrations of the State bear little trace of the sources of funding for primary schools.

20 Anne-Marie Granet-Abisset, "'Retardation et enfermement': Érudits et historiens face aux sociétés alpines (XIX^e^-XX^e^ siècles)," *Le Monde alpin et rhodanien*, no. 3 (2001), 55–76.

Secondly, by observing the sources of funding for hamlet elementary schools, our study once again questions the concept of the social demand for education.[21] This paradigm, which is still under discussion,[22] has been renewed and deepened by the observation of educational investment, particularly that of families.[23] "There is no social demand for education," writes Pierre Caspard, "there is only evidence of this demand: it is advisable to identify its different forms precisely, as close as possible to what parents think, say and do."[24] Seeking to evaluate "the private contribution to educational expenditure, which is often underestimated or difficult to evaluate,"[25] seems to us to be one of the means of observing this demand for education, a demand which, in the example of Savoie, seems to be more "communal" than familial.

Finally, the French authorities' respect for the Savoyard forms of social demand for hamlet schools, to the point of inspiring national school legislation, bears witness to the complexity of the relations between the various actors and their reciprocal transformations in the context of the co-construction of public policies,[26] particularly school policies,[27] between the local and national levels. In this way, a question that is the subject of debate among economists, namely the respective effects of centralised and decentralised organisations of the education system on the growth and qualitative evolution of elementary schooling,[28] is taken up again with different tools (an approach conducted on a reduced spatial scale, and attentive to the complexity of local arrangements).

This article begins with a presentation of the organisation of hamlet schools and their legal foundations in the first half of the nineteenth century in Savoie, then still part of the kingdom of Piedmont-Sardinia (1815–1860), and in France, at the time of the Guizot (1833) and Falloux (1860) school laws. The legal status, in fact, determines the structure of funding. The second part of the paper analyses the ways in which they were incorporated, legally and financially, into the French school system following the Annexation of 1860. This leads to the question of re-reading the evolu-

21 Furet and Ozouf, vol. 1 (1977).

22 Jean-Michel Chapoulie, *L'école d'État conquiert la France. Deux siècles de politique scolaire* (Rennes, Presses universitaires de Rennes, 2010), 18.

23 Pierre Caspard, "*Homo oeconomicus* et ses enfants. Raisons et modalités de l'investissement éducatif dans les milieux populaires (1700–1870)," in *Le coût des études. Modalités, acteurs et implications sociales XVI^e–XX^e siècle*, ed. Jean-François Condette (Rennes, Presses universitaires de Rennes, 2012), 171–87; Granet-Abisset (1996).

24 Pierre Caspard, "'Tenir les maîtres en bride': Les parents, la famille et l'école. France et Suisse (1700–1850)," in *Les personnels d'inspection. Contrôler, évaluer, conseiller les enseignants. Retour sur une histoire, France-Europe (XVII^e–XX^e siècle)*, ed. Jean-François Condette (Rennes, Presses universitaires de Rennes, 2017), 250.

25 Jean-François Condette, "Introduction. On ne badine pas avec l'argent de l'École. Le coût des études, nœud gordien de l'éducation?" in Condette (2012), 16.

26 Lutz Raphael, "L'État dans les villages: administration et politique dans les sociétés rurales allemandes, françaises et italiennes de l'époque napoléonienne à la Deuxième Guerre mondiale," in *Histoire de l'Europe rurale contemporaine. Du village à l'*État, ed. Jean-Luc Mayaud and Lutz Raphael (Paris: A. colin, 2006), 249–81.

27 Jean-Noël Luc, Jean-François Condette, Yves Verneuil, *Histoire de l'enseignement en France, XIX^e–XXI^e siècle* (Paris: Armand Colin, 2020), "La scolarisation au XIX^e siècle: une coproduction," 20–22.

28 Mark Bray, "Centralisation Versus Decentralisation in Educational Administration: Regional Issues," *Educational Policy* 5, no. 4 (1991), 371–85; Gabrielle Capelli, Michelangelo Vasta, "Can School Centralisation Foster Human Capital Accumulation? A Quasi-Experiment from Early XXth Century Italy," *The Economic History Review* 73, no. 1 (2020), 159–84.

tion in their numbers and that of primary education expenditure on a national scale at the end of the Second Empire.

Hamlet schools in Savoie and France in the mid-nineteenth century

In France, from 1833 onwards, for economic and pedagogical reasons, i.e. to contain public expenditure and to ensure the provision of primary education by qualified teachers, the government gave priority to the development of elementary schools in the main towns. Thus, depending on the few facilities granted, hamlet schools were most often able to develop only in the form of "private" schools, in the terminology of the Guizot law of 1833, and then "free," according to the expression used by the Falloux law of 1850. Conversely, also motivated by budgetary reasons, the Kingdom of Piedmont-Sardinia had encouraged local initiatives in favour of the creation of hamlet schools. To this end, it relaxed the rules applicable to lower public elementary schools, which differed from higher public elementary schools in that they had a more limited curriculum, comparable to that of the compulsory subjects determined in France by the Falloux law.[29] These exemption measures supported the creation of these schools in the Piedmont and Savoie Alps in the first half of the nineteenth century. During this period, school systems were set up in France, as in the kingdom of Piedmont-Sardinia, within the framework of a decentralised organisation, delegated in the first case, devolved in the second, according to the terminology proposed by Mark Bray:[30] on the one hand, the State supervised the action of the local authorities, on the other, the State being virtually absent, school organisation was the result of local initiatives taken by local administrations or communities of individuals at the sub-municipal level.

In Savoie: Public schools

Inherited from the end of the *Ancien Régime*, hamlet schools multiplied in the high Alpine valleys during the first half of the nineteenth century. They were the product of societies organised on the basis of a rural economy completed by the "migration industry",[31] as illustrated by the case of the territory of the former duchy of Savoie. Located in the south of the former duchy, the department of Savoie, with an area of over 6,000 square kilometres, is characterised by an average altitude of nearly 1,500 meters. In 1861, it had 275,000 inhabitants, partly grouped in the valleys, but mostly scattered in the mountains where they lived in many villages or hamlets. Their economic activities were however mainly based on travelling merchants and trade. In the mountains, the agro-sylvo-pastoral economy dominated, favoured by the family or else the collective exploitation of communal properties, the latter covering more than 70per cent of the territory in the upper valleys. Smallholdings were more predominant than in the lower slopes. Multi-activity was also an essential component of this rurality. This was organised in particular within the framework of migrations, mostly temporary or seasonal: in 1858, the average rate of migration compared to the population was about 10per cent for the Maurienne and Tarentaise regions. The resources which were drawn from this migration, added to those procured by the

29 Section 23 of the Act distinguishes between mandatory and optional matters.

30 Mark Bray (1991).

31 Paul Guichonnet, *La Savoie dans le royaume de Piémont-Sardaigne* (Grenoble: Imp. Allier, 1957), 28.

trade in cattle and cheeses, were of value to the populations of the Alpine communes who could be considered as relatively well-off compared to those of the low country, although the social homogeneity was however very relative.[32]

The hamlet schools were born of the population's desire to compensate for the general weakness of the public school system in rural areas and the constraints represented by the terrain, climate, slopes and natural risks inherent in the combination of these elements, which made travel conditions difficult, particularly in winter. They were able to raise the necessary funding, mainly in the form of foundations or "*œuvres-pies*" (pious works), the term used at the time, or from group subscriptions. These sources of financing were essential to the schools established in the mountain communes, and particularly in the hamlets.

The foundations were the work of village notables, clergymen or expatriates who, beyond school philanthropy, showed their concern to maintain influential relations with their country of origin. Contrary to the Aosta Valley, where ecclesiastical foundations were in the majority,[33] in Savoie private bequests predominated. The group subscriptions for the maintenance of schools, which I call school consortiums, were established on the model of community institutions which had existed since the Middle Ages. These economic associations, or groups of consortiums, were intended to manage the collective properties of a group of families (notably woods, mountain pastures, irrigation systems).[34] The school consortiums were numerous in Tarentaise, and were made up of the residents of the hamlets alone, but also sometimes in association with the expatriate "villagers." In Bourg-Saint-Maurice, in the hamlet of Villaret-sur-la-Rosière, the farmers joined forces in 1807 to recruit a schoolmaster. The capital collected from subscribed sums of between 36 and 120 francs, amounted to 1,044 francs, providing an annual revenue of 52 francs,[35] i.e. 80 per cent of the sum that the sale of a cow would fetch.

Donations and bequests, of which mountain schools were the main beneficiaries,[36] represented a significant proportion of the funds contributing to the remuneration of public school teachers in the Savoie departments at the time of the Annexation: about 25 per cent in Haute-Savoie and 22 per cent in Savoie.[37] Nowhere else in France were the proceeds of school donations and bequests so generous: nearly 75,000 and 74,000 francs respectively in 1878.[38] This method of financing, often supplemented by modest communal subsidies, made it possible to make hamlet schools

32 Laurence Fontaine, *Pouvoir, identités et migrations dans les hautes vallées des Alpes occidentales (XVII^e–XVIII^e siècle)* (Grenoble: Presses universitaires de Grenoble, 2003).

33 Reinotti (1973–1974).

34 Fabrice Mouthon, "La naissance des communs. Eaux, forêts, alpages dans les montagnes de Savoie (XII^e–XVI^e siècles)," *L'Histoire en Savoie*, no. 30 (2016).

35 Archives départementales de la Savoie [now ADS], 4 O 20.

36 Donations and legacies contributed to the financing of about 56% of the public schools in Maurienne in 1858, compared to only 26% in Savoie-Propre (ADS, Tac 19: Notizie statistiche intorno alle scuole publiques élémentaires de garçons—de filles—esistenti nella provincia di Maurienne—di Savoie-Propre, anno scholastico 1858–1859).

37 *Haute-Savoie. Conseil général du département*, rapport du préfet et procès-verbal des séances [now CGHS], 1861, 109–11; *Savoie. Conseil général du département*, rapport du préfet et procès-verbal des séances [now CGS], 1863, 125.

38 "Dons et legs," in Ferdinand Buisson (ed.), *Dictionnaire de pédagogie et d'instruction primaire,* Part 1, vol. 1 (Paris: Hachette & Cie, 1887), 729.

virtually free of charge (79 per cent of all pupils in mountain districts in 1871).[39] However, regardless of the way they were financed, whether partially public or totally private, including through school fees alone, hamlet schools had been considered by the Sardinian state to be public schools. This rule was due to the fact that the foundations, to which all private school financing was assimilated, existed under the control of the State through the Senate of Savoie.

This financial system was able to thrive because of the small amount of money spent on education, seeing the primacy given to seasonal winter education (three to five months). The scattered nature of the hamlets explains the scattered nature of the school settlements. At their peak in the middle of the century, the hamlet schools constituted a significant part of the school system. In 1845, in Tarentaise, they represented 70 per cent of the existing public elementary schools. Ten years later, the proportion was 55 per cent, 48 per cent in Maurienne and 43 per cent in the province of Haute-Savoie, centred on Albertville. Most of these schools were single sex before 1860, and pupils were admitted from the age of six to about eighteen; thus those over thirteen, the age limit set by the 1853–1855 regulations,[40] could account for up to 30per cent of the pupils, compared with 25 per cent in the communal schools of the rural lowlands. The teachers, most of whom were unlicensed, were peasants from the village community who had done this job for a few years. The income they earned was modest, often between ten and twenty Piedmont pounds per month, an amount that was reduced by almost half for the female teachers; remuneration in kind or as a supplement was rare. Before 1850, as in all rural schools, in addition to religious instruction, the teaching provided included reading and, secondarily, writing and arithmetic. In the following decade, the teaching of the latter two subjects was almost universal. In the small number of hamlet schools run by licensed teachers, the education provided was similar to that of the rural schools of the low country, with the learning of the French language through the study of grammar and written exercises being frequently practised. These programmes corresponded successively to those prescribed for the lower elementary schools by the regulations of 1822 and 1853–1855. The scope of this teaching was, however, most often limited by the mediocrity of the premises and the poor school materials.

These hamlet schools were the result of local initiatives and were favoured by the Sardinian monarchy as part of its territorial policy. As early as the 1840s, it agreed to suspend the application of the rules for the benefit of communes in mountainous areas with a low financial capacity. The scope of this dispensation was further extended by the 1853–1855 regulation: in communes where the teacher's salary was less than 300 pounds, the school administration was allowed to authorise persons without regular certificates or those who had not passed a special examination to teach. In the mountains, the same communes could also organise temporary schools, limited to the winter season, and the "Alpine communes" could modify the day's timetable, even reducing it to a two-and-a-half-hour lesson. Although these regulations only took into consideration the communal level, they favoured the opening of public schools in the hamlets at lower cost. From 1856 onwards, the Sardinian administra-

39 CGS, 1872, 148–49.

40 Regulation of 23 August 1853 published in Savoy by the decree of 11 November 1855, articles 41 and 42 (*Recueil des actes du gouvernement de sa majesté, le roi de Sardaigne*, 1855).

tion counted the hamlet schools under the name of "*scuole delle borgate*" in order to know the distribution of lower elementary schools according to the type of locality.[41] France made a different choice.

In France: Private schools

Since the Revolution, the State sought to promote the spread of primary education. However, in the first half of the nineteenth century, the weak financial capacity of the communes with regard to the standards imposed on them concerning on the one hand, firstly the salary of the communal teachers (minimum annual 200 francs supplemented by the product of the school fee as from 1833, then 600 francs since 1851) and secondly the school and housing premises and on the other hand[42] the State's wish to limit its financial interventions on a subsidiary basis like those of the communes and the departments led it to prefer the creation of primary education establishments in the communal chief towns. Not only did this encourage communes to join with others in maintaining these schools,[43] but it only authorised them to finance schools in hamlets when they were able to ensure the functioning of at least one boys' school and one girls' school.[44] Also, within the framework of the freedom of primary education, most of the hamlet schools were opened as free establishments, financed by private funds and run by qualified teachers declared to the administrative authorities,[45] though sometimes they were clandestine "establishments." At the end of the Revolution, these school openings were part of a defensive attitude by rural communities against administrative centralisation;[46] they were also the very expression of the social organisation of these communities, inherited from the *Ancien Régime*.[47] While the State intended to develop primary education by ensuring the quality of the recruitment of public teachers by controlling their aptitude to teach and offering a guaranteed remuneration that was relatively high in relation to the income derived from agriculture, on the contrary,[48] families expected education to be provided as close as possible to where they lived and at the least cost. In order to

41 ADS, 11 FS 58: Circolare, ministero delle public istruzione, scuole elementari nelle borgate, 14 December 1855.

42 Articles 13 of the law of 28 June 1833 and 40 of the law of 15 March 1850.

43 Articles 15 of the Order of 29 February 1816, 9 of the Act of 28 June 1833 and 36 of the Act of 15 March 1850.

44 Instruction ministérielle relative aux obligations imposées aux communes en ce qui concerne l'instruction primaire, 27 avril 1834 (Gréard, vol. 2, 1891), 128–40.

45 Articles 3 and 4 of the law of 28 June 1833 and 25 and 27 of the law of 15 March 1850.

46 Furet and Ozouf, t. 1 (1977), 111; Côme Simien, "Entre centralisation et décentralisation des questions scolaires: relire l'échec de l'école de la République (1789-1802)," in *Centralisation et fédéralisme. Les modèles et leur circulation dans l'espace européen francophone, germanophone et italophone*, ed. Michel Biard, Jean-Numa Ducange, and Jean-Yves Frétigné (Mont-Saint-Aignan: Presses universitaires de Rouen et du Havre, 2018), 17.

47 Furet and Ozouf, t. 1 (1977), 112; Côme Simien, "Culture des humbles et culture de l'écrit. De quelle intermédiation(s) culturelle(s) les maîtres d'école villageois du siècle des Lumières furent-ils les agents?" (*La Révolution* française, no. 18, 2020), https://doi.org/10.4000/lrf.4161 (accessed 23 August 2021).

48 Around 1870, in Haute-Savoie, the annual income from an average farm was 100 to 140 francs per person, with five people per family; the best paid farm worker, the master-valet, received 150 to 250 francs (Lovie (1963), 285, 288).

provide education to as many people as possible, the State was nevertheless forced to reduce its requirements.

However, adapting the regulations allowed the multiplication of hamlet schools in areas of scattered settlement and relative poverty. Under the July Monarchy, travelling teachers were authorised to bring children from several families together in the same house. They were assimilated to free teachers and were placed under the control of the rectors (head of the local education authority, the *académie)*.[49] Moreover, the rule applicable to public schools was relaxed for mountain areas. The obligation of communal financing remained, but, in the absence of a qualified teacher, and subject to the presentation of a certificate of good character, the educational administration authorised the rectors to "entrust primary education to a temporary delegate".[50] The application of these provisions, which were similar to those relating to the "ambulatory" minor schools organised in Scandinavian countries,[51] are known to us in particular regarding the former province of Dauphiné, in the territory of Briançonnais: in 1844, this arrondissement of the department of Hautes-Alpes had a dozen public hamlet schools for 148 private[52] schools. In the hamlets of the department of Haute-Loire, numerous "private" schools run by the Béates [53]continued to exist outside this regulatory framework.

The figures in the *Statistique de l'instruction primaire en 1863*, (*Statistics of Primary Education for the year 1863)*, which only counted public hamlet schools for boys or mixed establishments, reflect the specific role of these schools in the schooling of the Savoyard population: the 284 schools counted in the department represent 36 per cent of the 788 that were counted nationwide. The departments of Vosges (117), Hautes-Alpes (82) and Cantal (61) follow.[54] Aveyron, Lozère and Haute-Loire did not have any of these public establishments, the hamlets being provided only with free schools.[55]

Based on different legal principles, which were however subject to similar regulatory adaptations, these decentralized school organisations produced the same effect in the French and the Piedmontese Alps, namely mass elementary schooling. In the Savoyard Alps, on the eve of the Annexation, school enrolment rates for six- to fifteen-year-olds reached 81 per cent in Maurienne and 92 per cent in Tarentaise. In

49 Avis du conseil royal de l'instruction publique du 26 février 1836 relatif aux formalités imposées aux instituteurs ambulants (Gréard (1891), 223–224.

50 Arrêté du conseil royal de l'Instruction publique du 26 août 1836 relatif aux instituteurs primaires ambulants dans l'académie de Grenoble (Gréard (1891), 273–74).

51 Johannes Westberg, "Were There National School Systems in the Nineteenth Century? The Construction of a Regionalised Primary School System in Sweden," *History of Education* (accepted for publication); Sofia Kotilainen, "From Religious Instruction to School Education: Elementary Education and the Significance of Ambulatory Schools in rural Finland at the End of the Nineteenth Century," in *Education, State and Citizenship*, ed. Mette Buchardt, Pirjo Markkola, and Heli Valtonen (Helsink: Nordic Centre of Excellence NordWel, 2013), 114–37. This material was kindly provided to me by Johannes Westberg.

52 Vivier (1992), 137–38.

53 Conseil général de la Haute-Loire, rapport du préfet et annexes, session 1855, 172. These schools are not counted among the free schools.

54 *Statistique de l'instruction primaire en 1863. Situation au 1er janvier 1864*, Paris, Imprimerie impériale, 1865, table no. 2, 7–8.

55 État de l'*instruction primaire en 1864 d'après les rapports officiels des inspecteurs d'académie*, Paris, Imprimerie impériale, t. 2, 1866—reports for Lozère (65–78) and Aveyron (909–916).

the Piedmontese provinces of Susa, Pignerol and Aosta, these rates ranged from 63 per cent to 88 per cent.[56] In 1833, in the French Alps, in the Briançonnais, the schooling rates in relation to the total population already reached 16 to 18 per cent, i.e. values equivalent to those of the mountainous provinces of southern Savoie.[57]

Considered by the Sardinian monarchy as public establishments, the hamlet schools did not match the characteristics of those in France. How could they be integrated into the French school system after the Annexation of 1860? The place left to the communes in the management of the primary school, the importance given to the local recruitment of teachers, as well as the dissemination of the hamlet schools constituted the main criteria of distinction between the "Savoyard" and the French school systems. Thus, the challenge for the new government lay in the reorganisation of the school network. As far as hamlet schools were concerned, the question of their status led to the question of their financing.

The integration of Savoyard hamlet schools into the French school system

The conditions for the integration of hamlet schools into the French school system were not the same in the two Savoie departments. Haute-Savoie had four times fewer hamlet schools than Savoie (93 and around 365 respectively). Moreover, in the former, they were mostly permanent, whereas in the latter, they were mostly temporary. The former accounted for 6 per cent of public school enrolments, while the latter accounted for about 40 per cent. Thus, although they were easily integrated into the school system in Haute-Savoie, their number and operation raised legal and budgetary questions in Savoie. In the space of four years, three regulations were applied to them, before the law of 1867 legalised a third of them for the whole of France. In all cases, the new authorities intended to facilitate schooling for as many people as possible while containing public expenditure.

The State, between the wish to assimilate and temperament (1860–1867)

At the time of the Annexation, the French government was aware of the impossibility of abolishing the hamlet schools in Savoie. It adopted the arguments developed by the populations and their elected representatives: their existence was justified by the topography and the communication difficulties that this created, particularly in winter. But the authorities did not intend to consider them as public schools. Recognising them as such when the municipalities in which they were located did not have the financial resources required to meet the standards set by the law would expose the State to having to bear the corresponding costs from its budget. Therefore, strictly applying the law, the imperial administration, intended to leave these schools to their own devices by assimilating them to free schools, financed exclusively by foundations or subscriptions. However, the radicalism of bringing them into immediate conformity with French legislation had to be tempered very quickly in the face of the multitude of complaints. In his circular of 20 November 1860, the prefect changed his mind and informed the mayors that the communes could continue to subsidise the hamlet schools, the teachers being proposed by the munici-

56 Ministero dell'istruzione publica, *Notizie statistiche dell'istruzione elementare del regno per l'anno scolastico 1856–1857*, Torino, Stamperia reale, 1858.

57 Vivier (1992), 139.

pal councils and authorised by him.[58] With this prescription, the prefect of Savoie was adapting French legislation which, since 1850, had authorised private schools to receive subsidies from the communes, and even concessions of buildings, without losing their character as free schools.[59] Thus, in a prefectural circular, the administration established a hybrid "status" for schools that were both free and public, in which school fees could be collected.

By monitoring the regularity of municipal subsidies paid to free schools for the remuneration of male and female teachers, the government sought to combat the traditional personal relations between elected officials and teachers. In addition, it rejected requests to create schools that it deemed inappropriate, while working to regularise those that were deemed useful. To this end, the government decided in 1862 to help many of them. An extraordinary credit of 10,000 francs was allocated in each of the Savoie departments. In Savoie, about a hundred establishments benefited from this. Never before had so many hamlet schools been subsidised in the former Duchy.

Table 1. Hamlet public schools in the arrondissements of the department of Savoie between 1863 and 1879.

Boroughs	**1863**	**1864**	**1867**	**1879**			
				boys	**girls**	**mixed**	**total**
Chambéry	19	10	16	4	4	14	22
Albertville	64	63	56	10	10	43	63
St Jean de Maurienne	104	97	106	10	9	94	113
Moûtiers	169	146	128	26	26	92	144
Total	**356**	**316**	**306**	**50**	**49**	**243**	**342**

Sources: CGS, 1865, 101; ADS, Tac20, status of primary schools, 1863; 5T4, status of hamlet schools maintained or to be created by virtue of ministerial approval, 1868; Tac2, register of deliberations of the departmental council of public instruction, 29 December 1879.

As a result of a benevolent policy towards subsidised free schools, in 1863 there were almost as many hamlet schools as at the time of the Annexation (see Table 1). The rules that were applied to them and the financial assistance provided confirmed the existence of these schools and recognised their contribution to schooling. However, this was at the cost of devitalising the communal schools, which the administration considered to be superior in terms of their organisation and the education provided. Since this situation ran counter to its strategy, it sought to reduce the number of these schools by organising them into a network within the municipality.

The desire to assimilate: the prefectural decree of 8 July, 1864

Following the report of the inspector of the Chambéry academy, adopted by the academic council at its meeting of 1 December 1863, the prefect of Savoie, by order of 8 July 1864, reorganised the hamlet schools and the temporary girls' schools in the chief towns, which were henceforth considered as public schools. In order to contain

58 Recueil des actes administratifs [now RAA], prefecture of Savoie, no. 35, 1860.

59 Article 36, paragraph 4 of the law of 15 March 1850.

the resulting expenses, they were subject to lower organisational and financial standards than the chief town schools.

From 1 October 1864, hamlet schools that could not be opened as free schools were considered as annexes to the schools in the main towns. They could only be reconstituted or created by decision of the departmental council of public education, a body bringing together representatives of the school administration, local elected representatives and the clergy. The decision had to be taken at the request of the communal administrators and after an administrative inquiry. This investigation had to ensure that the school was necessary in view of the school-age population, the distance of the hamlet from the main town, any communication difficulties and any other reason of public interest. The teachers were considered as the assistants—but not the subordinates—of the principal teacher in the chief town. The latter appointed them after they had been proposed by the academy inspector and approved by the prefect. They had to hold a certificate of competence or the Sardinian "*patente*" or, as was the case on the eve of the Annexation, a special diploma, the certificate of aptitude for teaching in hamlet schools. The schools were open for four months, from 1 December to 31 March. For this school time, the teachers were paid 150 francs, i.e. 37.50 francs per month, financed by the income from the foundations which had to be paid into the municipal fund as well as by the school fees according to the rates fixed in the communal schools if necessary, and also ultimately by a municipal subsidy. Finally, the hamlets had to be able to provide suitable premises for the classroom as well as for the teacher's accommodation.[60] Thus, the hamlet schools were linked to the communal schools in the chief towns, not so much by their teachers as by their funding. This is evidenced by the authorities' plan to encourage pupils from the hamlets to attend the schools in the chief towns and thus to attach the related funding foundations to the communal schools, a recommendation that often contradicted that of the legacies that had established the foundations. In order to facilitate the attendance at the communal schools, the pupils of the hamlets who were admitted free of charge as well as those subscribing to the school fee, had the right to attend the communal schools during the time when the temporary schools were closed.

This regulation confirmed the authorities' desire to "communalise" the school territory. But the questioning of the traditional functioning of these schools provoked strong reactions. Invited to formalise their requests to open hamlet schools as early as September 1864, many municipal councils were slow to deliberate or expressed their disapproval of the planned reorganisation; for their part, male and female teachers refused to provide the information requested by the administration. By the following October, only 160 of the 428 subsidised free schools in 1863 had provided regularly for the salaries of their teachers.[61] In view of the importance of "private" contributions to the financing of these public schools (about two-thirds), the Tarentaise region was the area where there was the strongest resistance: eight out of ten communes did not obey. Thus, in its meeting of 25 November 1864, the departmental council of public education gave them formal notice to comply with the regulations within a year.

60 RAA, no. 20, 1862, prefectural order of 8 July 1864, 161–65.

61 ADS, Tac 1: délibération du Conseil départemental de l'instruction publique [now CDIP], 25 November 1864.

The resistible rationalisation of school locations in the hamlets

Faced with this imposition, some communes continue to resist, forcing the educational administration to tolerate an irregular situation in some schools for several years. The populations of the hamlets and their representatives, who managed the school funds, supported by the commune administrators, intended to maintain their school system at a lower cost in line with their economic and social organisation. They refuse the introduction or increase of school fees and wanted to be able to continue recruiting teachers by mutual agreement.

The rejection of the reform was justified on economic grounds, which were underpinned by the administration free of charge provided by local associations and institutions. In Valloire, a commune in Haute-Maurienne, the inhabitants of the hamlet of Les Verneys clearly expressed this opinion: they asked the territorial representatives of the State for "just one favour, the freedom to choose for 6 to 7 months of the year [...] a schoolmaster who would give the first principles of instruction" and to pay him or her freely from the funds managed by the hamlet.[62]

In Bourg-Saint-Maurice, a commune in Haute-Tarentaise, the municipal councillors rejected the authorities' proposal to reduce the number of schools from twenty to twelve because of the extent of the territory and also because the dispersion of the habitat in forty-two hamlets, with communication difficulties between them, meant there was an interest in having a decentralised organisation for education. The refusal to obey the orders of the prefectural decree of July 1864 was motivated in particular by financial considerations, as the commune did not intend to set up payment in its schools, nor to increase taxes to compensate for the additional cost which would result from the increase in the salaries of the teachers.[63]

Faced with this resistance, the State administration acted by force, but also by accommodation. In Valloire, it automatically organised the hamlet schools in the commune while maintaining the existing school network. By order of 31 March 1865, the prefect decided, on a provisional basis, to keep the schools open in ten hamlets, while noting the separation between boys and girls in two of them. He determined their opening period at between four and five months. He fixed the salaries of the teachers at between 100 and 187.50 francs, in other words he made an adjustment to the provisions of his decree of 1864 for only four schools.[64] In other places, in order to guarantee salaries, he automatically entered them in the communal budgets. In Tarentaise, this procedure was applied to two communes out of five for all or some of their schools. Thus, most of the communal administrations were progressively joining the "standardisation" desired by the State administration, albeit tempered in part according to their wishes. The reorganisation nevertheless led to the abolition of some forty public schools in hamlets, mainly in the Tarentaise region, by closing or transforming special schools for each sex into mixed schools. At the beginning of the school year in 1865, the administration authorised 316 public hamlet schools. In addition, there were some schools authorised as free establishments and others that continued to operate irregularly.

62 ADS, 2 O 2982: petition of the inhabitants of the hamlet of Verneys addressed to the mayor of Valloire, 1866.

63 ADS, T 982: letter from the primary inspector to the academy inspector, 2 November 1865.

64 ADS, 2 O 2982: Valloire, prefectural decree of 31 March 1865.

Thus, the integration of Savoyard hamlet schools into the French school system did not correspond to complete assimilation. The new territorial authority had to adapt its rules and establish new ones, which were not mandatory. These adaptations were nevertheless to inspire the Minister of Public Instruction Victor Duruy who, considering the inadequacies of the school system, intended to make primary education a great public service "by ensuring, at the expense of the entire community, the proper distribution of education for all."[65] To this end, although he did not succeed in establishing compulsory and free education, he did intend to encourage the latter, to extend the obligation to provide education for girls to municipalities with more than 500 inhabitants, as opposed to the 1850 threshold of 800 inhabitants and to increase the number of assistant teachers, even in the hamlets. Thus, he legalised the hamlet schools in all the departments on the model of the last regulation applied in Savoie.

The application of the 1867 law in Savoie: Financial assimilation

The French law of 10 April 1867 considered as a hamlet public school any school established outside the main town on the decision taken by the departmental council of public instruction on the advice of the municipal council. The legal framework for these schools was identical to that prescribed in Savoie three years earlier, the only distinction being that the administrative procedure was concluded by approval not by the prefect but by the minister. However, because of the public status granted to them by the law, these schools could now be subsidised on an ordinary basis by the State. Furthermore, the attitude of the State administration towards the Savoyard populations differed from the previous period. While its implementation of the prefectural decree was abrupt with the aim of reducing the number of hamlet schools, in applying the law it sought to rationalise the network of hamlet schools while seeking to obtain a consensus with the populations on the choice of locations. Thus, the organisation of hamlet schools after 1867 was mainly a matter of the co-construction of a local school service between the State and the population. On the other hand, the State was firm on the issue of integrating the people's private funds into municipal coffers.

The construction of a local public school service by the State and the population

The organisation of the hamlet schools according to the 1867 law was still marked by the spirit of rationalisation. The State administration was still seeking to reduce the existing network in order to optimise both attendance and the budgetary management of the communes and, subsequently of the State. In its debate on 22 December 1867, the departmental council of public education ratified the existence of 305 hamlet schools (269 existing schools and 35 new ones) spread over 113 communes. Their financing was essentially provided by the communes, with the State contributing 17 per cent of the 43,304 francs needed to finance salaries and rents. As a sign of the savings it made, this proportion was almost seven points lower than its contribution to the ordinary expenditure on primary education in the department.[66]

At the end of the Second Empire, the academic inspectorate considered the

65 Report to His Majesty the Emperor on the situation of primary education during the year 1863, *Bulletin administratif de l'instruction publique* 3, no. 57 (1865), 199.

66 ADS, 5 T 4: state of the hamlet schools maintained or to be created by virtue of ministerial approval, 1868; CGS, 1869.

organisation of hamlet schools in Savoie to be complete. However, in order to encourage the schooling of the greatest number of children, it was led, on the one hand, to reduce the number of closures, and on the other hand, to reopen a number of public schools closed before 1868 or else to open new ones in hamlets which had not had any school until then. In the Tarentaise and Maurienne areas, the number of communes affected by a decrease in the number of hamlet schools was half that of before 1867. The Tarentaise was the valley most affected by the rationalisation of hamlet schools before 1867 and was the one which had the greatest number of these openings after this date and until 1879: twenty-two in thirteen communes compared to eleven in nine communes in the Maurienne.[67]

The State authorised the opening of these schools all the more easily as their financing was taken care of by the commune and, if necessary, with the help of the population in the framework of foundations or subscriptions. The population did not hesitate to make their contribution, including sometimes in the form of school fees, so decried in the early years of the Annexation. Their financial commitments testify to their desire to obtain a temporary school near their homes at all costs. In addition to the traditional method of foundations, their contributions most often took the form of a subscription to pay the rent for the school building and the teacher's accommodation. In some cases, the inhabitants also undertook the financing of the initial installation costs, including school furniture. Finally, for the school to be authorised by the education authorities, the latter needed to be able to ascertain the agreement between the inhabitants of the hamlets concerned and the local administrators. The consistency was evident in most cases as the administrators' requests were often supported by petitions from the local population. Symbolic of this favourable evolution is the case of Bourg-Saint-Maurice where, by legalising fifteen of the twenty schools and authorising the opening of two free schools, the academic administration largely satisfied the demands of the town council and authorised it to pay the teachers slightly less than the norm. Also, in January 1869, the commune, which had not complied with the 1864 regulations, agreed to apply the 1867 law.

The State administration organised schools on a municipal level. To this end, it took into account the number of pupils in existing schools and the potential number of schools to be created, as well as the costs associated with each of them. It also ensured that the local schools were not disrupted in favour of an overly decentralised school structure. However, rather than creating posts for assistants in the schools of the chief towns, it often preferred to maintain or create temporary hamlet schools which, in addition to improving winter attendance, made it possible to reduce municipal expenses, particularly in view of the less restrictive salary levels affecting teaching assistants (150 francs for four months compared with 400 to 500 francs a year for an assistant in a school in the chief town in accordance with the 1867 law).

These developments illustrate the pragmatism of the government and its constant concern to adapt to the topographical, demographic, and economic configurations of the communal territories in order to facilitate the schooling of the greatest number of children, even if this was only partial, both in terms of attendance and teaching. In 1878, the number of hamlet schools reached a maximum of 343. Compared

67 ADS, Tac 20: status of primary schools, 1863; 5 T 4, extract from the minutes of the deliberations, CDIP, 12 December 1867; Tac 2, register of deliberations, CDIP, 29 December 1879.

to 1860, the decrease was relatively modest, about 6per cent. In 1880, despite the general prohibition on pupils over the age of thirteen attending a mixed school, their attendance at school was more or less the same as twenty years earlier: hamlet schools accounted for 43 to 60 per cent of public schools in the mountains and 26 to 44 per cent of their pupils.[68] In spite of the exhortations of the school administration to attend them in the summer season mobility towards the schools of the main towns remained limited to about 10 per cent of the pupils, according to the primary education inspector of the Tarentaise.[69] Given the short duration of school time, the low level of the teachers, without a diploma or holding the modest certificate of aptitude for heading the hamlet schools, and the poor material conditions, the teaching provided in these schools was of a lower quality than in the communal schools. It was most often limited to the rudiments of the basic compulsory subjects of the primary school curriculum: religious instruction, reading and writing, arithmetic and the metric system, and needlework for girls.

The relative success of the enrolment in hamlet schools was however, achieved at the cost of the loss of control over the management of their funds by the populations.

Financial assimilation of hamlet schools

With the Annexation, the hamlet schools were forced to join the French school system, not only in the administratively but also in the financial organisation. In this matter, the State administration did not compromise. Private funds contributing to the financing of public schools were gradually integrated into municipal coffers.

In 1860, in the department of Savoie, more than half of the revenues of the foundations were still managed by local lawyers, the proportion being 80 per cent in Tarentaise.[70]. Following the Sardinian monarchy, the new prefectural administration undertook an administrative and financial assimilation. Applying the theory of de facto management which stipulates that without legal authorisation no one can handle public money,[71] it intended to obtain from the representatives in the hamlets that the capital relating to the foundations and school subscriptions be paid into the municipal funds. It tried to put an end to the previous practice, qualified as secretive, while trying to reassure the local administrators and the populations about the use of the funds, which it was not always able to guarantee. Despite repeated reminders, the agents resisted the injunctions and were slow to comply. At the end of the administrative procedure for the submission of accounts, which lasted about two years, some of them, in particular in Tarentaise, supported by their constituents, still continued to claim the private nature of their association and the management of its funds.[72]

The evolution of the inclusion of income from donations and bequests in the departmental primary education budget, as shown in the table below (table 2), confirms the relatively slow pace at which this submission of accounts took place. They

68 Julliard (2019), 631.

69 *Rapports d'inspection générale sur la situation de l'instruction primaire, année scolaire 1879–1880, Savoie*, Paris, Imprimerie nationale, 1881, 6.

70 Ministero dell'istruzione publica, *Notizie statistiche dell' istruzione elementare del regno per l'anno scholatico 1856–1857*, Torino, Stamperia reale, 1858.

71 Article 64 of the law of 18 July 1837 on municipal administration.

72 Julliard (2019), 561.

were not integrated into the public finance system until after the law of 10 April 1867. In 1868, their amount was almost equivalent to that estimated at the end of the Sardinian period (65,000 francs). The last foundations and subscriptions allocated to public schools in the hamlets were integrated into the communal budgets at the turn of the 1880s. In Tarentaise, this success of the administration sounded the death knell of the school consortiums.

Table 2. Ordinary expenditure on public primary education in Savoie in 1865, 1868 and 1871.

Origin of resources	Departmental statistics			Ministerial statistics		
	1865	1868	1871	1865	1868	1871
Gifts and bequests	31 206	67 044	67 516	19 952	67 046	67 516
Communes	205 260	172 346	190 617	116 402	174 458	190 617
School payments	78 423	74 889	63 586	49 171	74 891	63 586
Department and State	47 345	103 050	150 855	63 391	118 680	150 729
Total	**362 234**	**417 329**	**472 574**	**248 916**	**435 075**	**472 448**

Department of Savoie: CGS, reports on the situation of primary education, 1866, 1869 and 1872; Ministerial statistics: Statistique comparée de l'enseignement primaire 1829–1877, 1880, 236–291.

The table presented above reveals a discrepancy in the financial data for the years 1865 and 1868 between, on the one hand, the data from the reports of the education authority inspectors in the department of Savoie and, on the other hand, the data published by the Ministry of Public Instruction. The major discrepancy is the failure to take into account the financial data relating to girls' schools for the year 1865 in the ministerial statistics. However, the importance of donations and legacies in the financing of primary education in Savoie (8.6 per cent in 1865 according to departmental statistics) compared to the very modest proportion on a national scale (0.5 per cent[73]), raises the question of the visibility, in official statistics, of private funds contributing to the financing of public schools.

An invitation to reassess the evolution of primary education expenditure?

The Savoyard case allows us to discuss the results of the 1867 law on a national scale from two angles: the register of hamlet schools, and the broader perspective of the evolution of primary education expenditure on a national scale at the end of the Second Empire. According to the *State of the Empire (Exposé de la situation de l'Empire)*, presented to both Chambers in Parliament on 29 November 1869, nearly 2,000 hamlet schools were created in the two years following the law coming into force.[74] However, one must wonder about their number and the way they were created. On the one hand, the *Statistics of Primary Education for 1872*, assuming the figure to be close to reality, establishes their total number at 2,134,[75] or only 1,346 more than in 1863. On the other hand, and above all, although dozens of hamlet schools may

73 Ministère de l'instruction publique et des Beaux-Arts, *Statistique comparée de l'enseignement primaire 1829–1877 (Comparative Statistics of Primary Education 1829–1877),* Paris, Imprimerie nationale, 1880, 236–99.

74 Published in the *Bulletin administratif de l'instruction publique*, 12, no. 230 (1869), 389.

75 *Statistique de l'instruction primaire en 1872*, Paris, 1872, 11–12.

have been created, most of those counted, as the example of Savoie suggests, had previously existed as free establishments: their inclusion in the statistics now resulted from their recognition as public schools. The evolution of the number of hamlet schools, as shown in the 1872 statistics, confirms this transformation of status for the departments which subsequently had a large number of hamlet schools, such as Lozère (178) and Hautes-Alpes (145).

In his study on *Les dépenses d'enseignement et d'assistance en France au XIX^e siècle (Expenditure on education and assistance in France in the nineteenth century)*, Bruno Théret showed the interest in taking into account private funds for the study of the evolution of expenditure according to activities.[76] This interest is all the more important since part of the funds, in particular donations and bequests, were progressively integrated into communal budgets in conformity with the law of 1867. Thus, in the case of Savoie, the inclusion of income from foundations, estimated at 65,000 francs at the time of the Annexation, in the accounts for public primary education for the year 1865, tended to smooth out the evolution of ordinary departmental expenditure: the increase in the latter between 1865 and 1868 was only about 5 per cent, as opposed to 15 per cent without taking into account the estimated amount of donations and legacies.

In the light of this observation, we believe that the analysis of the evolution of primary education expenditures around 1866–1868 should be re-examined, especially for departments where the proportion of temporary free schools was high before 1867. This re-reading could lead to an adjustment of the evolution of public expenditure on primary education on a national scale and to a reduction in the "brutal increases in the overall amount" of expenditure at the end of the Second Empire and the beginning of the Third Republic (41.5 per cent between 1865 and 1868[77]), as noted by Raymond Grew and Patrick J. Harrigan.[78]

The department of Savoie provides an opportunity to observe the State's school policy towards hamlet schools in a territory where there were many of them. In its desire to make schooling available to all, the State could only take over the schooling practices of mountain societies in the context of the extension of the public primary education service. It gradually decided to organise temporary local schools of lesser quality than the schools in the main towns, thus containing the increase in public expenditure while satisfying families who were anxious to receive education at a lower cost. The law of 1867 enshrined this school policy. In order to facilitate access to education for as many children as possible, the State reconstituted, as it had between 1816 and 1833,[79] a third category of elementary schools, but from then on they were only temporary and dispensed the rudiments, and they existed alongside the other schools where compulsory subjects, and sometimes also optional subjects were taught.

76 Bruno Théret, "Les dépenses d'enseignement et d'assistance en France au XIX^e siècle: une réévaluation de la rupture républicaine," *Annales ESC*, no. 6 (1991), 1335–74.

77 *Statistique comparée de l'enseignement primaire 1829–1877 (Comparative Statistics of Primary Education 1829-1877), op. cit.*, 240–43.

78 Raymond Grew, Patrick J. Harrigan, *L'école primaire en France au 19^e siècle* (Paris: Éditions de l'EHESS, 2002), 249.

79 The ordinance of 28 February 1816 on the formation in each canton of a free and charitable committee to supervise and encourage primary education (article 11) introduced three certificates of ability, the third being limited to the ability to "read, write and calculate."

In contrast to this legislation, the republican government which intended to make the school an instrument of national unification, endeavoured to strengthen the integration of hamlet schools into the network of public elementary schools, in particular by standardising the status of teachers and the curriculum. If, in the mountain departments, it still sought to rationalise the establishment of schools as an economy measure, in others, notably in Brittany, it would show itself to be more generous with the aim of winning their populations over to the Republic.[80]

On the other hand in Italy, the Casati law (1859) for decentralising school organisation called in particular for the freedom to recruit and remunerate unlicensed teachers with fewer than fifty pupils to be maintained. This could not but sustain the traditional operation of most hamlet schools and also lead to an increase in cultural differences with those of the main towns.[81] In the absence of financing through school fees and due to a moderate subsidy policy by the Italian state, the financing of schooling could only be based on the limited budgetary capacity of the communes. The maintaining of a decentralised school system until the beginning of the twentieth century, leaving the hamlet schools to themselves and not allowing ambulatory schools, slowed down the progress of schooling and contributed to perpetuating regional disparities.[82]

In France, on the other hand, the affirmation of school centralisation under republican governments, including with regard to hamlet schools, partly explains the development of elementary school culture and the reduction of regional disparities at the end of the nineteenth century and the beginning of the following century.[83] But since the second half of the twentieth century, the model of the republican communal school and its cost have been called into question. The issue of schooling in rural and mountain areas has once again been questioned by the State and defended by the population and their elected representatives.[84] In a different context, marked in particular by an evanescent rurality, the question of the specificity of schooling in rural areas and the new question of the inequalities in education that it can generate[85] are still being raised.

80 Jean-François Chanet, *L'école républicaine et les petites patries* (Paris: Aubier, 1996), 59–68.

81 Marco Cuaz, *Alle frontiere dello Stato. La scuola elementare in Valle d'Aosta dalla restaurazione al fascismo* (Milano: Franco Angeli, 1988).

82 Gabrielle Capelli, "A Struggling Nation Since Its Founding? Liberal Italy and the Cost of Neglecting Primary Education," in *School Acts and the Rise of Mass Schooling: Education Policy in the Long Nineteenth Century*, ed. Johannes Westberg, Lukas Boser, and Ingrid Brühwiler (Basingstocke: Palgrave Macmillan, 2019), 223–51.

83 Claude Diebolt, Magali Jaoul, and Gilles San Martino, "Le mythe de Ferry: une analyse cliométrique," *Revue d'économie politique* 115 (2005), 471–97.

84 Madeleine Lacouture, "Réseau des écoles et nouvelles pratiques du territoire montagnard: l'exemple des Hautes-Terres du Puy-de-Dôme," *Annales de géographie*, t. 109, no. 616 (2000), 613–30.

85 Charles Moracchini, *Système éducatif et espaces fragiles: les collèges dans les montagnes d'Auvergne* (Clermont-Ferrand: Presses universitaires Blaise Pascal, 1992); Yves Alpe *et al.* (eds.), *L'enseignement scolaire en milieu rural et montagnard*, t. 1 à 6 (Besançon: Presses universitaires de Franche-Comté, 2001–2014).

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Transforming and Financing Intermediate-Level Technical Education During Industrialisation: Sweden 1850–1920

Fay Lundh Nilsson & Niclas Blomberg

Abstract • Around 1900, Sweden had transformed into a modern industrial nation. A three-level technical school system, introduced in the 1850s, ensured that Sweden maintained a strong position among other industrialised countries. In this article, we study changes in the structure and financing of the technical secondary schools, the middle level of the system, between 1850 and 1919. Both local and national actors were important in the structural changes and educational reforms, but government grants remained the same for extended periods, which led to frequent discussions and pleas for increased funding. Low salaries compared to other forms of schooling and competition from the industry gradually became a problem recruiting qualified teachers. However, stakeholders who considered the education of middle-level technicians an important matter pushed for increased funding, improvements in teachers' salaries and employment conditions, and restructuring of the teaching to keep pace with technological development.

Keywords • Industrialisation, technical education, financing of education, educational reforms

Introduction

> It is not only the engineer, the designer, the director of large industrial companies, who for his business must seek light and guidance in the instructions of science. Those who are to lead these enterprises at all different levels are in need of it: yes, even the deepest ranks of the numerous industrial classes can benefit from the applications of science and art for their work.[1]

The mid-nineteenth century is regarded as the beginning of a period of radical economic and societal development in Sweden. At this time, agriculture was still dominant, though mining was also being practised successfully. In the ensuing decades, Swedish economic development benefited from strong demand for export goods, mainly raw materials and simpler industrial products, as other countries increased their investments in railways, industries, and housing. The sawmill industry, for example, gained an early rapid boost thanks to international demand.

Over the course of a few decades thereafter, industrialisation, urbanisation, and modernisation took off and, at the beginning of the twentieth century, Sweden was an established and successful industrial country with an internationally acclaimed

1 SOU 1876:7, *Underdånigt betänkande och förslag angående den lägre tekniska undervisningen i riket* (Stockholm: Ivar Häggströms boktryckeri, 1874), 3. Authors' translation.

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mechanical engineering industry. What made this development possible? As in many other European countries, railway construction had gained momentum, new processes in steel production had been innovated, and extensive institutional changes had been implemented during the latter half of the nineteenth century. Liberalisation of national markets, as well as increased mobility between countries, also contributed to the rapid transformation.[2]

Around 1850, Swedish higher technical education was almost on par with Europe's leading technological institutions. The Technological Institute (*Teknologiska Institutet*)—from 1877 the Royal Institute of Technology (*Kungliga Tekniska Högskolan*)—in Stockholm trained mainly engineers for the large-scale industry and public administration. The craft sector, as well as local and regional-based small and medium-sized industries lacked technically skilled personnel;[3] not only foremen but also people in higher positions mainly received their education through years of practical training at the workplace.[4] Thus, it became clear that a successful technological development required a new technical-education level. Thanks to a proposal from the principal of the Technological Institute, Lars Johan Wallmark, four technical secondary schools—the focus of this article—modelled after the German *Gewerbeschulen*,[5] were established in the mid-1850s in Malmö, Norrköping, Borås and Örebro. Thus, a complete technical-education system was created with the existing technical Sunday and evening schools as the lower level, the technical secondary schools as the intermediate level, and the Technological Institute as the higher-level education.[6]

The firm belief in technology's blessings during the latter half of the nineteenth century became part of the political goal of ensuring Sweden had a position in the race towards modernity and industrialism. Thus, the technical secondary schools became part of a much larger plan that came to affect their development over time, both in terms of the content of the teaching and the financing of the schools. Although the technical secondary schools have been the subject of previous attention as technical educational institutions, the issue of funding has not been addressed before.[7] In this article, we study how the establishment of the technical schools was initially financed and how the interplay between subsequent reforms and financing developed over time.

2 Lennart Schön, *En modern svensk ekonomisk historia: Tillväxt och omvandling under två sekel* (Lund: Studentlitteratur, 2014); Thor Berger and Kerstin Enflo, "Locomotives of local growth: The short and long-term impact of railroads in Sweden," *Journal of Urban Economics*, no. 98 (2017), 124–38.

3 Göran Ahlström, "Technical Education, Engineering and Industrial Growth: Sweden in the Nineteenth and Early Twentieth Century," in *Education, Technology, and Industrial Performance in Europe, 1850–1939*, ed. Robert Fox and Anna Guagnini (Cambridge: Cambridge University Press, 1993), 115–40.

4 Fay Lundh Nilsson, "Sågverksindustrin och utbildningsfrågorna," in *Sågad skog för välstånd: Den svenska sågverksindustrins historia 1850–2010*, ed. Ronny Pettersson (Stockholm: Kungl. Skogs- och Lantbruksakademien, 2015), 418–19.

5 Lars-Johan Wallmark, *Om techniska elementar-skolors inträttande i Sverige* (Stockholm, 1851).

6 Chalmers (*Chalmerska Slöjdskolan*), established in 1829, was already in the 1850s an exception. Wallmark saw Chalmers as one of the better so-called handicraft schools, which could become one of the planned technical secondary schools. However, Chalmers gradually developed towards a level just below the Institute of Technology. See: Rolf Torstendahl, *Teknologins nytta: Motiveringar för det svenska tekniska utbildningsväsendets framväxt framförda av riksdagsmän och utbildningsadministratörer 1810–1870* (Uppsala/Stockholm: Almqvist & Wiksell, 1975), 171, 181, 184.

7 Ahlström (1993).

The remainder of the article is arranged as follows. First, we provide a background of previous research, followed by our research questions and an introduction of our sources and data. This is followed by a section on the funding of the establishment and the early years of the technical secondary schools. The following two sections deal with two major reforms and their financing. The article ends with an analysis of the interaction between reforms and funding.

Background and previous research

Researchers have long been interested in whether there is a connection between technological and organisational development of production and occupational skills in the workforce. According to, for example, Claudia Goldin and Lawrence F. Katz, skilled or more educated labour is more complementary with new technology or physical capital than is unskilled or less-educated labour. [8]

However, it can be argued that such a general reasoning is based on the premise of the average worker. In recent years, attention has been paid to defining different kinds of human capital and its usefulness during periods of industrial development. Research has so far brought forth interesting new results. Of particular interest to the present article are the studies that deal with *upper-tail knowledge* and *intermediate human capital*.

The role of different levels of technical knowledge

The term upper-tail knowledge was first used in 2005 by Joel Mokyr[9] and appeared again some years later in an article by Mokyr and Voth, who argued that "… the Industrial Revolution was carried not by the skills of the average or modal worker, but by the ingenuity and technical ability of a minority."[10] The term has subsequently been used by several researchers. For example, Maria P. Squicciarini and Nico Voigtländer distinguish between average human capital and upper-tail knowledge, the latter embodied in the presence of "knowledged elites".[11] Claude Diebolt, Charlotte Le Chapelain, and Audrey Rose Menard also refer to Mokyr's idea that human capital may consist of several different parts and that these can be combined in different ways. Thus, a specific combination may prove "useful" for economic growth, while other kinds of human capital do not contribute to economic development.[12] Of particular relevance to the present article is their use of the term intermediate human capital. The term is defined as "intermediate skills formed by the diffusion of basic general knowledge that goes beyond basic literacy and numeracy skills."[13]

8 Claudia Goldin and Lawrence F. Katz, *The Race between Education and Technology* (Cambridge: The Belknap Press of Harvard University Press, 2009), 93–94.

9 Joel Mokyr, "Long-Term Economic Growth and the History of Technology," in *Handbook of Economic Growth, vol. 1*, ed. P. Aghion and S. Durlauf (Amsterdam: Elsevier, 2005), 1113–80.

10 Joel Mokyr and Hans-Joachim Voth, "Understanding Growth in Early Modern Europe," in *The Cambridge Economic History of Europe*, ed. Stephen Broadberry and Kevin O'Rourke (Cambridge: Cambridge University Press, 2009), 35.

11 Maria P. Squicciarini and Nico Voigtländer, "Human Capital and Industrialization: Evidence from the Age of Enlightenment, *The Quarterly Journal of Economics* 130, no. 4 (2015), 1877–78.

12 Claude Diebolt, Charlotte Le Chapelain, and Audrey Rose Menard, "Neither the Elite, nor the Mass: The Rise of Intermediate Human Capital during the French Industrialization Process," *Cliometrica* no. 15 (2021), 168.

13 Diebolt, Le Chapelain, and Menard (2021), 169.

It differs from specific vocational skills by not targeting any specific occupation; instead, it consists of general knowledge in basic scientific and technical subjects, foreign languages, law, and trade. Thus, it also differs from scientific knowledge that only occurs in an intellectual elite.[14]

Technology transfer

The Swedish state's interest in investing in technical education in the early nineteenth century originated in two different lines of argument: the need for more people to engage in productive occupations in the industry, followed by higher social mobility, and the need to create an internationally competitive Swedish industry.[15]

The subsequent emergence of a technically knowledgeable Swedish workforce for the industry can be seen as a two-step process in which international influence played a determining role. The first step involved technology transfer via technically interested agents directly to the industry. The second step concerned building and institutionalising technical education inspired by the teaching models of more developed countries.

Technical knowledge is not only disseminated through institutions, but also through "immaterial matters, such as ideologies, knowledge, and opinions" carried by agents such as individuals, newspapers, and journals. However, for a successful transfer to take place, there must be a positive cultural climate and a sufficient level of knowledge.[16] In the case of Sweden, both prerequisites seem to have existed in the early 1900s. Even before the introduction of compulsory elementary schooling in 1842, the majority of the Swedish population was partially literate, which was an effect of the Church Act of 1686, which stipulated that every adult Swede should be able to read the most important religious texts. Although the general level of education of the population was low, this partial literacy provided a cultural breeding ground for the interest in education in general. As we will see later on, on an individual level, Lars Johan Wallmark's proposal in the 1850s for the establishment of technical secondary schools was strongly inspired by his personal contacts in Germany, as was the work of later reformists.

Personal contacts and an industrial culture also played significant roles in the localisation of the technical secondary schools in the early 1850s. Strong local industrialists and other prominent people with well-developed connections with representatives in parliament were important for the final decisions on the localisation of the four technical secondary schools.[17]

Another inflow of technical knowledge became common in the late nineteenth century when educated Swedish technicians brought back knowledge to Sweden.

14 Ibid.

15 Torstendahl (1975), 202–44.

16 Karl Gunnar Hammarlund and Tomas Nilson, "Technology in Time, Space, and Mind: An Introduction," in *Technology in Time, Space, and Mind: Aspects of Technology Transfer and Diffusion*, ed. Karl Gunnar Hammarlund and Tomas Nilson (Göteborg: Forskning i Halmstad 13, 2008), 10–11. See also: Lars G. Sandberg, "The Case of the Impoverished Sophisticate: Human Capital and Swedish Economic Growth before World War I," *The Journal of Economic History*, vol. 39 (1979), 225–41.

17 Fay Lundh Nilsson and Per-Olof Grönberg, "Inget för de lärde? Diskussionerna om lokaliseringen av de tekniska elementarskolorna i Sverige i mitten av 1800-talet," *Historisk Tidskrift* 139, no. 2 (2019), 251–81.

This could be done in two ways. The first was through engineers, who after several years of study at world-leading polytechnical schools, mainly in German-speaking countries, returned to Sweden. The second was through engineers who had studied in Sweden but found jobs in countries such as Germany and the United States, especially within the mechanical, electrical, and chemical industries.[18] As recent research shows, graduates from the technical secondary schools also went abroad for further study and some years of work.[19]

Financing of education

In addition to the large literature on human capital and its relation to industrialisation processes, there is a large and growing literature on education and its effects on society. Part of this literature is historical, dealing with the experiences of various countries with respect to the rise of mass education during the period of industrialisation. However, the literature focusing on the history of how these great undertakings were financed remains relatively scarce.[20] Scarcer still is historical literature on the funding of technical education.

In the case of Sweden, local taxes levied in-kind were essential to the early growth of the primary school (*folkskolan*) in the 1840s and onwards, making schooling affordable when monetary means were not readily available locally.[21] Teachers' wages were not always sufficient and there is evidence that the rural teachers often were engaged in a livelihood diversification.[22] The point of livelihood diversification is also interesting from a technical education point of view, as many primary school teachers were also engaged in the so-called technical Sunday and evening schools that were established in small numbers from the early nineteenth century.[23] Around 1850, there were nine such schools, often labelled as handicraft schools (*slöjdskolor*).[24]

Another study that deals with educational finance is Peter Lindert's *Growing Public*. Lindert argues that, in contrast to traditional theories on the expansion of mass education that often emphasise elite self-interest, other explanatory factors, such as decentralisation and democratisation, allowed local governments to decide auton-

18 Per-Olof Grönberg, *The Peregrine Profession: Transnational Mobility of Nordic Engineers and Architects, 1880–1930* (Leiden/Boston: Brill).

19 Fay Lundh Nilsson and Per-Olof Grönberg, "A Technical Workforce for Regional Industrial Development? Origin and Dispersion of Graduates from the Technical Secondary Schools in Malmö and Borås 1855–1930," *Scandinavian Economic History Review* (2021). Published online: 01 April 2021.

20 Anne Berg et al., "Introduction: The History of Educational Finance," *Nordic Journal of Educational History* 2, no. 1 (2015), 3–22.

21 Johannes Westberg, "When Teachers Were Farmers: Teachers' Allotted Farms and the Funding of Mass Schooling, 1838–1900," *Nordic Journal of Educational History* 2, no. 1 (2015), 4–22; Johannes Westberg, "Making Mass Schooling Affordable: In-kind Taxation and the Establishment of an Elementary School System in Sweden, 1840–1970," *Pedagogica Historica* 52, no. 4 (2016), 349–63.

22 Johannes Westberg, "How Did Teachers Make a Living? The Teacher Occupation, Livelihood Diversification and the Rise of Mass Schooling in Nineteenth-Century Sweden," *History of Education* 48, no. 1 (2018), 19–40.

23 Lars Larsson, *Industri- och hantverksutbildning under två sekler*, Föreningen för svensk undervisningshistoria, volume 194 (Uppsala: Universitetstryckeriet, 2001); Per Hartman and Sven Hartman, "Hantverksskolning eller karaktärsfostran? Den slöjdpedagogiska debatten i Sverige under 1800-talets senare hälft," *Techne* 25, no. 2 (2018), 4.

24 Brita Wernlund, *Några drag i den svenska yrkesutbildningens utveckling* (Stockholm: Author, 1965), 21–73.

omously on matters of educational spending without interference from the central government.[25]

The Industrial Revolution might have been driven by a minority in possession of upper-tail knowledge, as Mokyr argued, but in order to operate and maintain the means of production that these elites invent, a much larger labour force with many different types of skills is required. The emergence of the technical secondary schools can be seen as a recognition of this—albeit possibly unconsciously—by the industrialists, educationalists, and politicians at the time. When it comes to the financing of technical education, especially during the early years, the research is rather fragmented. Anders Hedman devotes a few pages to the subject in his treatment of technical (vocational) education reforms in the 20th century, but his exposition of financial matters does not extend to the 19th century.[26] Similarly, although the work of Lennart Nilsson contains several references to financial matters, his main focal point is not the financing of technical education and his treatment is largely constrained to what is already contained in the government reports.[27]

Although the financing of Swedish technical education is mentioned in a plurality of places, it is always fragmented and is never the focus of attention, but brought in by authors as a part of a different narrative. Thus, more systematic studies are needed to form a more complete picture. One important lesson that we draw from the emerging body of research into educational finance is that *finance* does not simply mean money. Rather, it should be thought of as pertaining to funding—who is funding, for what reasons and under what circumstances. For instance, how the 19th century primary school teachers lived is a part of this conceptualisation of financing. Thus, the study of educational finance requires that we study broadly the overarching societal and institutional context. For this reason, the article will also focus on reforms and legislation.

Research questions

As is evident from the literature review above, the financing of the technical secondary schools should be seen in a larger perspective. The state's early interest in productive activities and international competition, the elite's self-interests, the industry's demand for technical knowledge, and the local communities all played different but significant roles during 70 years of financing the technical secondary schools. In this article, we explore various aspects of the funding of these schools.

Firstly, we examine the financing of the technical secondary schools from the establishment in the 1850s, during the reform periods in the 1870s and the late nineteenth century until the end of the school form in 1920. We ask the following questions:

- What role did the state, municipalities, and private financiers play in the establishment of the technical secondary schools in the 1850s and did the relationship between the financiers change over time?

25 Peter Lindert, *Growing Public*, vol. 1 (Cambridge: Cambridge University Press, 2004), Chapter 5.

26 Anders Hedman, *I nationens och det praktiska livets tjänst: Det svenska yrkesutbildningssystemets tillkomst och utveckling 1918 till 1940* (Umeå: Pedagogiska institutionen, Umeå universitet, 2001).

27 Lennart Nilsson, *Yrkesutbildning i nutidshistoriskt perspektiv* (Göteborg: Acta Universalis Gothenburgensis, 1981).

- Did changes in the schools' teaching/teaching assignments, due to the official reports in the 1870s and early twentieth century, involve increased financial commitments from the state, the local community, and other financiers?

Secondly, in the 1850s the technical secondary schools were an entirely new type of schooling on a new intermediate level between the existing Sunday and evening schools and the Technological Institute. Therefore, we ask the following question:

- What conclusions can be drawn regarding the technical secondary schools' status and significance as seen from stakeholders in industry and the government?

Thirdly, an important issue that came up in the discussions about the establishment of technical secondary schools was the availability of teachers. The cities of learning, which wanted but did not get technical secondary schools, used the availability of teachers as an argument for choosing these cities. Despite the shortcomings of other cities in terms of the supply of teachers, the parliament chose to establish the first four schools where there was already a somewhat developed industrial activity.[28] Here, we ask the following question:

- To what extent did the necessity of being able to recruit qualified teachers influence the reforms concerning teachers' wages?

Definitions and limitations

When the technical secondary schools were introduced, and up to the beginning of the twentieth century, only two educational levels were used in the official reports on technical education. According to this system, the technical secondary schools were regarded as lower technical education institutions. In this article, we prefer to use the term intermediate technical education, which Diebolt et al. define as "Basic scientific and technical knowledge (linear drawing, geometry and mechanics, chemistry and physics, mathematics, marine and hydrography) …".[29] We do so because the division into three levels better reflects the purpose of Wallmark's comprehensive technical education system.

Our exploration of these schools has certain limitations. Concerning the detailed financing of the technical secondary schools on the central level, we have, within the framework of the resources available to us, chosen to focus on the government grants and the teachers' wages. On the local level, we take a closer look at the school in Malmö, supplementing this with material from the other schools.

Sources and data

The rapid development of the natural sciences and the subsequent technical application of new scientific findings gradually led to a more or less acute need for a revision of the entire technical education field in the 1870s. The first official report, published in 1873, considered higher technical education. The appointed committee examined the extent to which other independent technical schools could be merged with the

28 Lundh Nilsson and Grönberg (2019), 265–66, 270, 274.

29 Diebolt, Le Chapelain, and Menard (2021), 169.

Technological Institute.[30] This report was the starting point for a broader review of Swedish technical education. The committee's discussions about scientific and technological development and its detailed comparisons with other countries' technical education also formed the background for the next inquiry, which dealt with the lower technical education, including the technical secondary schools.[31] This report was published and sent out for expert opinion in 1874.[32] The report, as well as the comments sent to the committee from the schools, are invaluable for understanding what had become of Wallmark's proposal. A new investigation was initiated in 1907 and led to the publication of two official reports in 1911 and 1912.[33] These reports present a broad overview of the results of the first reform and a detailed description of the background and proposed implementation of the successor of the technical secondary school—the specialised technical school (*fackskolan*).

Financing

The official reports also contain some discussions about financial matters, including some details that are hard to find elsewhere. However, when it comes to the financing of the schools, the most important source is the reports of the national accountants (*Riksdagens revisorers berättelse*).[34]

The Swedish parliament recently underwent a process of digitalisation in which older documents from 1521 to 1970 were made available online. Available material includes propositions, motions, minutes, and committee reports. Currently, only the period from 1867 is searchable via the parliament's home page. From these reports we can obtain a yearly view into the finances of the technical secondary schools, which enables us to see how income, expenses, and government grants changed over time. However, the data have a few limitations. Firstly, the reports only appear yearly after 1866—the year when the bicameral parliament replaced the estates. Secondly, there is a tendency for the categories used in the reports to change from time to time. This makes a detailed comparison along the temporal dimension difficult for all but some areas, such as wages. Thirdly, it seems that the schools did not always report other income sources to the parliament; comparisons with the other main source, the accounting books from the school in Malmö, covering the period 1855–1876, show, for example, that interest from certain funds was not reported.

We should also mention the choice of monetary units used in this article. The Swedish currency system in the 19th century was quite complex, with five different *riksdaler* in addition to a few other currencies.[35] Until 1873, *riksdaler*, *riksdaler*

30 SOU 1874:2, *Underdånigt betänkande och förslag angående åtskilliga läroverks förening med Teknologiska Institutet och bildandet av en Teknisk Högskola* (Stockholm: Ivar Häggströms boktryckeri, 1873).

31 SOU 1876:7, *Underdånigt betänkande och förslag angående den lägre tekniska undervisningen i* riket (Stockholm: Ivar Häggströms boktryckeri, 1873).

32 According to the Swedish SOU-system used for official reports where reports are numbered after publication year, there seem to be an inconsequent numbering of this report.

33 SOU 1918:10, *Underdånigt utlåtande och förslag till den lägre tekniska undervisningens ordnande I* (Örebro: Länstidningens tryckeri, 1912); SOU 1918:10, *Underdånigt utlåtande och förslag till den lägre tekniska undervisningens ordnande II* (Örebro: Länstidningens tryckeri, 1911). Note that the first part was published after the second part.

34 See: https://www.riksdagen.se/sv/dokument-lagar/hitta-aldre-riksdagstryck (in Swedish).

35 Rodney Edvinsson, "Swedish Monetary Standards in Historical Perspective," *Stockholm Papers in*

banco, *riksdaler specie*, *riksdaler riksgälds*, *riksdaler riksmynt* were in use, with values changing over time. For instance, between 1855 and 1873, one *riksdaler* was defined as two-thirds of a *riksdaler banco*, one-fourth of a *riksdaler specie*, four *riksdaler riksgälds*, or one *riksdaler riksmynt*.[36] The system was consolidated after 1873 and in the new units one *krona* was equal to one *riksdaler*.

This diversity creates a problem when studying various points in time, especially since the units are sometimes mixed within the same source. In this article, we have decided to report monetary units as they are given in the sources, except when looking at changes over longer periods of time, in which case we have converted to *kronor* to make a comparison possible. Before 1873, we have taken the value of one *krona* to equal one *riksdaler* in order to enable us to make comparisons.

The government grants were divided into so-called ordinary and extraordinary grants, with the former accounting for the majority of the grants. The latter were changed three times—in 1856/58 a few years after the schools' inception, in 1876, and in 1905—but otherwise remained largely constant during the period of study. Thus, three subperiods can be identified here: the period until 1876, including the changes in the initial years; the period 1877 to 1905; and the period 1906 to 1919. Extraordinary grants were used for temporary expenses and were almost never allocated before the turn of the century, except for a short period in the 1870s in preparation for the first major reform.

The technical secondary schools

As director of the Technological Institute, Wallmark was well acquainted with the status of domestic technical education, but he had also studied the development of technical education in other European countries.[37] It was, above all, the German technical three-level education system that inspired Wallmark when he presented his ideas about a new type of school—the technical secondary school. The German system consisted of technical institutes/polytechnical schools at the higher level; technical secondary schools, including the *Gewerbeschulen*, at the intermediate level; and Sunday and evening schools at the lower level.[38] In Wallmark's proposal, as well as in later reform proposals, the *Gewerbeschulen* played an important role. Meyers' *Konversations-Lexikon* characterised the *Gewerbeschulen* as "Institutions in which the prior knowledge and the basics of professional knowledge for higher craftsmanship and the industry are taught."[39] The *Gewerbeschulen* were organised in close cooperation with industrial and trade organisations, which also handled the management and financing of the schools together with governmental official.

They also functioned as a preparation for higher-level technical education.[40] The already-existing German system for technical education and Wallmark's ideas for

Economic History, Department of Economic History, Stockholm University, no. 6 (2009): 26.

36 Calculations based on: Edvinsson (2009), 26.

37 Wallmark (1851), 5.

38 Ibid., 16.

39 *Meyers Konversations-Lexikon* (Leipzig and Wien: Autorenkollektiv, Verlag des Bibliographischen Instituts, 1885–1892), search word "Gewerbeschule". Authors' translation.

40 Alexandra Semrad, "Modern Secondary Education and Economic Performance: The Introduction of the Gewerbeschule and Realschule in Nineteenth-century Bavaria," *Economic History Review* 68, no. 4 (2015), 1311–12.

a similar solution in Sweden fit well into recent research's distinctions on different types of human capital. For Sweden, Wallmark's proposal meant that the existing Sunday and evening schools and the new technical secondary schools would convey what Diebolt, Chapelain and Menard characterise as basic and intermediate human capital (see also Definitions and limitations), while the Institute of Technology would stand for what Squicciarini and Voigtländer, in the spirit of Mokyr and Voth, call upper-tail knowledge.[41]

Wallmark proposed Stockholm and Malmö as the first cities that should have a technical secondary school. The first proposition for the secondary technical schools in 1850/51 called for a yearly grant of 6,600 *riksdaler* to each of the proposed schools.[42] The standing committee of supply (*statsutskottet*) was initially sceptical and recommended the four estates to reject the proposition—introducing yet another school with similar existing subjects was not seen as the best way to use the resources of the state.[43] However, three of the four estates in parliament submitted objections to this stance, with the Peasants (*bondeståndet*) being the only estate supporting it. It was generally felt that technical secondary school should give instruction in subjects not readily available in general schools, such as modelling, chemistry, physics, and accounting.[44] With three of the estates objecting, the standing committee of supply changed its stance, recommending the chambers to agree to the introduction of one school, with a yearly grant of 5,000 *riksdaler,* which was 1,600 *riksdaler* less than the initial proposal.

By comparison, a decade earlier the upper secondary school *Stockholm's Gymnasium* with five teachers had received a yearly government grant of 5,640 *riksdaler*.[45] In addition, the technical school in Eskilstuna received a government grant of 5,000 *riksdaler* in 1856/58 on the condition that the city covered costs for rent, heating, and furniture.[46] We can see that although there was some dissatisfaction with the size of the grants (see discussion below), it seems 5,000 *riksdaler* was not an uncommon grant in other schools as well.

In Stockholm, neither the city board nor the parliament showed any interest in financing such a school since they meant that they had enough of the costs for the existing handicraft school. The city of Malmö, on the other hand, had in 1850 applied for a state grant to start a school that would prepare for higher technical studies. Unlike Stockholm, Malmö was also willing to pay for teaching facilities. A fundraising drive preceding the application for a state grant had collected 3,125 *riksdaler banco* from 122 Malmö citizens, some of which were prominent manufacturers and businessmen (see Table 1). The three largest contributors, with 200 *riksdaler* each, were Mathias Flensburg, a merchant and the city's largest shipowner, board member of the Navigation school, and founder of *Malmö Sparbank*;[47] Lorentz Isak

41 Diebolt, Le Chapelain, and Menard (2021); Squicciarini and Voigtländer (2015); Mokyr (2005); Mokyr and Voth (2009).

42 Proposition no. 1 (1850/51), 50–54.

43 Statsutskottets utlåtande no. 87 (1850/51), 21.

44 Statsutskottets memorial no. 152 (1850/51), 16.

45 Statsutskottets utlåtande no. 62 (1840/41), 8.

46 Statsutskottets utlåtande no. 122 (1856/58), 69.

47 Mathias Flensburg, https://sok.riksarkivet.se/sbl/artikel/14228, Svenskt biografiskt lexikon (article by Bengt Hildebrand), retrieved 2021-10-21.

Bager, a merchant and local politician;[48] and Frans Henrik Kockum the elder, also a local politician but most importantly the founder of what would become one of Sweden's largest mechanical workshops.[49]

Table 1. Fundraising drive for a technical school in Malmö 1850—contributors and contributions

Number of contributors	Contribution (riksdaler banco)	Sum (riksdaler banco)
3	200	600
9	100	900
2	66	132
9	33	297
6	25	150
18	20	360
7	16	112
3	13	39
27	10	270
38	< 10	290
Sum: 122		**3,150**

Source: G2: 1, in G2 Kassaböcker (Cash books), Tekniska elementarskolan i Malmö 1853–1966 (Malmö Technical Secondary School 1853–1966), Malmö stadsarkiv (Malmö City Archive).

A technical secondary school was established in Malmö in 1853. During the next parliament session of 1853/54, the parliament decided on three more schools—in Borås, Örebro and Norrköping—each receiving a grant of 5,000 *riksdaler*. As was the case in Malmö, co-financing from the cities was a prerequisite for obtaining government grants.[50]

All four schools saw their grant increased to 12,000 *riksdaler riksmynt* at the parliamentary session of 1856/58. The schools were also granted a one-time sum of 4,500 *riksdaler* each to use for acquisition of equipment. The background to the increase in government grants was a motion in the Clergy (*prästeståndet*), represented by member of parliament and dean in Örebro, Wilhelm Gumælius, and treated by the standing committee of supply.[51] The motion problematised the initial decision of 1850, which saw the government grants to the schools set 1,600 riksdaler lower than the initial proposition of 6,600 riksdaler. Since the initial proposal was already strained, this put additional pressure on the cities to supply the remaining 1,600 riksdaler, in addition to the facilities also supplied by the same cities. It was considered unfair that a city which fulfilled the requirements should be forced to supply an additional contribution.

The insufficiency of the grants was said to be most noticeable in the effects on teacher supply, an important theme that would recur later on in the period of study

48 Lorentz Isac Bager, https://sok.riksarkivet.se/sbl/artikel/18984, Svenskt biografiskt lexikon (article by B. Boethius.), retrieved 2021-10-21.

49 Carl Frans Henrik Kockum, https://sok.riksarkivet.se/sbl/artikel/11704, Svenskt biografiskt lexikon (article by Rune Kjellander), retrieved 2021-10-21.

50 Lundh Nilsson and Grönberg (2019), 262, 270–72.

51 Statsutskottets utlåtande no. 122 (1856/58), 64–69.

as well. To create a favourable environment in which technically skilled teachers would have an incentive to stay for a longer period, and not move to more lucrative employment opportunities within the industry, the wages needed to be improved; for this to be possible, a more generous grant was deemed necessary.

Gumælius included a budget table for the first year in the Örebro school, which is reproduced here in Table 2. For the first year, the principal received 800 *riksdaler*, while other teachers received at most 666 *riksdaler*. This situation was compared to the teachers in the upper secondary schools, where the most junior teacher would receive approximately 1,300 *riksdaler*. This comparison between the technical secondary schools and other school forms is an important point that we will return to below. The discussion led to an increase in the budget of the schools to 12,000 *riksdaler* each.

Table 2. Budget for the first year of the technical school in Örebro (*riksdaler banco*—nominal values)

Specification	**Wage**
Principal's wage	800.00
Wages for the teacher in …	
Mathematics	666.32
Chemistry	666.32
Physics	350.00
Mechanics	300.00
Linear drawing	200.00
Free-hand drawing	200.00
Shop floor work	333.16
Language	533.16
Botany and zoology	133.16
History and geography	133.16
Other expenses	
Janitor	200.00
Library	33.16
Laboratories	200.00
Lighting, firewood, cleaning, etc.	250.00
Total	**5,000.00**[a]

Source. Statsutskottets utlåtande No:122, 1856–58, 66.
Note. The data given in the report seem to contain an error, as the sum total is actually 4,998.44 *kronor*.

The early years

According to the first regulations, the aim of the schools in Malmö, Borås and Örebro was twofold: to provide necessary elementary knowledge to those who wanted to engage in industrial occupations and to prepare for entry into higher technical education.[52] The aim of the Norrköping school was strictly set to prepare for an occupation.[53] Entrance requirements were the same for all schools; the applicant should have reached the age of 14 and be able to present grades either from an educational institution or from a private teacher. In some cases, admission tests could be arranged. Admitted students paid a tuition fee; in Malmö, for example, this amounted to 12.50 *Riksdaler banco* per term in 1854[54]—a sum equivalent to around 160 working hours for an average worker in the mechanical industry.[55]

Right from the start, a three-year education was offered in all schools except Örebro, which due to financial problems during the first years only managed to offer two years of education.[56] In Norrköping, after the first year students were divided into two different programmes—the mechanical and the chemical programme[57]—while the other schools, up until the late 1870s, offered the same education for all their students. The content of the teaching also differed, partly due to different local and regional industrial traditions, and partly due to the schools' different orientation in terms of preparing for higher studies. In the late 1850s, general subjects such as history, geography, and languages held a relatively prominent position in Malmö and Borås. Appendix 1 and appendix 2a–2c shows a timetable from Malmö technical secondary school in the spring term of 1857. Over time, these schools approached the stronger technical concentration of the schools in Norrköping and Örebro (Table 3).

Table 3. Amount and share of total teaching: technical/natural science and general subjects up to around 1872

	Malmö		**Borås**		**Örebro**		**Norrköping**	
Subjects	Hours	%	Hours	%	Hours	%	Hours	%
Technical/natural science	3,380	84	3,180	74	2,850	88	3,160	93
General	660	16	1,122	26	400	12	250	7
Total	**4,040**	**100**	**4,302**	**100**	**3,250**	**100**	**3,410**	**100**

Source: Malmö 1876:7 (1874), 24; Borås (do), 27; Örebro (do), 20; Norrköping (do), 12.

52 See, for example: SFS 1856:18, *Stadgar för tekniska elementarskolan i Örebro* (NA, 1856).

53 SOU 1876:7 (1874), 11.

54 G2:1 1850–1859, Kassaböcker (*Cashbooks*), Malmö Tekniska Elementarskola (*Malmö Technical Secondary School*), Malmö Stadsarkiv (*Malmö City Archives*).

55 Calculated after: Svante Prado," Nominal and Real Wages of Manufacturing Workers, 1860–2007," in *Historical Monetary and Financial Statistics for Sweden, Volume I: Exchange rates, Prices and Wages, 1277–2008*, ed. Rodney Edvinsson, Tor Jacobson, and Daniel Waldenström (Stockholm: Ekerlid, 2010); Rodney Edvinsson and Johan Söderberg, "A Consumer Price Index for Sweden 1290–2008," *Review of Income and Wealth* 57, no. 2 (2011), 270–92.

56 Otto Gallander, "Bidrag till tekniska läroverkets i Örebro historia," in *Tekniska föreningen i Örebro 1875–1925: Minnesskrift utgiven med anledning av föreningens femtioåriga verksamhet*, ed. E. Forsberg and E. Adlers (Stockholm: Bröderna Lagerström, 1925), 34–35. (accessed January 5, 2021).

57 SOU 1876:7 (1874), 12.

The accounting books from the school in Malmö allow us to paint a partial picture of what the government grants were used for in this initial period. In 1858, wages accounted for just over 81 per cent of the grants, while the remainder were distributed to the library (eight per cent), machinery (four per cent), the workshop (two per cent), and other minor expenses.[58] Between 1870 and 1878 we can see that around 70–75 per cent of the grants were used for wages.[59]

We have seen how, in the mid-19th century, Wallmark's proposal gave rise to the technical secondary schools aiming to provide a set of intermediate skills that were considered necessary for the progress of the nation. However, here we should remind ourselves that although the fluent narrative might suggest so, the development of a nation is not a simple task. There are many variables to balance when the budget is created, and there are many stakeholders with potentially conflicting goals.

We are reminded of this in the parliamentary session of 1850/51, where the standing committee of supply recommended that the proposition be rejected. Another example can be found in Stockholm, where neither the city council nor the parliament wanted to fund another school. Lastly, we can see this in the discussion of insufficient wages that arose early on in the period. The latter is an important point of discussion that will recur in the period between the two major reforms, the first of which will be discussed in the next section.

Economic development and educational reforms

From the 1850s, parts of the emerging Swedish industry developed at a rapid pace. Mechanisation and new types of energy, such as steam engines and hydroelectric power, contributed to the rapid growth of large industries. Until the end of the 1860s, the domestic market was the driving force. Cotton weaving mills, mechanical workshops, soap factories, and match factories were among the first branches to show high annual percentage growth. During the period from 1850 to 1870, the sawmill industry was the leading Swedish export industry, but at the end of the period new export sectors, like the pulp and paper industry and the dairy industry, became increasingly important. The following decades saw new industries stimulated by a growing domestic market. Carpentry shops, glassworks, porcelain factories, and sugar mills were among the most fast-growing industries, as were those producing more luxurious consumption goods like tobacco and beverages.[60]

The ensuing transformation of the Swedish industry, starting in the 1890s, meant that new sectors, such as the engineering industry, became the motors of growth. The global economy favoured Sweden—abundant natural resources attracted foreign capital. The inflow of capital and outflow of labour, the latter due to extensive migration, caused wages to rise. As a consequence, domestic demand for consumer goods as well as for machines for the expanding industry increased rapidly. Taken together, these factors led to the Swedish economy becoming the fastest-growing in

58 G2:1 1850–1859, Kassaböcker (Cashbooks), Malmö Tekniska Elementarskola (Malmö Technical Secondary School), Malmö Stadsarkiv (Malmö City Archives).

59 G2:3 1870–1877, Kassaböcker (Cashbooks), Malmö Tekniska Elementarskola (Malmö Technical Secondary School), Malmö Stadsarkiv (Malmö City Archives).

60 Lennart Schön, *An Economic History of Modern Sweden* (London & New York: Routledge, 2012), 102–3.

the world between 1890 and 1930.[61] However, the government and representatives of both industry and academia were, on several occasions, concerned that technical education in Sweden did not maintain the same level as in other, competing countries. Two major reforms—the first in the middle of the 1870s, the second in the early 1900s—will be briefly examined below.

The first major reform

In 1872, the Swedish Government appointed an inquiry into the existing technical education. The result was two official reports in 1872 and 1874. The former dealt with a reorganisation of the Technological Institute into a university of technology,[62] while the latter concerned the lower technical education, including the technical secondary schools.[63] In the 1872 report, the committee stated that Sweden could not remain passive to scientific and technological advances due to the ongoing competition between the world's industrialised countries. The committee concluded, rather dramatically, that it was all about a struggle for existence.[64] Another group that had obtained insights about the importance and need for technical education based on theoretical studies was the industrialists, who had earlier relied, more or less, on traditional on-the-job training.[65]

Like Wallmark in the 1850s, the 1874 committee recognised Germany as a country at the forefront in terms of systematisation of elementary technical education. However, the committee did not content itself with the impressions of the German schools. As examples, the well-known *Conservatoire des arts et métier* in Paris, the technical schools in Anger, Aix, and Chalon-sur Marne, which aimed to educate skilled foremen and workers for the mechanical industry, and *La Martinière* in Lyon with the same aim, were mentioned; however, the German *Gewerbeschulen*, which underwent a reorganisation in 1870, again ended up becoming the model for the Swedish technical secondary schools.[66]

The committee highlighted some areas that had to be improved in order to catch up with technological development:

1. *The purpose of the education*—technical secondary schools should concentrate entirely on training leaders at lower levels, such as foremen, leaders in small industries, and leaders in construction. Preparing students for higher technical education should be the responsibility of the upper secondary school (*realskolans högre avdelning*) with its broad general education.[67]
2. *The requirements for prior knowledge*—a large influx of technically interested students and increased knowledge requirements in the industry paved the way for stronger formal entrance requirements, with the junior secondary school (*realskolans lägre avdelning*) as an appropriate level.[68]

61 Ibid., 136–38.

62 SOU 1874:2 (1873).

63 SOU 1876:7 (1874).

64 SOU 1874:2 (1873), 3.

65 SOU 1876:7 (1874), 5.

66 Ibid., 9–10.

67 Ibid., 32–33

68 Ibid.

3. *Specialisation*—technological development called for more specialisation, especially in some larger industries, but many small industries could make better use of all-round technicians. Therefore, the committee proposed a compromise. The division into a mechanical and a chemical programme was recommended for the schools in Malmö, Borås, and Örebro. In Malmö and Norrköping, the two largest cities, a special construction programme would be set up. However, the division should take place as late as possible during the education (Appendix 2a–2c).[69]
4. *A stronger emphasis on technical and scientific subjects*—with prior studies in the junior secondary school, the students had already acquired basic knowledge in general subjects.[70]
5. The *teachers*—fewer teachers with a greater teaching obligation instead of many teachers with other obligations would enhance the quality of the teaching.[71]
6. *Costs*—the proposed reorganisation meant an increase in government costs, with teachers' salaries as the largest expense item, for the four schools by 34 percent (from 61,500 *kronor* to 82,400 *kronor*).[72]

The committee also proposed a reorganisation of the teacher wage system. Now, wages should be per teacher and year, as opposed to a fixed wage per hour of instruction. The committee suggested that the schools maintain a small set of teachers in the main subjects (mathematics and physics, chemistry, mechanics, construction, and practical geometry), while instruction in other subjects could be assigned to non-permanent teachers. The main teachers should have a yearly salary of at least 3,000 *kronor* each, with a seniority allowance consisting of two stages, with one increase of 500 *kronor* after five years, and another increase of 500 *kronor* after another five years.[73] Finally, a position combining the roles of principal and teacher would receive a yearly salary of 4,000 *kronor*.[74]

Although the schools' budget increased in 1856/58 as a result of the motion by Gumælius, we have reason to believe that the status of the teachers remained less favourable than teachers in other educational institutions, at least until the reform. First, one clue comes from the accounting books of the Malmö school. Figure 1 shows the wages paid to teachers between 1855 and 1873 and reveals a remarkable lack of change after the initial increase. Since the values are nominal, we can immediately see that there was no attempt to account for changing price levels in the wages, which seems like an odd notion for such an extended period of time.

69 Ibid., 37–39.

70 Ibid., 48.

71 Ibid. 57.

72 Ibid., 65.

73 Ibid., 62–65; Statsutskottets utlåtande no. 22 (1876), 25–7.

74 Statsutskottets utlåtande no. 22 (1876), 26.

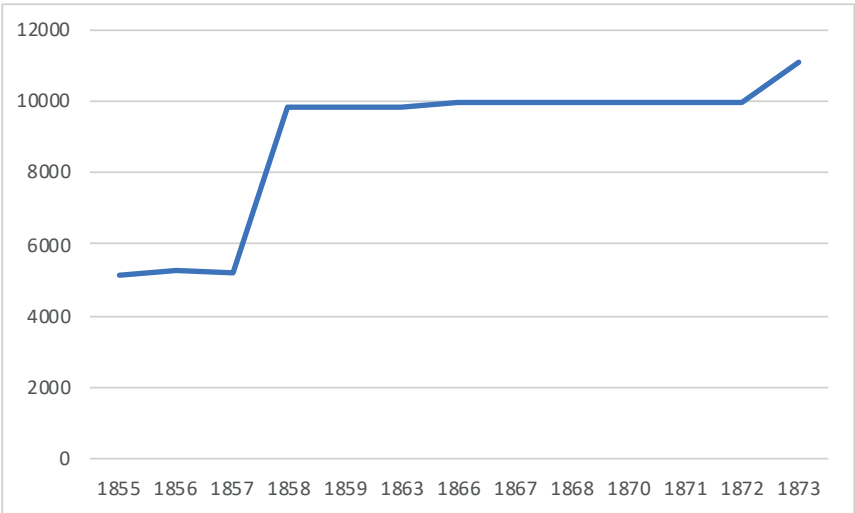

Figure 1. Total wages in the Malmö school before 1873 (*riksdaler banco*—nominal values).
Source. G2: 1, 2 and 3 in G2 *Kassaböcker* (Cash books), Tekniska elementarskolan i Malmö 1853–1966 (Malmö Technical Secondary School 1853–1966), Malmö stadsarkiv (Malmö City Archive).

Second, the technical education committee that delivered its report in 1874 expressed the opinion that the economic premium of a teacher position at these schools was so low compared to the industry that talented individuals should be attracted by offering a more secure position than they had at the time; thus, these teachers should receive a pension according to the same rules as other teachers at the same educational level. Again, we see a comparison and a connection to the more theoretical school forms.[75]

Unfortunately, when the reform was implemented in the late 1870s, a severe economic downturn led to decreasing interest in technical education and, in Malmö for example, the number of students dropped from 102 in 1877 to 51 in 1885. The school in Borås had the same problems recruiting students, with 92 students in 1876 but fewer than 40 students in the mid-1880s. Thereafter, the number of students rose again in both Malmö and Borås, but did not reach its previous level until the turn of the twentieth century.[76]

As industrialisation progressed in Sweden, changing conditions in industry and society gave rise to friction between the purpose of the schools and what they were actually accomplishing. Thus, the spectrum of reform points was rather broad. The committee recognised that teachers' wages were important to the to-be-reformed system. As industry grew rapidly, the system also had to keep up with the changes, or else skilled teachers would not be attracted to the positions offered by the schools. This would become a more pronounced problem near the turn of the century, before the second reform.

75 SOU 1876:7 (1874), 58–59.

76 Fritz Montén, *Malmö teknologförbund: Minnesalbum utgivet i anledning av Malmö tekniska läroverks 75-åriga verksamhet: 1853–1928* (Malmö: Rektor Montén, Tekniska läroverket, 1928), 21; Borås: Database.

It is also useful to compare the technical secondary schools with the technical Sunday and evening schools that were discussed in the same report. The committee also suggested that certain means be made available to support these schools, and for the 15 schools that were counted to this category at the time, a total of 50,000 *kronor* was proposed.[77] This amounts to an average of just over 3,000 *kronor* per school.

The second major reform

Large-scale urbanisation and the expansion of the railway network during the late nineteenth century meant an increasing need for constructional engineers all over the country. Thus, the school in Borås established a construction programme like the one in Malmö and Norrköping in 1897, and Örebro followed in 1902. The most important event, however, was the establishment of a new technical secondary school in Härnösand in northern Sweden in 1901.[78]

Fear that Sweden, despite its strong industrial development, was left behind regarding the share of students taking part in basic technical education and the government grants spent on it, as well as new innovations, such as the use of electricity and the internal combustion machine, led to the appointment of a new committee in 1907, which presented its proposal in 1912. Similar fears were also voiced by groups such as the engineering meetings and the Swedish handicraft organisation (*Sveriges hantverkarorganisation*).[79]

Discussions of this kind can also be seen in the parliamentary minutes. The budget proposition from 1905 contains a detailed report of the wage-situation. In 1899, a third level was added to the seniority allowance, giving an additional 500 *kronor* after five years.[80] This change was due to a series of petitions by the school boards to improve the wages at the schools. However, whereas a seniority allowance with four levels was petitioned for, only one additional level was added. Further petitions from the teachers ensued, and again a comparison with the secondary grammar schools was made. Once again, concerns were voiced that if the wages are not sufficient, skilled individuals will gravitate toward employment in industry instead.[81]

The situation described by the school boards was not simply a hypothetical fear about what could happen if the situation was not improved. In 1895 the teacher in construction, Carl Jacob Magnell, left his position at the school in Borås to seek a more economically feasible position elsewhere. After two rounds of advertisement, the position was finally filled, but the position was open again after only five years. Once again, the position was advertised twice, but this time less successfully. The first round of advertisements received no applicants at all, and while the second round attracted two applicants, neither were qualified. The result was that, at the

77 SOU 1876:7 (1874), 148.

78 SOU 1918:10 (1912), 15. The establishment of a school in Norrland was preceded by a fight between the industrial city of Sundsvall and the city of learning, Härnösand. Unlike the establishments in the 1850s, the school town's educational traditions were considered an advantage. Lundh Nilsson and Grönberg (2019).

79 Nilsson (1981), 54–55.

80 Proposition 1, part 8 (1905), 103. The proposition also comments on the lack of change since the reform in 1877.

81 Ibid., 105.

time of the proposition in 1905, the school still had trouble filling the position, and used substitutes to make the best of the situation.[82]

The standing committee of supply had nothing to object against the proposition, especially given that the wages in the general education system had been reformed the year before.[83] Thus, the teachers in the secondary technical schools would receive increases in their wages of 500 *kronor* after five, 10, 15, and 20 years of service, along with new pension regulations and a system for sick leave. This led to a corresponding increase in the schools' budget, which accounts for the step we see after 1905 in Figure 3 below.

The new committee that was formed two years later criticised the hitherto small amount of specialisation, which despite the introduction of different programmes, was the result of the previous reform. Technological development now called for further specialisation. The committee pointed to five critical areas: (1) an overly long period of study, (2) division of programmes being done too late, (3) too many subjects, (4) too much focus on general, non-technical subjects, and (5) too many compulsory technical subjects instead of greater specialisation in the various programmes. As a solution, a new organisation was presented, according to which educating technicians with practical knowledge should be taken care of by specialised two-year technical schools (*fackskolor*). These should not only specialise in the three above-mentioned programmes, but also in electronics, road and canal building, timbering, textile industry, and the paper and pulp industry.[84] An important aim was to impart the technical knowledge, which together with industrial experience was required by those who were to supervise and manage work in workshops, factories, and other industrial workplaces such as engineering offices and laboratories. Technical schools should also provide knowledge to people who were engaged in business activities within the industry.[85]

The committee's proposal in 1912 was received with some benevolence, but there was also criticism of the decision to shorten the education to two years and the early specialisation. Critics argued that the industry was still in need of comprehensively educated technicians and that education would be too one-sided. The modern industry needed technicians with linguistic and mercantile knowledge that neither the current technical secondary schools nor the new specialised technical schools could provide.[86] A new revised proposal was presented in 1918, probably delayed due to the First World War. The proposal was approved by the parliament, with some minor changes, and a new regulation was issued in 1919 that meant the end of the technical upper secondary school era. The reorganisation started in 1919 with the introduction

82 Ibid., 107.

83 Statsutskottets utlåtande no. 9 (1905), 19–24.

84 SOU 1918:10 (1912), 53–55.

85 Proposition no. 335, *Kung. Maj:ts nådiga proposition till riksdagen angående omorganisation av den lägre tekniska undervisningen* (1918), 6.

86 Montén (1928), 24–25. For more about new knowledge required in the industry, see, for example, Boel Berner, *Sakernas tillstånd: Kön, klass, teknisk expertis* (Stockholm: Carlsson, 1996); Bosse Sundin, *Den kupade handen: Historien om människan och tekniken* (Stockholm: Carlsson, 1991); Alf Johansson, *Arbetarrörelsen och taylorismen: Olofström 1895–1925: En studie av verkstadsindustrin och arbetets organisering* (Lund: Studentlitteratur, 1990).

of the two-year specialised technical school and a three-year technical upper secondary school.[87]

As we have seen, both reforms led to major overhauls of the schools. In terms of funding, this meant that the government grants to the schools saw large increases. From this perspective, 1905 is also an important year as the grants were raised in response to a proposition that was prompted by an ongoing discussion on teacher wages. The comments by the standing committee of supply—that there was noth ing to object to, especially once the wages in the general education system had been reformed—could be taken as a hint that the technical education system was somewhat left behind.

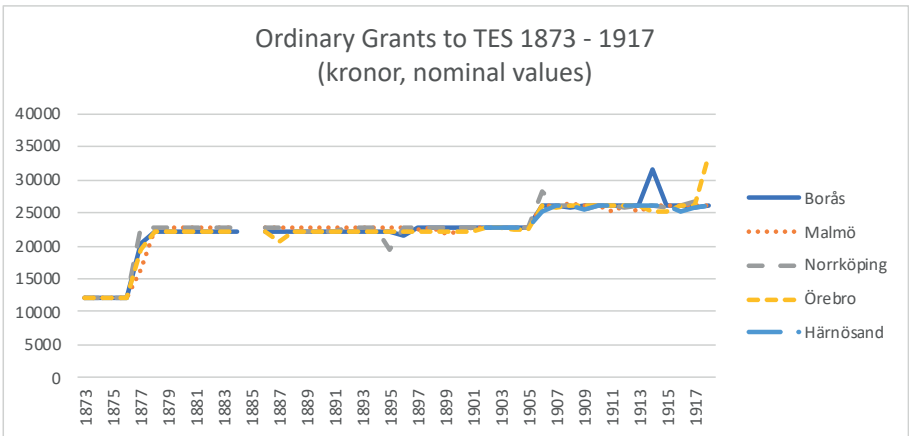

Figure 3. Ordinary grants to technical secondary schools 1873–1917 (in *kronor*—nominal values)
Source. Riksdagens revisorers berättelse för år 1873–1918 (various years. *Note*. The year 1885 is missing from the reports).

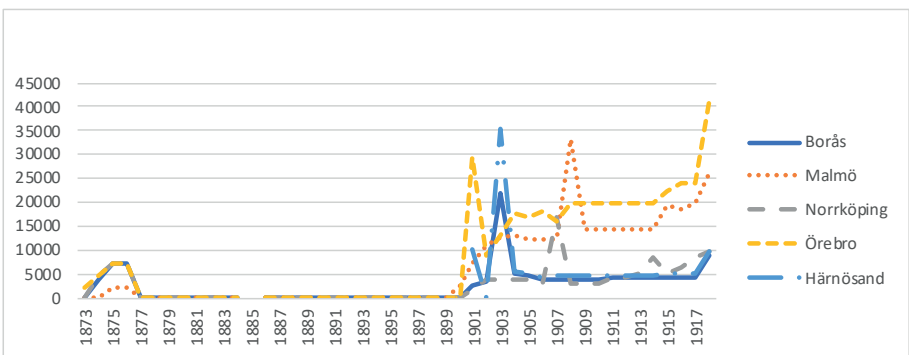

Figure 4. Extraordinary grants 1873–1918 (in *kronor*—nominal values)
Source. Riksdagens revisorers berättelse för år 1873–1918 (various years. *Note*. The year 1885 is missing from the reports).

Figures 3 and 4 exhibit the changes in government grants between the two major reforms. The extraordinary grants in the mid-1870s are in preparation for the coming

87 Montén (1928), 23–24.

reform. The extraordinary grants that are frequently allocated from 1900 seem to have been of a somewhat different nature. As we have seen, at the turn of the century the school boards made several petitions to the government to increase the insufficient wages, which led to a decision of a new wage system in 1905. However, it was not only the wages that were insufficient, but the overall budget. The school in Norrköping reported in 1897 that the 900 *kronor* that were allocated to illumination and heating were insufficient, as these expenses had amounted to 1,800 *kronor* per annum during the period 1887–1896.[88] Also, the Borås school had problems. As the city lacked a gasworks, it had to rely on the more expensive electricity for illumination. Moreover, the expansion of the school's facilities, combined with a sharp increase in fuel prices in the city, led to the school having problems with the heating budget as well.[89]

The reason these expenses were covered via extraordinary grants, and not a raise in the ordinary grants, was that such a change was deemed to require a more substantial investigation before any action could be taken.[90] Thus, we see frequent extraordinary grants in the last subperiod before the next major reform, the two most common purposes being "in support of school operations"[91] and advance borrowing from the next year's grants.

This tendency to not decide on a major change without the support of a formal inquiry is prevalent in parliament, and we believe that it could, at least partially, be responsible for the stepwise nature of the grants over time. When something changes in the factors affecting the system, which the change is political, social, or economic, the actors will eventually perceive this as something that must change. However, to drive a change through parliament, an inquiry must first be instigated, which may take several years to complete. When the inquiry is complete, a proposition can be put forward to parliament.

Thus, the stepwise character in Figure 3 is thought to be due to a resistance to change. However, there are ways to increase the budget to the schools without requiring a major reform, which is the extraordinary grants—by granting the schools a temporary increase, budget requirements can be met without the need to reform the system.

Donations and bequests

We have investigated how the government grants changed over time. However, although the main source of income was the government grants, the schools also received funding from various other actors—both individuals and organisations—throughout the period of study. We have been able to gain some insight into this through the reports in parliament, a book about donations and bequests to the school in Norrköping 1815–1897,[92] the accounting books from the school in Malmö, and a commemorative book on the school in Örebro.[93]

88 Proposition no. 1, part 8 (1900), 306.

89 Ibid., 311.

90 Statsutskottets utlåtande no. 9 (1900), 315.

91 *För upprätthållande av verksamheten*, authors' translation.

92 Unspecified author, *Donationer till tekniska elementarskolan samt Ebersteinska söndags- och aftonskolan i Norrköping—åren 1815–1897* (Norrköping: Norrköpings tidningars aktiebolag, 1900).

93 Martin Lien, *Högre tekniska läroverket i Örebro 1857–1957*: *En minnesskrift på styrelsens uppdrag* (Örebro: Tekniska föreningen i Örebro, 1957).

Donations and bequests (henceforth referred to collectively as "gifts") can be directed towards the school, but can also be directed toward the students at the school, which seems to have been the case for many of these in Norrköping. Although the lack of documentation is a limitation here, it seems the reports in parliament only list gifts in the form of direct transfers of money. Gifts of, for instance, mineral collections to promote instruction in science are not listed, nor is interest received from funds gifted to the schools. Since all forms of gifts benefit the school in some way, even if they are targeted at the students, we have decided to also include gifts that are not targeted directly at the schools.

At several points in time, the school in Norrköping received donations and bequests from various actors. However, direct monetary transfers to the school itself were rare. In March 1858, Baron Fr. Funck donated a collection of minerals to the school, in order to promote the scientific instruction, and in November 1860, medical doctor Sir L. P. Hanssén donated his collection of "shells, molluscs, and other natural phenomena together with the cupboard that houses them."[94]

Between 1870 and 1900, the various donations and bequests were not for the school per se; rather they consisted of funds to be allotted to students who distinguished themselves in diligence or behaviour. Thus, in April 1884, a civil engineer and former student at the school named J.A. Andersson bequeathed in his will a fund of 5,000 *kronor*, the interest of which was to be allotted to one student who distinguished himself. Organisations also donated in this way. In August of 1870 the labour association of Norrköping (*Norrköpings arbetareförening*) started a fund to reward distinguished students at the school and the connected technical Sunday school. For the Örebro school, Martin Lien lists a total of 24 gifts between 1865 and 1920.[95] Most of these were similarly aimed at students who distinguished themselves, but three of the gifts have "no clauses in particular" attached, which may indicate that they went to the school directly, although the details are unknown.

If these facts generalise to all five schools and the entire period of study, it seems gifts did not have a direct impact on the schools. However, gifts directed to the students can be expected to affect the school indirectly by raising the popularity of the school, by encouraging the students to work harder, and possibly by allowing poorer students to finish the education in cases where they would not otherwise have been able to. This highlights the need for future research to focus on the students and the effects of these gifts.

Conclusions

In this article, we have documented changes in the structure and financing of the technical secondary schools, from their establishment in the 1850s to the end of their era, marked by the new regulations in 1919. The focus of our study has been on different types of financiers, the financial consequences of the two major reforms in the mid-1870s and early 1900s, the technical secondary schools' government grants in relation to other forms of schooling, and the specific question of the impact of wages on opportunities to recruit qualified teachers.

94 Unspecified author (1900), 47.

95 Martin Lien (1957), 173–76.

Early proponents of the schools included not only educationalists but also members of parliament, local politicians, local industry, and individual stakeholders. It was made clear from the beginning that the cities that applied for a technical secondary school must be ready to co-finance the school. During the establishment phase, private financiers seem to have played a significant role through fundraising and grants. In Malmö, for example, the city's application for a state subsidy for a technical school was preceded by an extensive collection of funds from manufacturers, businessmen, and other citizens.

When Wallmark's proposal to establish two technical secondary schools was discussed in the parliament, the cost per school was calculated at 6,600 *riksdaler*. However, the standing committee of supply initially wanted to reject the sum altogether, but three out of four estates managed to convince the committee to agree to a yearly grant of 5,000 *riksdaler*, which left the necessary 1,600 *riksdaler* to be paid for by the cities themselves. However, it was considered unfair that cities that had already fulfilled their requirements should be forced to pay an additional contribution and this caused serious protests. After lengthy discussions, the parliament decided to increase the budget to 12,000 *riksdaler* for each school. After the establishing phase, government grants rose by stages but remained the same in nominal values for extended periods. At regular intervals, the school boards felt compelled to complain to the government and request increased funding. Private donations to the schools that were important in the beginning later took the shape of donations and bequests intended for students' grants and/or different kinds of teaching facilities.

The extent and quality of Sweden's different levels of technical education remained a burning question during the second half of the 19th century. The fear that Sweden would not be able to keep up with the competition in the international markets seems to have been a driving force in the further development of the technical secondary schools. In the official reports, comparisons with other countries regarding the share of students taking part in basic technical education, and the governments grants spent on it played an important role. It became clear that the state must take greater responsibility for the technical schools in the same way as other industrial competitors did. As a common thread throughout the existence of the technical secondary school, there was the comparison with the conditions in Germany, which was seen as the pioneering country when it came to technical education at all levels. The reform in the 1870s, which among other things, proposed specialisation, and a stronger emphasis on technical and scientific subjects, led to major government investments. Not least important was the tardy establishment of a technical secondary school in Härnösand in 1901, the main task of which was to educate young men from the northernmost parts of the country.

During the initial discussion in the parliament about the location of the technical secondary schools, one of the core issues was the opportunity to obtain qualified teachers. In the end, the parliament chose to establish the first four schools where there was already a somewhat developed industry instead of in cities of learning. Despite an initial fear of a possible shortage of suitable teachers in the industrial cities, other aspects gradually came to dominate the teacher question. The main focus was the fact that the employment conditions and salaries at the technical secondary schools could not compete with the salaries at the corresponding stage in other school forms. However, the industry gradually also became a threat to the recruit-

ment of teachers as it could offer higher salaries and better employment conditions. Thus, the wage issue came to characterise a large part of the reform work. Since salaries were the largest item of expenditure from the outset, improvements in the area led to significantly increased costs.

The discussion about teachers' salaries was, in a sense, also about the status of the technical elementary schools in the education system. The educational level of the technical secondary schools matched what Diebolt et al. call *intermediate human capital* and they arguably occupied a level between elementary technical education in the Sunday and evening schools and scientific knowledge, as disseminated by the Technological Institute. The investigations that preceded the two reforms strongly emphasised the importance of training technical leaders at lower levels, such as foremen, and leaders in small industries. If scientific progress is driven by what Squicciarini and Voigländer call the *knowledged elites*, who are in possession of what Mokyr has coined *upper-tail knowledge*, it is the foremen and the shop-floor level engineers and technicians who shoulder the burden of managing and operating the machines that are the result of new scientific principles. Therefore, the reforms on secondary technical education during the 19th and early 20th centuries, not least in terms of increased funding and improvements in teachers' salaries and employment conditions, should be seen as an acknowledgement of their importance by the state and the other stakeholders.

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Appendix

Appendix 1. Timetable Malmö technical secondary school spring term 1857

		Upper form	**Lower form**
Monday	8–12 a.m. 2–3 p.m. 3–4 p.m. 4–5 p.m. 5–6 p.m.	Chemistry—laboratory work German language Physics Physics	Linear drawing German language Arithmetic and algebra Arithmetic and algebra
Tuesday	8–10 a.m. 10–12 a.m. 2–3 p.m. 3–4 p.m. 4–5 p.m. 5–6 p.m.	Free-hand drawing History and geography French language Arithmetic and algebra Arithmetic and algebra	Geometry Chemistry French language Botanic and zoology Botanic and zoology
Wednesday	8–10 a.m. 10–12 a.m. 2–3 p.m. 3–4 p.m.	Mechanics Swedish language English language	Free-hand drawing Swedish language English language
Thursday	8–10 a.m. 10–12 a.m. 2–3 p.m. 3–4 p.m. 4–5 p.m. 5–6 p.m.	Mechanics Physics German language Chemistry Chemistry	Linear drawing Linear drawing German language Arithmetic and algebra Arithmetic and algebra
Friday	8–10 a.m. 10–12 a.m. 2–3 p.m. 3–4 p.m. 4–5 p.m. 5–6 p.m.	Linear drawing Linear drawing French language Algebra Algebra	Geometry Chemistry French language Arithmetic Arithmetic
Saturday	8–10 a.m. 10–12 a.m. 2–3 p.m. 3–4 p.m. 4–5 p.m.	Shopfloor work Shopfloor work English language Shopfloor work	History and geography Free-hand drawing English language

Source: F2B:1 in G1:1, Tekniska elementarskolans arbetsordningar 1854–1883 (Technical Secondary School—programmes). Malmö tekniska elementarskola (Malmö Technical Secondary School), Malmö Stadasarkiv (Malm City archive).

Appendix 2a. Proposed distribution of subjects—First year (all students)

Subject	**Autumn term**	**Spring term**
Pure mathematics	11	11
Chemistry	3	3
Geometry and linear drawing	8	8
Swedish language	2	2
Free-hand drawing	4	4
Shopfloor work	6	6
Total	34	34

Source: SOU 1876:7 (1874), 45.

Appendix 2b. Proposed distribution of subjects—Second year (mechanical and construction program/chemistry program)

Subject	**Autumn term**	**Spring term**
Pure mathematics	8/8	2/2
Mechanics	4/4	7/7
Physics	5/5	6/6
Chemistry	3/3	0/0
Laboratory lessons	0/0	0/8
Geometry and linear drawing	4/4	4/4
Machine drawing	0/0	4/0
Bookkeeping and commerce	4/4	2/2
Swedish language	2/2	0/0
Mineralogy and geodetics	0/0	3/3
Shopfloor work	4/4	4/0
Total	34/34	32/32

Source: SOU 1876:7 (1874), 45-46.

Appendix 2c. Proposed distribution of subjects—Third year (mechanical/construction/chemistry program)

Subject	**Autumn term**	**Spring term**
Pure mathematics	2/2/2	2/2/2
Applied mechanics	3/3/3	3/3/3
Machine drawing	11/6/4	12/6/4
Engineering	3/3/3	3/3/3
Geodetics	0/0/0	2/2/2
Shopfloor work	8/0/0	8/0/0
Construction	5/16/5	0/14/0
Chemistry and laboratory work	0/0/15	0/0/16
Total	32/30/32	30/30/30

Source: SOU 1876:7 (1874), 46–47.

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The Birth of the Apprenticeship Tax (1890–1925): A French Approach to Financing Technical Education

Stéphane Lembré

Abstract • Envisaged at the beginning of the twentieth century as a reaction to the perception of an "apprenticeship crisis," the development of technical education in France was regulated after the First World War by the Astier Law passed in 1919. However, this development, particularly in the form of schools and courses, required resources that the law did not provide. The creation of the apprenticeship tax in 1925 was a response to this problem and was based on various projects and debates that had arisen before the war concerning the respective roles of employers' representatives and the State. In this article, this tax is placed in the international context of choices in the management of technical education in order to examine the British precedent. It reflects the power issues at stake in the control of this form of education and introduces an original French approach to its financing and governance.

Keywords • Apprenticeship, technical education, legislation, employers, taxation

Introduction

> There are, in fact, as I speak, few problems that are both more urgent and more serious for our country than that of apprenticeship, which has preoccupied merchants, industrialists and politicians for so long. […] Let us not wait as we did after 1870 to create free and compulsory primary education in France. We must, without waiting for economic disasters, which I do not want to foresee, and which are not to be feared, immediately create compulsory vocational education in the practical and feasible form where it can, where it must be created.[1]

In a speech he gave in June 1907 at the *Conservatoire des arts et métiers*, the former Minister of Trade and Industry, Alexandre Millerand, urged action to promote the vocational training of young French men and women. International economic competition, changes in production methods linked to industrialisation, transformations in society with the growth of the working class, and the need to train citizens who were convinced of the benefits of the Republic all called for remedies to the "apprenticeship crisis" that was being denounced on all sides.[2] In passing, this politician, who had sparked off a heated debate in France when he became the first socialist to enter the government ten years earlier, wanted to be a realist: if he referred to the free primary education made compulsory a quarter of a century ear-

1 Alexandre Millerand, "La crise de l'apprentissage," in *Travail et travailleurs*, ed. Alexandre Millerand (Paris: Fasquelle, 1908), 257–67. All translations into English are by the author.

2 Stéphane Lembré, "La 'crise' de l'apprentissage: de l'échec à la loi (fin XIX^{e} siècle–années vingt)," in *L'échec a-t-il des vertus économiques?,* ed. Natacha Coquery and Matthieu de Oliveira (Paris: CHEFF, 2015), 309–18.

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lier thanks to the Ferry laws of 1881 and 1882, it was in order to better rule out the possibility, in the near future, of generalising vocational education in schools, given the cost that this would represent.

Twenty years later, in a report presented to the Higher Council for Technical Education, the Director of Technical Education, Edmond Labbé, strongly defended the apprenticeship tax.[3] Created by the Finance Act of 13 July 1925, the need for it had gradually become apparent in view of the inadequacies of apprenticeship (in companies) and technical education (in schools) observed since the beginning of the century.[4] This apprenticeship tax stipulated that any company paying more than 10,000 francs in salaries per year must pay a tax set at 0.2 per cent of the total payroll. Partial or total exemption from the tax was provided for if the employer could justify its expenditure on initial vocational training, either directly through the organisation of apprenticeships in the company, or indirectly by supporting technical education courses or schools. Up to that point, the law of 25 July 1919, known as the Astier law, had constituted the "charter" of technical education in France. This law defined technical education, organised it and made it compulsory for boys and girls under 18 employed in trade or industry to attend vocational courses lasting a few hours a week organised by companies or municipalities during working hours. No mention was made however, of the question of the financial resources required for the development of technical education and the application of this obligation. The inadequacy of the 1919 law therefore justified the creation of the apprenticeship tax six years later.

Presented as a matter of course to provide a trained workforce for trade and industry and to balance employers' expenditure on training, the choice of taxing companies was not a natural one. It required the agreement of economic and political circles on the introduction of a tax in a particularly tense fiscal and political context due to the irregular receipt of post-war German reparations following the Treaty of Versailles, the flight of capital, the devaluation of the franc, the explosion of indebtedness, the burden of which represented 45 per cent of budgetary revenue in France in 1921, repeated exchange rate crises and inflation. In 1925, the apprenticeship tax appeared as an original measure, as only France had such a financial instrument at that time. Understanding the conditions of its adoption is all the more important as this often-decried mechanism, which has been reformed several times, has subsequently shown great resilience, to the point of being maintained for almost a century, and being adopted and adapted in various countries until recently, as shown by the apprenticeship levy introduced in 2017 in England.[5]

The history of the apprenticeship tax has begun to be written with an emphasis

3 Until 1920, the Department of Technical Education was under the authority of the Ministry of Trade, and then the Ministry of Public Education. In the 1920s, an Under-Secretary of State for Technical Education, attached to the Minister of Public Education, chaired the Higher Council for Technical Education and had authority over the Technical Education Department.

4 Archives nationales (AN) 20020354/1: Historique de la taxe d'apprentissage, 144 p. typed. The report was published the following year: Edmond Labbé, *L'apprentissage et la taxe d'apprentissage* (Paris: Eyrolles, 1928).

5 Malgorzata Kuczera and Simon Field, "Apprenticeship in England, United Kingdom," in *OECD Reviews of Vocational Education and Training* (Paris: OECD Publishing, 2018); Andrea Laczik and Olly Newton, "Latest Apprenticeship Reform and Its Impacts: The Case of England," in *Contemporary Apprenticeship Reforms and Reconfigurations*, ed. Thomas Deissinger, Ursel Hauschildt, Philipp Gonon, Silke Fischer (Zürich: LIT, 2019), 41–43.

on the study of local tensions and compromises at the time of its implementation, which has highlighted strong contrasts from one territory to another: in the Rhône, as in Toulouse, there was a predominant agreement between the interested parties, as Marianne Thivend and Michaël Llopart have shown. Antoine Vernet studied the tensions in the Loire department, while the North of France was characterised by strong opposition to the tax, analysed by Odette Hady-Hémery.[6] On the other hand, at the national level the issue was only approached from the point of view of the development of technical education. The apprenticeship tax, as proposed by Edmond Labbé, was seen as a simple instrument for providing the necessary resources to finance the creation of schools and vocational courses that corresponded to a certain concept of manpower training.[7]

However, if the adoption of the apprenticeship tax coincided with a political consensus in Parliament on the usefulness of technical education, as Jean-Michel Chapoulie demonstrates, this consensus is not sufficient to account for the slow maturation of the apprenticeship tax projects, which were already under discussion before the 1914–1918 war without yet reaching the consensus of 1925, or to understand where and how its instigators conceived their project. In a country that claims equal citizenry, in which expenditure on primary education is borne by the community in the name of the general interest, for which the State is the guarantor, the choice of the apprenticeship tax, unprecedentedly placed the financing of a partly public education on a part of the national community, by means of taxation. Less than a decade after the introduction of income tax in France, the argument of reducing inequalities through taxation refers to the political and ideological options that are inseparable from the financing of education and training.[8] The history of French technical education has shown little interest in its financing,[9] despite the existence of a collective volume devoted to the "cost of education." Some studies have high-

6 Marianne Thivend, "Les formations techniques et professionnelles entre l'État, la ville et le patronat: l'emploi de la taxe d'apprentissage à Lyon dans l'entre-deux-guerres," *Le Mouvement Social*, no. 232 (2010), 9–27; Antoine Vernet, "Les disciplines de l'industrie: Le patronat métallurgique et la formation organisée des travailleurs dans la région de Saint-Etienne (1865–1954)" (doctoral thesis, Université Lumière Lyon 2, 2018); Odette Hardy-Hémery, "Les milieux patronaux du nord et la question de la taxe d'apprentissage dans les années 1920," in *Formation professionnelle et apprentissage XVIII^e^–XX^e^ siècles,* ed. Gérard Bodé and Philippe Marchand, *Revue du Nord*, no. 17 (2003), 233–50; Michael Llopart, "La Chambre de commerce de Toulouse et l'organisation de la formation professionnelle en Haute-Garonne, 1919–1945," *Annales du Midi* 128, no. 293 (2016), 67–89; Marc Suteau, "La mise en œuvre de la loi Astier: l'exemple nantais," in *Les Patrons, l'État et la formation des jeunes*, ed. Gilles Moreau (Paris: La Dispute, 2000), 27–38; Stéphane Lembré, *L'école des producteurs* (Rennes: PUR, 2016), 250–63.

7 Jean-Michel Chapoulie, "Représentations de la main-d'œuvre, actions parlementaires et administratives. Le développement de l'enseignement technique entre les deux guerres," *Vingtième siècle*, no. 88 (2005), 23–47.

8 Ferrán Ferrer, "Le financement de l'éducation: tendances et problèmes latents," in *Financement des équipements éducatifs et décentralisation / Decentralisation and the financing of educational facilities* (Paris: OECD, 2002), 13–39; and more broadly Thomas Piketty, *Capital et idéologie* (Paris: Seuil, 2019). On income tax, see Nicolas Delalande, *Les batailles de l'impôt: Consentement et résistances de 1789 à nos jours* (Paris: Seuil, 2011).

9 Antoine Léon, *Histoire de l'éducation technique* (Paris: PUF, 1968); Vincent Troger, Patrice Pelpel, *Histoire de l'enseignement technique* (Paris: L'Harmattan, 2001). See also Stéphane Lembré, *Histoire de l'enseignement technique* (Paris: La Découverte, 2016) and Claude Didry, "L'apprentissage à l'épreuve du droit du travail: De la socialisation familiale à l'enseignement professionnel (1851–1936)," *Artefact*, no. 3 (2015), 39–51.

lighted the interest of the subject, such as the case of the city of Nantes (studied by Marc Suteau) or the *Société d'enseignement professionnel du Rhône* (SEPR, studied by Marianne Thivend).[10] However, funding is particularly important for technical education and apprenticeship, as it is a power issue between the professions and the public authorities.[11]

The archives of the Directorate of Technical Education (DET) within the Ministry of Public Education are a precious source in this regard.[12] They do not deal with the projects that led to the creation of the tax, but they do document its implementation through internal administrative notes, the numerous decrees and application circulars, as well as statistical documentation on the proceeds of the apprenticeship tax.[13] The publications by observers and protagonists of this creation as well as parliamentary documents shed light on the conditions of its creation, in particular the Jean Locquin collection (1879-1949). He was an art historian and lawyer who, as a socialist deputy for Nièvre, was rapporteur for the technical education budget in the Assembly from 1925 to 1928.[14] The *Bulletin de l'enseignement technique* published by the *Association française pour le développement de l'enseignement technique* (AFDET), which was recognised in 1902 but had been active since 1898 through this publication, reveals the knowledge of foreign experiences of those involved in French technical education at the beginning of the twentieth century, to whom this bulletin was distributed. All of these sources make it possible to review the various projects, then to present the law passed in 1925, implementing some of the proposals, and finally to determine the role of comparisons in this decision to create a tax system that was unprecedented in France.

The financing of technical education in projects from 1910 to 1925

In the early years of the century, the situation of technical education and apprenticeship had become a publicly debated issue in France. Surveys carried out by the Labour Office revealed the difficulties of apprenticeship in companies facing technical and organisational changes. However, the problem of financial resources was only gradually identified as the necessary reform of technical education became clearer.

In 1905, the Minister of Trade tabled a bill on technical education, the explanatory memorandum of which was very detailed and which took stock of the existing institutions in France. The need for a dual adaptation to the needs of trade and industry and to local needs was pointed out, as well as the economic urgency that argued for compulsory vocational education. The bill did not identify financing as a difficulty. Four years later, in the course of their study, which is a reference for the mass of

10 Marc Suteau, *Une ville et ses écoles, Nantes 1830–1940* (Rennes: PUR, 1999); François Robert, "Le financement de la SEPR (1864–1959)," in *SEPR, 1864–2014: 150 ans au service de la formation professionnelle en Rhône-Alpes* (Lyon: EMCC, 2014), 122–27; Jean-François Condette, ed., *Le coût des études: Modalités, acteurs et implications sociales, XVI^e^–XX^e^ siècle* (Rennes: PUR, 2012).

11 Annie Vinokur, ed., *Pouvoirs et financement en éducation: Qui paye décide?* (Paris: L'Harmattan, 2007).

12 Their value has been demonstrated by Guy Brucy, *Histoire des diplômes de l'enseignement technique et professionnel, 1880–1965: l'État, l'école, les entreprises et la certification des compétences* (Paris: Belin, 1998).

13 AN, 20020354/1: History of the apprenticeship tax, 1925–1982.

14 AN, 310 AP: Fonds Jean Locquin (1879–1955). Files 43 to 47 contain documentation on technical education that attests to the sustained attention given to this subject. See Chapoulie (2005), 258–59.

information collected and presented, Placide Astier the radical-socialist deputy of the Ardèche and his collaborator Isidore Cuminal, himself a general councillor of the Ardèche, did not consider the cost of developing technical education to be an obstacle to the legislation they were calling for—probably so as not to jeopardise the bill's chances of success. The cost of vocational courses for young people already at work, on which the expected expansion of technical education was based, would be borne by the *communes* (smallest local administrative units) and the State, through a policy of subsidies.[15]

This state of mind must be seen in relation to the growth in educational expenditure in the 19th century, which can be quantified in terms of the State's share in particular.[16] While a distinction must be made between primary education, which became free under the law of 16 June 1881, and secondary education, which had to be paid for, the operation of schools depended in both cases on several sources of funding. The building of primary schools was based on the joint financial effort of the State and the communes. In 1889, teachers acquired civil service status which removed the burden of salaries from the communes which then concentrated on operating costs. Secondary schools could not operate with the help of family contributions alone: their foundation and operation required the commitment of the State and the communes, which were interested in this facility for the children of the local elite.[17] However, the study of public funding gives only a small idea of educational expenditure in nineteenth-century France. From the Catholic Church to associations and real educational entrepreneurs, private funding is as varied as it is difficult to estimate precisely.

The historiography of technical education confirms this observation. However, it is important to recall its profound diversity: its components are sometimes attached to the primary and secondary orders, in other cases they are autonomous.[18] If the contributions represented by public funding from the State, the municipalities and the departments did not make it unique, it was the subsidies provided by companies, chambers of commerce—representing the interests of the companies to which they offered advisory and support services—or employers' unions, or even associations and unions of workers or employees, which marked one of the specificities of technical education, over and above the great diversity of the establishments that make up this sector.

The "local supply" of technical education, heterogeneous but abundant at the beginning of the twentieth century, was based on multiple financing, as recommended by the Commission on Vocational Education whose work led to a report published

15 Placide Astier and Isidore Cuminal, *L'enseignement technique industriel et commercial en France et à l'étranger* (Paris: H. Dunod et E. Pinat, 1912), 348–49.

16 Bruno Théret, "Les dépenses d'enseignement et d'assistance en France au XIX^{e} siècle: une réévaluation de la rupture républicaine," *Annales ESC*, no. 6 (1991), 1335–74; Alain Carry, "La dépense de l'État pour l'éducation secondaire professionnelle (France, 1820–1938)," in Bodé and Marchand (2003), 115–28.

17 Philippe Savoie, *La construction de l'enseignement secondaire 1802–1914* (Lyon: ENS éditions, 2013); Solenn Huitric, "Transformer les collèges communaux en lycées: La coproduction d'une action publique (1830–1880)" (doctoral thesis, University of Lyon, 2016).

18 See Pelpel and Troger (2001); Jean-Michel Chapoulie, *L'École d'État conquiert la France* (Rennes: PUR, 2010), chapter 10; Lembré (2016).

in 1864–1865.[19] The Commission discouraged the government from organising such education itself and considered that it was necessary above all to "encourage, by means of subsidies, the efforts made by towns, departments or even private individuals."[20] Each year, a sum was distributed by the Higher Council for Technical Education created in 1870. However, the system was threatened by the increase in requests for subsidies that accompanied the creation of technical schools. According to Julien Fouqué, in 1900, the subsidy system delayed the development of this type of education. The financial issue could thus be identified as an obstacle; it was in fact a finance law, dated 26 January 1892, which gave rise to the practical schools of commerce and industry.[21]

At the local level, combinations of funding dominated, with different percentages of contributions depending on the type of establishment.[22] The role of these practical schools in the development of technical education has been well studied in some cases, such as that of the technical schools in Nancy. Following the creation of the Nancy Faculty of Sciences in 1854, complementary courses (which extended elementary education) were organised but the lack of resources weakened the initiative, and it was taken over at the end of the century by the project to create a chemical institute and then other courses (on the manufacture of beer, on colouring materials, on applied physics). Finally, the electrotechnical institute project marked the involvement of industrial circles, with donations such as those from the company Solvay and more generally the "generosity of industrialists,"[23] which complemented the efforts of the general council to found the institute and equip laboratories.[24] The municipality remained a central player in this dynamic industrial landscape and in Nancy, a region with a high level of schooling, "France's showcase" and which played a prominent role during the period of German annexation of neighbouring regions of France.[25] The financing of vocational training for young workers and apprentices in Nancy was not very different, institutionally speaking, from that of schooling in general. Several sources of funding have been identified. From 1881 to 1919, the Drouot Girls' Vocational School operated under private status thanks to the annuity from the bequest of its founder, Pierre-Auguste Drouot, and from the proceeds of the work of its third-year pupils for the local clientele: from 1884 onwards, the latter pro-

19 *Enquête sur l'enseignement professionnel ou recueil de dépositions faites en 1863 et 1864 devant la commission de l'enseignement professionnel* (Paris: Imprimerie nationale, 1864–1865).

20 Julien Fouqué, *La Crise de l'apprentissage et les progrès de l'enseignement professionnel*, thesis for the doctorate (Paris: Arthur Rousseau, 1900), 115–16.

21 Ibid., 129.

22 Gérard Bodé, "Les budgets des établissements d'enseignement technique sous la IIIe République (1870–1940)," in Condette (2012), 127–40.

23 Étienne Bolmont and Jean-René Cussenot, "La Faculté des sciences de Nancy (1854–1907): équipements, personnels et enseignements," in *Aux origines d'un pôle scientifique. Faculté des sciences et écoles d'ingénieurs à Nancy du Second Empire aux années 1960*, ed. Laurent Rollet and Marie-Jeanne Choffel-Mailfert (Nancy: Presses universitaires de Nancy, 2007), 171.

24 Françoise Birck, "De l'Institut électrotechnique de Nancy à l'École nationale supérieure d'électricité et de mécanique (1900–1960)," in *Un siècle de formation des ingénieurs électriciens: Ancrage local et dynamique européenne, l'exemple de Nancy*, ed. Françoise Birck and André Grelon (Paris: éd. de la Maison des sciences de l'homme, 2006), 29–31.

25 Philippe Savoie, "Offre locale et engagement de l'État. Les enseignements technique et primaire supérieur à Nancy et les conditions de leur évolution sous la Troisième République," *Histoire de l'éducation*, no. 66 (1995), 48.

vided at least 20 per cent and up to 30 per cent of the school's own revenue each year. The municipality had to balance the books especially from 1902 onwards.[26] Far from being merely the result of constraints, the distribution of sources of funding was also a deliberate choice: in the Nancy example, the *École professionnelle de l'Est* (EPE) selected its students by charging registration fees, whereas the boys' EPE, which prepared students for comparable careers, was free.

The composition of funders also changed, as did the rapprochement between the EPE and the Ministry of Trade and Industry, which was reflected in the subsidies from 1900 onwards, in a context of lasting rivalry with the Ministry of Public Education, which provided the EPS for boys with the necessary tools and teaching staff.[27] In Lyon, (the Société d'enseignement professionnel du Rhône), a private law organisation founded in 1864, developed thanks to its own revenues (student enrolments, member contributions, subscriptions from 1874 onwards, donations, interest, deposits and foundations) as well as public funds (Ministry of Trade and Industry, department, municipalities), semi-public resources (chambers of commerce) and private subsidies (trade unions, industrialists and shopkeepers). In 1900, their own income amounted to 49,592 franc and, the subsidies were 49,887 francs, that is to say there was a balanced distribution in which the subsidies compensated for the always insufficient revenue.[28]

This varied funding had two major disadvantages in addition to the limits of state subsidy: that of forcing any training institution to meet the requirements of its various funders, thus leaving it relatively little autonomy; and that of the absence of any incentive to increase the investment of one funder, who was always quick to rely on the other funders to make this effort.

The taxation hypothesis

The idea of taxation gradually took shape. As early as 1909–1910, the chambers of commerce demanded that the professions participate with the State, the departments and the communes in the financing of an apprenticeship and vocational training that they would control.[29] For Auguste Boudra, founder and director of the Lyon watchmaking school, "the organisation and regulation of apprenticeships is a big question of money; but the sacrifice, however great it may be, is nothing compared to the danger that awaits us,"[30] namely the relegation of France in economic competition and the degradation of its know-how. It would however be possible "to regenerate apprenticeship at little cost,"[31] according to this modest educational entrepreneur, a good connoisseur of technical education and very hostile to "official schools" whose cost would be excessive and uncontrollable according to him. On the other hand, Georges Bourrey, director of the journal *La Technique moderne* and also, on a voluntary basis, an inspector of technical education, judged that government expenditure

26 Ibid., 55.

27 Ibid., 61–62.

28 Robert (2014).

29 Edgard Durandy, "L'apprentissage et l'instruction professionnelle," *Le Journal des chambres de commerce et d'industrie, des chambres consultatives et des chambres syndicales*, no. 2 (1910), 19–22.

30 Auguste Boudra, *Pour l'apprentissage* (Lyon: Author, 1909), 5.

31 Ibid

was negligible and could be significantly increased by the proliferation of practical schools under the supervision of the Ministry of Commerce.[32]

The search for the terms of a law led to imagining a resource allocation mechanism based on a principle of equity. Among the projects, some provided for plural financing that would depend on the respective roles of the State and the professions, and on centralised or decentralised management. Gustave Dron, a deputy from the Nord region and mayor of Tourcoing, feared the statist tendency of the 1905 project taken up by Astier in 1908. His experience as a local elected official, involved in numerous projects with national resonance, served him well in calling for a "transactional" system that went beyond the respective views of the Ministries of Commerce and Industry on the one hand, and Public Education on the other, and that spared the interests of employers, municipalities and the State.[33] The operating expenses (personnel, tools, supplies) of the vocational courses should be shared between the commune (one quarter), the State (one quarter) and the company managers (half).[34] But before the war, positions varied between recognition of the role of the municipalities and the desire for decentralised management on the one hand and, on the other, an appeal to the State to support private initiatives, in return for "a few subsidies, granted with discernment."[35] In fact, the Ministry of Commerce and Industry subsidised or sponsored a great many technical education courses.[36]

Assuming that the State budget, through the various ministries concerned, could bear the cost of a dense network of vocational schools—which were more costly than vocational courses—the relevance of State technical education was generally questioned in favour of adapting the forms to the needs of each profession for skilled labour. During the apprenticeship congress organised in Roubaix in 1911, the president of *the Fédération patronale du bâtiment et des travaux publics* (employers' federation for building and public works) called, , for attention to be paid to local and professional particularities: according to him, "apprenticeship at school" as developed in Paris, Roubaix or Tourcoing was "only an exception made possible by the financial power of these towns" whose efforts were supported by the State.[37] The cost of equipping schools would be too high to be borne by the municipalities or the State: it was up to the manufacturers to renew their machines in order to facilitate an apprenticeship that could not take place exclusively in schools.[38] The argument underlines the issue of the control over training, which a large number of the employers were not ready to abandon to the State, despite the numerous criticisms concerning the training provided "on the job" in the companies. Funding could be provided by the

32 Georges Bourrey, *Le problème de l'apprentissage et l'enseignement technique* (Paris: H. Dunod et E. Pinat, 1913). Bourrey's position as departmental inspector of technical education was voluntary, but he was a local collaborator of the technical education administration.

33 Gustave Dron, *L'Organisation de l'apprentissage* (Nancy: Impr. Pierron, 1909).

34 Gustave Dron, "La question de l'apprentissage devant le Parlement," in Ligue de l'enseignement, *La Question de l'apprentissage* (Paris: Ligue de l'enseignement, 1913).

35 Paul Merlet, *Les lois sur l'apprentissage et leurs conséquences économiques et sociales* (Paris: Jouve et Cie, 1912), 283.

36 A list of the only courses subsidised or sponsored for less than three years by this Ministry is given in Marc Réville, *Enseignement technique et apprentissage* (Paris: Dunod et Pinat, 1913), 72–107.

37 Speech by Auguste Villemin, in Paul Jannettaz, *Congrès national de l'apprentissage de Roubaix: General report* (Paris, 1912), 143.

38 Ibid., 144.

chambers of commerce through a modest increase in the additional pennies collected from their members to support their budget: this proposal was strongly criticised for giving too much power to company managers.

The most precise project was presented to the Paris City Council in 1910. According to councillor Pierre Quentin-Bauchart, solving the problem of apprenticeship was complicated by the cost of taking care of a large number of apprentices in a wide range of professions.[39] Taking up an amendment to the Astier project supported by the National Federation of Master Tailors of France, he judged that the employers should decide on the creation, within each "corporation," of a special tax, the proceeds of which would go to apprenticeships. The intervention of the public authorities would be limited at the local level to providing premises and supervising the use of the funds. This proposal was linked to the situation in Paris, where the municipality had been making a financial effort since the 1870s to set up a network of special schools for girls and boys:[40] in 1908, the budget would be nearly two and a half million francs, whereas the budget of the city of Paris in 1905 amounted to nearly 820 million francs.[41] To this must be added the cost of manual work in primary schools and of technical courses for adults, in a local context marked by the very specific socio-professional composition of the Parisian population (over-representation of arts and crafts industries).[42]

This apprenticeship tax project was discussed and clarified. It was taken up by the radical deputy for the Vosges, Constant Verlot, member of the democratic republican party and also a teacher at the Chaptal college, in his report submitted to the Chamber on behalf of the trade and industry committee on 20 December 1912. In it, the elected centrist advocated the introduction of an apprenticeship tax to be paid into a departmental fund. Verlot regularly returned to the subject, for example, in his proposal tabled on 27 March 1917 with his radical-socialist colleague from Charente-Maritime, René Carré-Bonvalet, and then in a project submitted on 30 June 1921, aimed at multiplying and regulating the chambers of trade, one of whose prerogatives would be to collect taxes to create and support vocational training facilities.

Although the law had been under debate since 1905, it was not passed until July 1919, and financing was still a subject for discussion. Although it did provide a significant advance on the principle of compulsory vocational training, the law was probably all the more easily passed because it did not address the divisive issue of financing. The First World War had certainly demonstrated the importance of a trained workforce in the armaments industries and, in the post-war period, the role played by the qualification of the workforce in economic competition was better understood. However, the employers refused to accept financial responsibility if they did not have control over technical education and apprenticeships, whereas central government claimed this control, in particular through the certificate of professional competence

39 Conseil municipal de Paris, *Proposition relative à la création d'une taxe corporative d'apprentissage, presented by M. P. Quentin-Bauchart, conseiller municipal* (Paris: Imprimerie municipale, 1912).

40 Lucien Lambeau, *L'Enseignement professionnel à Paris. Recueil annoté contenant les discussions, délibérations, rapports du Conseil municipal de Paris et les documents administratifs se rapportant à la question* (Paris: Imprimerie municipale, 1898–1900).

41 Eugène Raiga and Maurice Felix, *Le régime administratif et financier du département de la Seine et de la Ville de Paris*, (Paris: Rousseau, 1922), 533.

42 Astier and Cuminal (1912), 247.

created in 1911 and transformed into a certificate of professional aptitude in 1919.[43] For Ludovic Zoretti, a professor at the Faculty of Science in Caen and also an activist in the General Confederation of Labour (*Confédération Générale du Travail*, CGT) (a trade union created in 1895), free education should prevail for technical training that was fully integrated into the education system.[44] The principle of a tax was not contested by the CGT which, in 1922, referenced the Verlot project regarding an additional tax on the main tax on property.[45] The CGT was in favour of this because part of the expense would fall on the employers: this tax, which would support the budgets of the chambers of trade, stipulated that employers who did not train the number of apprentices set by the chambers of trade would have to pay a surcharge of up to 100 per cent for those who refused the training obligation. In the absence of an alternative proposal, the CGT demanded above all the control of the training of workers by the workers' movement and not by the employers' organisations[46].

The plan to set up chambers of trade was implemented at the beginning of the 1920s, along with the apprenticeship tax, given the importance of apprenticeship for craft businesses. At the International Apprenticeship Congress held in Lyon in October 1921, the representatives of the Alsace-Lorraine Chamber of Trades demanded control of apprenticeships.[47] Entrusting the tax to the chambers of trade was obvious to the Finistère deputy Maurice Bouilloux-Lafont, a centre-right politician (though a member of the left-wing republican group), who came from a banking background, but who devoted a complete study to the chambers of trade, motivated by the apprenticeship crisis.[48] This convergence of the two projects (apprenticeship tax and chambers of trade) can be explained by the intensity of the criticism directed at the chambers of commerce. The representatives of industry and commerce were preponderant, and the craft enterprises denounced their inaction in a field which it is true, was not at the heart of their missions. For the Inspector General of Technical Education Constant Caillard, who presented his argument in one of the first issues of the *International Labour Review*, the restoration of apprenticeship was a primary motivation for establishing the chambers of trade in France and providing them with permanent and abundant resources through the apprenticeship tax.[49] These chambers of trade would thus have the explicit mission of dealing with apprenticeship, unlike the chambers of commerce, which often manage higher business schools.

43 Brucy (1998).

44 Ludovic Zoretti, *Education: Un essai d'organisation démocratique* (Paris: Plon, 1918), 263.

45 The *patente* is a direct tax to which any company or person carrying out a non-salaried professional activity is subject. In France, from 1844 to 1975, the *patente* consisted of a fixed portion, depending on the size of the municipality in which it was levied, and a proportional portion.

46 *La Voix du Peuple*, no. 48 (1922), 752–57.

47 Christian Rendu, *Le mouvement artisanal lyonnais et la création des Chambres de Métiers 1919–1934* (Lyon: Chambre de Métiers du Rhône, 1987), 8 and following; Bernard Zarca, *L'artisanat français, du métier traditionnel au groupe social* (Paris: Economica, 1986), 36–37.

48 Maurice Bouilloux-Lafont, *Les chambres de métiers. Comment nous les concevons* (Paris: Payot, 1919), 50.

49 Constant Caillard, "Les chambres de métiers en France," *Revue internationale du travail* 3, no. 3 (1921), 255–76. The article summarises the work by the same author entitled *Chambres de métiers et conseils de métiers* (Paris: Librairie de l'enseignement technique, 1920), 257. The law of 9 April 1898 specifies the main responsibilities of the chambers of commerce: to provide the government with the opinions and information requested of them on industrial and commercial matters; to present their views on the means of increasing the prosperity of trade and industry (art. 11).

Comparisons and decision

On the eve of the vote on the 1925 Finance Act, the *Conseil supérieur de l'enseignement technique* made international comparisons. From the expected references to Germany, Austria and Switzerland, whose efforts to develop vocational schools and courses had already been commented on in the 19th century, to more unexpected examples such as Yugoslavia and New Zealand, the aim was to convince Parliament of the importance of a financial effort that had already been made abroad.[50] These comparisons were part of an already long-standing undertaking of documentation, carried out on the occasion of universal exhibitions and also carried out by the AFDET and various well-informed syntheses, starting with that of Placide Astier and Isidore Cuminal.[51] They should not, however, make us forget the echo of local experiences, which convinced the Directorate of Technical Education to further explore the solution of taxation.

Financing, a subject of investigation

From 1898 to 1912, the pages of the *Bulletin de l'enseignement technique* (BET), a fortnightly published by the AFDET, which was close to the Ministry of Trade, contained a collection of sixty-six articles describing the situation in some twenty countries in Europe and the world, and comparing them more or less explicitly with the French situation.

More than half of the articles deal with the financing of technical education, but with varying degrees of precision. Most of them present the main institutions and programmes offered, in order to give a measure of the effort made by the promoters of courses or schools, but some articles devote several dozen pages to their subject, while others do not exceed two pages. When financing is discussed, in a relatively concise manner despite some exceptions, it is first of all to mention the tuition fees, registration fees or boarding fees, paid by the students and their families or covered in whole or in part by the promoters of the training, and then the subsidies granted by various funders are mentioned. The latter are most often the State, local authorities and economic or professional groups, the role of private initiative in the early days of the institutions being also frequently mentioned, even when it was later taken over by the public authorities. Income from the marketing of objects produced by students is also featured. Swiss trade schools earned a substantial annual income from this: one third of the income of the Winterthur metalworking school in 1902 came from the sale of objects to industrialists or to other schools.[52]

The different definitions of technical education in different countries, which may cover training of widely differing levels, quality and scope, make comparisons difficult. But the common objective of preparation for work requires equipment in the

50 *Higher Council for Technical Education, June 1925 session. The problem of apprenticeship. Proposed solutions*, 26–36.

51 On the role of world exhibitions and the circulation of knowledge in educational debates, see Klaus Dittrich, "Experts Going Transnational: Education at World Exhibitions during the Second Half of the Nineteenth Century" (doctoral thesis, University of Portsmouth, 2010); Damiano Matasci, *L'école républicaine et l'étranger* (Lyon: ENS éditions, 2015); Alexandre Fontaine, ed., *Penser la circulation des savoirs scolaires dans l'espace transatlantique: émigration—transferts—créations (XVIII^e–XX^e siècle)* (Lormont: Le bord de l'eau, 2021).

52 Clavel, "Rapport sur un voyage d'études en Suisse," *Bulletin de l'enseignement technique*, no. 11 (27 June 1903), 237.

form of machines, tools, supplies and materials for workshops, commercial offices or laboratories. The role of business in providing this equipment is rarely mentioned. Nevertheless, in their article on the Dortmund steam engine construction school, where "the dominant concern everywhere was to place at the disposal of the teachers and students apparatus or organs for testing and demonstration,"[53] Émile Corre and Edmond Labbé devote some space to this. Donations from industrialists allowed the opening of industrial and commercial museums in many countries, important components of an education through exhibitions that could be found elsewhere in Europe.[54] The Industrial and Technological Museum of the Prague Chamber of Commerce, opened in December 1898 and was also subsidised by the Provincial Diet of the Kingdom of Bohemia.[55] Some authors refer to the French situation, such as the director of the *Ecole Pratique de Commerce et d'Industrie* (EPCI) in Nîmes, who estimated that the combined subsidies from the cantons, municipalities and the State for Swiss vocational education amounted to more than three million francs: "It would be interesting to know how much money is spent on vocational education in France."[56]

The analysis of the distribution of the various funding sources is of greater interest for international comparison than that of national expenditure, which is dependent on specific definitions and contexts. German business schools received subsidies from states, cities and chambers of commerce, in varying amounts,[57] while in Swiss hotel education, represented in 1911 by four private schools, tuition fees were the main source of revenue. This plurality also refers to the importance of collaboration between public and private funders. This common characteristic was highlighted to emphasise the need to strengthen joint commitments to French technical education. Thus, Placide Peltereau, a member of the Paris Chamber of Commerce, described the training courses for the leather trades in several European countries, and then explained how the training effort of the *Syndicat général des industries du cuir*, (General union of leather industries) through the Lyon tannery school, can be explained by the modesty of its resources, which were derived solely from the contributions of some twenty trade unions and chambers of commerce and their members. The lack of interest on the part of the State was compared to the "official subsidies that foreign governments have granted everywhere in Europe to similar teachings." Local connections filled the gap: the union was linked to the school of industrial chemistry at the University of Lyon, and the students of the tannery school took courses at the Faculty of Science, in order to reduce costs.[58] The example, which could be found

53 Émile Corre and Edmond Labbé, "L'enseignement technique en Allemagne: L'école de construction de machines à vapeur de Dortmund," *Bulletin de l'enseignement technique*, no. 14 (27 July 1907), 322.

54 Stéphane Lembré, "Les arts industriels à l'école et au musée: L'École nationale de Roubaix et ses références au XIX^{e} siècle," *Revue du Nord*, no. 422 (2017), 691–706.

55 Colomies, "L'enseignement industriel et commercial en Bohême," *Bulletin de l'enseignement technique*, no. 2 (23 January 1909), 20–24.

56 Clavel (1903), 230–31.

57 Edmond Jourdan and G. Dumont, "Les écoles de commerce en Allemagne et en France," *Bulletin de l'enseignement technique*, no. 50 (3 June 1899), 280.

58 Placide Peltereau, "L'enseignement technique des industries du cuir à l'étranger et en France," *Bulletin de l'enseignement technique*, no. 11 (21 juin 1902), 175–76. Peltereau was the owner of one of the main tanneries in the Château-Renault industrial district. Cf. Cédric Perrin, "Le district en échec: L'exemple des tanneries de Château-Renault (v. 1860–1985)," in Coquery and de Oliveira (2015), 257–73.

in other professional fields and in other places, revealed the possible collaboration between institutions whose size and management have little in common.

In the very informed summary they published in 1908 in support of the 1905 bill, Astier and Cuminal offer an international overview of the organisation of technical education. The financing of the policies implemented is analysed on the basis of extensive documentation. The authors begin with Germany, a source of inspiration, where advanced courses were free for those who attended them. Some schools charged students and their families "a small fee." The costs were covered by the communes and guilds, as well as by subsidies from the German states.[59] The report of a Parisian delegation to Austria-Hungary provides information on technical and vocational education governed by the law on industry of 21 May 1884. This included taxation:

> Municipalities which have at least fifty apprentices, and for which there is no special school, are obliged to institute a special course for the instruction of apprentices. The taxes and fines collected under the present law shall be allocated to the maintenance of these schools. In the event of a shortfall, the communes may establish a special contribution of up to two per cent of the amount of direct taxes. If, because of their poor financial situation, they are unable to meet the costs of the school, they may also request assistance from the Minister of Cults and Public Instruction.[60]

Anxious to demonstrate the efforts already made abroad and the modest financial cost, Astier and Cuminal also praised the sums devoted to vocational schools in Switzerland, leaving aside apprenticeships in companies, which were nevertheless developed.[61] They also cited examples of other, more centralised forms of organisation, such as the Copenhagen Technical Society: using information provided by the *Bulletin de l'enseignement technique*, the two authors emphasise that the State played a large part in the financing.[62] In Belgium, the choice was different, with the State subsidising only those vocational courses that had proved their worth and whose programmes had been validated by the Ministry of Industry and Labour. Funding played a discriminating role: "the selection is made by itself, simply by the national subsidies."[63] The reference to the United States is based on the in-depth investigation carried out there by the Director of the Université du Travail (University of Labour) in Charleroi, Belgium, Omer Buyse. [64] In this publication, which was reprinted several times in the following years, the information collected is used to reflect on the achievements in the field of technical education of the government of the province of

59 Astier and Cuminal (1912), 64.

60 Ibid., 80.

61 Ibid., 113. See Lorenzo Bonoli, "La naissance de la formation professionnelle en Suisse: entre compétences techniques et éducation morale," *Éducation permanente*, no. 192 (2012), 209–21; Esther Berner, Philipp Gonon, Christian Imdorf, "The Genesis of Vocational Education in Switzerland from the Perspective of Justification Theory: On the Development of a Dual Vocational Education Model in the Cantons of Geneva and Lucerne," in *History of Vocational Education and Training in Europe. Cases, Concepts and Challenges*, ed. Esther Berner, Philipp Gonon (Bern: Peter Lang, 2015), 45–66; Lorenzo Bonoli, Jean-Louis Berger and Nadia Lamamra, ed., *Enjeux de la formation professionnelle en Suisse. The Swiss "model" under the microscope* (Zurich: Seismo, 2018).

62 Ibid., 116 and *Bulletin de l'enseignement technique*, no. 12 (23 June 1906), 280–300.

63 Ibid., 123.

64 Omer Buyse, *Méthodes américaines d'éducation générale et technique* (Paris: H. Dunod, 1908).

Hainaut, on whose behalf he had made the trip to the United States. The question of tuition fees is again addressed for some of the various schools mentioned by Buyse, without any specific development regarding the financing.

The comparison with other countries made the examination of funding a means of denouncing the state's reluctance to act in France. While praising private initiative, the various authors writing in the *Bulletin de l'enseignement technique* or in specialised publications called for reform. The writers thus called for technical education to come from the professions, while at the same time calling for a greater commitment from the State, rather than from local authorities whose role was already hampered by the crisis in local finances.[65] The conviction of this compatibility was to be found in the reflection on the apprenticeship tax, since from the government's point of view, the State could legitimise its intervention—which had been strengthened since the nineteenth century—on condition that it was presented as a support for private initiative, in order to accommodate the attachment to liberalism of employers and private school managers as well as of a whole section of political leaders.

Taxation and subsidy: references in perspective

The articles in the *Bulletin de l'enseignement technique* and the summary by Astier and Cuminal highlight the role of the British precedent in the French choice of taxation. In addition to the school fees still required to attend a school, the development of technical education in the UK was based on an original resource, additional to the subsidies granted by the Board of Education and the local authorities, introduced by the Local Taxation (Customs and Excise) Act of 1890 and "commonly known as Whiskey money."[66] It was a tax on spirits that Parliament, sensitive to the need for a trained workforce to compete in the international economy, decided to allocate to technical education at the local level. Until 1902—the tax was decided for ten years—it provided substantial additional resources for technical education.[67] In their 1908 study, Astier and Cuminal specify that this British choice was made possible "thanks to the initiative of Sir Henry Roscoe and Mr Arthur D. Aclaud, founders of the National Association for the Promotion of Technical Education," the counterpart of AFDET.[68] This influx of funds triggered a short-term awareness of the situation in London, where the sums collected were opportunely mobilised from 1892 by the London County Council. The economist and socialist activist Sidney Webb, one of the founders of the London School of Economics, joined this body. In 1893, the Technical Education Board of the London County Council was set up under the chairmanship of S. Webb. In 1898, this taxation brought in 740,000 pounds, and nearly 900,000 pounds in 1900–1901. The historian and educationalist Michael E. Sadler, professor at

65 This crisis was linked to the reduction in the relative share of indirect taxes in municipal revenues, in particular with the end of octroi duties on beverages decided with the law of 22 February 1918. Jean-Luc Pinol, "Villes 'riches', villes 'pauvres:' Les finances municipales de l'entre-deux-guerres," *Vingtième Siècle. Revue d'histoire*, no. 64 (1999), 67–82.

66 Pierre Texier, "L'enseignement technique français et anglais à l'Exposition franco-britannique de Londres," *Bulletin de l'enseignement technique*, no. 7 (17 April 1909), 136.

67 Paul Richard Sharp, "Whiskey Money and the Development of Technical and Secondary Education in the 1890s," *Journal of Educational Administration and History* IV, no. 1, (1971), 31–35; Anthony David Edwards, *The Role of International Exhibitions in Britain 1850–1910: Perceptions of Economic Decline and the Technical Education Issue* (Amherst: Cambria Press, 2008), 180–83.

68 Astier and Cuminal (1912), 132–33.

the University of Manchester, whose work was cited by Astier and Cuminal, estimated at that time the expenditure on "the various stages of public education" from public funds at about 25 million pounds for England and Wales.[69] The considerable sums derived from the tax, which was abandoned in 1902, corresponded to the beginnings of a Labour vision of fiscal issues, which culminated in the tax reform project presented in 1909 by liberal leader Lloyd George, in which the objective of reducing inequalities took precedence over that of financing public expenditure.[70] They explain the rapid expansion of technical education in Great Britain despite significant regional variations linked to the management of local authorities.[71]

Following the 1908 Franco-British exhibition in London, organised in the context of the Entente Cordiale, the comparison was made by Pierre Texier, a professor at the EPCI in Limoges since 1906, who had obtained a grant in order to "easily study technical education in England and compare it to what it is in France."[72] In addition to the study by Astier and Cuminal, Texier thus offers the most complete comparison in terms of financing. There was much less comment in France on Austria-Hungary, where taxation had been introduced in 1884.

The American choice, which was reported in various publications in France (for example in the *Revue d'économie politique*[73]) and abroad (in the first issue of the *Revue internationale du travail*[74]), also influenced the French choice. A few weeks before the United States entered the world war, Congress decided, through the Smith-Hughes Act signed on 23 February 1917, to provide federal funding for vocational training.[75] This option was adopted at the end of a study conducted since January 1914 by Senator Hoke Smith and relayed by Dudley M. Hughes to the House of Representatives, itself motivated by the ongoing reflections on vocational education since the report of the Douglas Commission (1906).[76] According to the Smith-Hughes Act, under certain conditions, states may use funds made available to them for the development of technical education, that is institutionally distinct from general education.[77]

69 Michael E. Sadler, "England," in *Nouveau dictionnaire de pédagogie et d'instruction primaire*, ed. Ferdinand Buisson (Paris: Hachette et Cie, 1911). See James H. Higginson, "Michael Ernest Sadler," *Prospects: The Quarterly Review of Comparative Education* 24, no. 3–4 (1994), 455–69.

70 Pierre Rosanvallon, *The Society of Equals* (Paris: Seuil, 2011), 233.

71 Stephen Cotgrove, *Technical Education and Social Change* (London: Allen & Unwin, 1958), 63; Stewart Richards, "The South-Eastern Agricultural College and Public Support for Technical Education, 1894–1914," *The Agricultural History Review* 36, no. 2 (1988), 172–87; Stanley James Curtis, *History of Education in Great Britain* (London: University Tutorial Press, 1967), 497.

72 Texier (1909), 129.

73 *Revue d'économie politique* XXXVI (1922), 524.

74 *International Labour Review* 1 (1921), 419.

75 Sixty-Fourth Congress, Second Session, *Public Acts and Resolutions*, Public Document, no. 347, 929–36, quoted in Marvin Lazerson and W. Norton Grubb, *American Education and Vocationalism: A Documentary History* (New York and London: Teachers College Press, 1974), 133–34; Howard R. D. Gordon, *The History and Growth of Vocation education in America* (Long Grove: Waveland Press, 2003), 79.

76 Stephen Provasnik, "Disentangling the Triumph of Vocationalism from the Institutionalization of Vocational Education: A Reexamination of the Douglas Commission Report, Social Efficiency, and the Cooley Controversy," in *Educating in a Working Society: Vocationalism in 20th Century American Schooling*, ed. Glenn P. Lauzon (Charlotte: Information Age Publishing Inc., 2019), 79.

77 Michael Their, Joshua Fitzgerald, Paul Beach, "Partitioning Schools: Federal Vocational Policy, Tracking, and the Rise of Twentieth-Century Dogmas," in Lauzon (2019), 21.

In this perspective, in June 1925, in France, the Higher Council for Technical Education's survey of the financial efforts made by various foreign countries led to an appeal to parliamentarians:

> If we have mentioned the example of these foreign countries, it is not, needless to say, that we judge them to be superior to our own; even in this field France, at the cost of lesser efforts, has done as well or better than any of them. But it would be a dangerous mistake to rely too much on our natural qualities, especially our ingenuity and our ability to improvise. Beyond a certain limit, if we neglect the necessary means, we are bound to fall behind. […] That is why we have the firm hope that Parliament will not refuse us the vote of a tax necessary to our needs, justified in its application as well as in its object, conforming at the same time to the particular interests of the economic circles to which it is requested and to the higher interests of France.[78]

The international comparison conducted before and after the war is important to explain the debates on the financing and the final decision to create the apprenticeship tax. It argues in favour of going beyond a historiography that has long been content to identify the historical development of national models for the organisation of technical education and vocational training.[79]

Local experiences

The Directorate of Technical Education's apprenticeship tax project also built on two local post-World War I experiences. After the armistice, the return of Alsace and Moselle to France provided the example of a different organisation of financing under the leadership of the Alsace-Lorraine Chamber of Trades. Edmond Labbé, who had previously been an inspector general in the North, gave details in a report to the general council of this department:

> A tax is payable by each member of the Chamber of Trades; this tax is calculated on the basis of the professional tax (*Gewerfsteuer*) levied on the net profit of the business. [...], after approving the budget of the Chamber of Trades, the Prefecture notifies the Alsace-Lorraine Directorate of Direct Taxes and the Land Registry of the sum which this establishment needs to cover its expenses. To this sum must be added the amount of the rebates allocated during the previous financial year, given that for this tax there is no non-value fund. The amount thus obtained is then divided by the total of the collection units of the three departments. This total is determined with the help of the special registration forms drawn up by the auditors and on which all the taxpayers liable for the tax are listed. [...].[80]

A second local experiment, the Armentières fabric manufacturers' union, (in the

78 *Conseil supérieur de l'enseignement technique, session de juin 1925. Le problème de l'apprentissage. Les solutions proposées*, 37.

79 Wolf-Dietrich Greinert, *Mass Vocational Education and Training in Europe: Classical Models of the 19th Century and Training in England, France and Germany during the first half of the 20th* (Luxembourg: Office for Official Publications of the European Communities, 2005); see the critique initiated by Anja Heikkinen, "How to Study Apprenticeship Comparatively," in *Vocational Education and Apprenticeships in Europe: Challenges for Practice and Research*, ed. Anja Heikkinen, Ronald G. Sultana (Tampere: Tampereen Yliopisto, 1997), 267–93.

80 Report on technical education, by M. Labbé, Conseil général du Nord, 1920 session, 195–96.

North of France) created twenty years earlier, organised a compensation fund in 1922 for the development of apprenticeships for weavers. The aim was to bring together the means to train apprentices and prevent them, once trained, from leaving for a competitor in the area who had not invested in training. In a textile town undergoing reconstruction, recruitment difficulties motivated the training of the workforce, which was a guarantee of better productivity. The organisation of the financing of the training effort required a year of discussions. The apprenticeship fund that emerged from these discussions was fed by a monthly payment representing 1per cent of salaries, which meant that the union had to be provided with payroll records, an obstacle that had long been insurmountable. Every month, each industrialist provided a list of the names of his apprentices, and the proceeds of the fund were divided monthly by the number of apprentices, taking into account the different lengths of apprenticeship according to the specialities (one year for weavers, three months for warpers, one month for winders and peelers).[81] Despite the mistrust between competitors, training became a subject for the very influential local employers' union, and some companies were convinced of the need to develop apprenticeships in order to have a trained workforce.[82] Although sources are lacking on this point, the fund set up before the creation of the apprenticeship tax seems to have adapted to it in order to coordinate companies' requests for exemption, which became a classic function of the local employers' unions: the tax system was superimposed on the pre-existing corporate organisation.

The experience of Alsace-Lorraine, the trial of an employers' apprenticeship fund run by textile manufacturers in Armentières and, more broadly, the essential role of local players in the budgets of establishments, led to the development of the tax project, in the same way as the options adopted in certain foreign countries.

Voting on the apprenticeship tax, 1924–1925

The creation of the apprenticeship tax was an important event for French technical education, which sought resources in order to develop. The adoption of the tax came at the end of intense parliamentary debates, thanks to the cautious support of employers' representatives and to a favourable political context.

The situation of technical education and the cautious support of employers' representatives

At the time of the debates in Parliament, in 1924–1925, the organisation of French technical education remained as it had been drawn up by the Astier law of 25 July 1919. Joseph Dupin, the director of the Tourcoing practical school and delegated inspector general, described the landscape of diversified provision at the International Congress of Technical Education in Charleroi which opened on 16 May 1925. The Directorate of Technical Education sought to structure this offer around schools, vocational courses and apprenticeships in companies. The full-time schools aimed to train workers, foremen, workshop managers or skilled workers, and engineers. The vocational courses, which offered part-time training, were aimed primarily at

81 Archives nationales du monde du travail (ANMT), 19994007/040, Rogeau aîné, "Apprentice. Armentières. Project," n.d. [1923], 3 typewritten pages.

82 ANMT, 1994007/032, letter from Dufour-Lescornez fils to the president of the *Fabricants de toiles d'Armentières*, Lille, 31 January 1922.

apprentices and young workers and employees under the age of 18. Apprenticeships were "on-the-job" and focussed on the construction site and the workshop. The priority given to training in schools or in companies depended on the professions, the knowledge and know-how required, and the capacity (including in terms of work organisation) of companies to train the workforce under good conditions. Diplomas and teacher training (with the creation of the vocational aptitude certificate in 1911 and the *École normale de l'enseignement technique* in 1912) contributed to the transversal organisation of this system.[83]

Despite the prevailing agreement on the necessary development of vocational training, there was no shared position among employers' representatives at the time of the vote on the apprenticeship tax. While some groups showed their support for this creation, others, and in particular the chambers of commerce, showed their distrust. The supporters of the tax came first of all from the metallurgy sector, in search of qualified workers.[84] Through the voice of the Union of Metallurgical and Mining Industries (UIMM), the employers of the metallurgy industry accepted the apprenticeship tax, insofar as thanks to their already significant expenses they expected to benefit from the exemptions provided for. The UIMM did not hesitate to call for State intervention to support technical education—which distinguished it from other employers' organisations. The positions of the chambers of commerce oscillated between rejection of the tax, out of attachment to liberalism, and, more frequently, critical vigilance. For example, before the war, the Paris Chamber of Commerce changed its initially hostile position in favour of compulsory vocational training, in accordance with the Astier law. It then considered the creation and organisation of trade councils organised by professional family, from a corporatist perspective, and more specialised chambers of apprenticeship, also centred on professions. In the end, it favoured the latter. By situating the organisation of apprenticeship in relation to successive projects, in particular those of the deputy Constant Verlot, the Chamber first of all had to defend its prerogatives and its vision of what apprenticeship should be. The workshop-school formula was considered to be the most effective: it reconciled cost moderation, by avoiding the creation of vocational schools, and adaptation to the trades, by favouring apprenticeship in workshops that were supposed to reproduce the working conditions in companies. As far as budgetary resources were concerned, the employers' agreement to an apprenticeship tax was recalled—the Chamber of Commerce even emphasised that a "large number of industrialists and shopkeepers" had "demanded" its creation—on condition that this tax was used "to form a special and autonomous fund for the exclusive needs of apprenticeship."[85]

83 AN, 310 AP 47: Fonds Jean Locquin, International Congress of Technical Education in Charleroi, section IV: French works, report presented by Joseph Dupin.

84 Danièle Fraboulet, *Quand les patrons s'organisent. Stratégies et pratiques de l'Union des industries métallurgiques et minières 1901–1950* (Villeneuve-d'Ascq: Presses universitaires du Septentrion, 2007), 198–200.

85 *Bulletin de la Chambre de commerce de Paris*, no. 44–45 (7 November 1925), 1487. On the workshop-schools, see Sandrine Leroy and Catherine Omnès, "La chambre de commerce de Paris et les ateliers-écoles (1883–1939)," in *La Chambre de commerce et d'industrie de Paris 1803–2003, II: Études thématiques*, ed. Paul Lenormand (Geneva: Droz, 2008), 153–66, Jean-Pierre Briand, "L'apparition du 'préapprentissage' dans les grandes villes au début du XXe siècle," *Formation Emploi*, no. 27–28 (1989), 42–64, and *Au temps des ateliers-écoles: La chambre de commerce de Paris et l'apprentissage (1921–1939)* (Paris: CCI de Paris, Direction de l'information économique, 1996).

The prospect of a tax may have been experienced by business leaders as an intrusion into the management of their affairs, since its operation implied a scrutiny of their accounts by the State to verify expenditure on technical education, or even a dispossession of entrepreneurs, insofar as the decision to exempt a business subject to the tax might depend on an inspection of its training achievements. This upheaval in the relationship between the State and business took place in the wake of the 1914–1918 war, during which the economic interventionism of the authorities had increased significantly.

Until the adoption of the tax, the post-war period saw a twofold evolution, which could be seen in the parliamentary bills as well as in the positions taken by various groups. On the one hand, there was a development in the management of the mechanism which was initially entrusted to the professions, then integrated into the project to set up chambers of trade representing the craft industry in full institutional organisation. Although these chambers were finally introduced on 26 July 1925,[86] two weeks after the creation of the apprenticeship tax, in the end the management of the tax was entrusted to the departmental committees for technical education, chaired by the prefect and including representatives of the technical education administration, which therefore limited the power of the bosses or master craftsmen. On the other hand, there was a change in the purpose of the tax itself, since the special tax for apprenticeship paid into a dedicated fund would become a "tax for the development of technical education (and secondarily of apprenticeship). The proceeds of these sums were to be attached to the State budget, and were set at 0.5 per cent of the total amount of the wages, salaries and all cash remunerations paid during the previous year by the head of the company."[87] The Paris Chamber of Commerce and the majority of its provincial counterparts were reluctant, even opposed, to the changes in the tax project, which was backed by the supporters of technical education and the radical and radical-socialist elected officials. The reduction of the tax rate from 0.5 to 0.3 and then 0.2 per cent and the clarification of the exemption mechanism partially reassured them. However, these changes undermined the consensus that had prevailed until then and animated the last sessions of the lower House devoted to this article of the Finance Act.

An opportunistic measure by the Cartel of the Left

Many points remained to be settled during the drafting of the 1925 Finance Act. Article 25, which introduced the apprenticeship tax, was particularly controversial. Its principle, as presented to the deputies at the end of 1924, was nevertheless simple: the crisis in apprenticeship could only be remedied by new training methods and be partly relocated to schools that the financial efforts of the State and local authorities (communes, departments) alone were not enough to support. Employers therefore had to bear part of the cost of training, a measure that was all the more legitimate as it concerned their future workforce.[88] This argument was put forward

86 See Steven M. Zdatny, *Les artisans en France au XX^e siècle* (Paris: Belin, 1999); Cédric Perrin, *Entre glorification et abandon: l'État et les artisans en France, 1938–1970* (Paris: Comité pour l'histoire économique et financière de la France, 2007).

87 *Bulletin de la chambre de commerce de Paris* (1925), 1489–90.

88 Maurice Bokanowski and Edmond Laskine, *Commentaire pratique de la nouvelle loi de finances du 13 juillet 1925: dispositions fiscales* (Paris: Librairie des Jurisclasseurs, 1925), 46–52.

by the Under-Secretary of State for Technical Education, on which the Directorate of Technical Education depended since it had been attached to the Ministry of Public Education by Alexandre Millerand, then President of the Council of Ministers, in January 1920.

The political context is essential for understanding the adoption of the apprenticeship tax. The *Cartel des gauches*, an electoral coalition bringing together the Radicals and the Socialists of the French Section of the Workers' International (SFIO), came to power in June 1924. This government, led by Édouard Herriot, introduced various educational and economic projects that met with strong opposition. While the Minister of Public Instruction, François Albert, was in favour of a reform towards a single school system, if not to abolish the different orders of schools that hindered the republican promise of equality, at least to bring them closer together, in the first instance, the project was entrusted to a commission known as the "single school" commission, whose work progressed slowly due to the lack of a shared conception of what should be reformed.[89] In monetary and financial matters, the weight of the expenses of the war years and then of reconstruction, and the inability of the Radicals and Socialists to agree on the debt or on the fight against inflation, caused Edouard Herriot's government to fall. Before he resigned as President of the Council of Ministers in April 1925, Herriot supported the project to introduce the apprenticeship tax included in the Finance Act, in line with his call to strongly develop technical education, which he believed was the only way to improve France's position in international economic competition.[90]

In contrast to the most politically divisive subjects, the apprenticeship tax attracted more support: according to the parliamentary debates that preceded it, its creation was dissociated from the school issue and financial or monetary matters, and placed in the perspective of qualifying a workforce that was insufficient in number following the war. On the initiative of the radical-socialist deputy and mathematician Émile Borel, it also included an effort in favour of scientific laboratories, known as the "Laboratory Grant." It was the methods rather than the principle that were discussed, as was acknowledged by Senator Isidore Cuminal, whose extensive knowledge of technical education has been noted. As rapporteur for the Senate Finance Committee, he estimated that more than 300 million francs were needed to implement the programme for the extension of technical education from 1925 to 1929, including nearly 174 million francs from the State.[91] Though the apprenticeship tax also seemed to be an indispensable means, its revenue was difficult to estimate, as was the operation of the exemption procedure. The Senator for the Ardèche was in

89 Bruno Garnier, *Les combattants de l'école unique: Introduction à l'édition critique de L'Université nouvelle par «les Compagnons» des origines à la dispersion du groupe (1917–1933)* (Paris: INRP, 2008); John E. Talbott, *The Politics of Educational Reform in France, 1918–1940* (Princeton: Princeton University Press), 1969, chapter 4.

90 Édouard Herriot, *Créer* (Paris: Payot, 1919), volume 2, chap. XIII: L'enseignement technique, 73–109. See Nicolas Beaupré, "*Agir* et *Créer*: Les écrits de guerre d'Édouard Herriot," in *Édouard Herriot en quatre portraits*, ed. Bruno Benoît (Villeneuve-d'Ascq: Presses universitaires du Septentrion, 2020), 275.

91 Senate, year 1925, ordinary session. Annex to the minutes of the sitting of 17 March 1925, *Rapport fait au nom de la Commission des finances chargée d'examiner le projet de loi, adopté par la Chambre des députés, portant fixation du budget général de l'exercice 1925. Ministère de l'Instruction publique (3e section: Enseignement technique), par M. Cuminal*, 17–18.

favour of a year of experimentation, in order to reassure the traders and industrialists liable to the tax. In June, a second report by the Senate's Finance Committee, taking up the request of several deputies, called for the article creating the apprenticeship tax to be separate for a more detailed study of its repercussions to be made. The political situation of the Cartel of the Left encouraged the government to ignore this, so as not to derail a measure that it would no longer be able to pass a few months later. Obviously, however, if the overall mechanism was well thought out, the methods of application and the possible repercussions of the tax are not known. The mechanism of exemptions to the apprenticeship tax, intended to recognise the expenses of companies that were already involved in apprenticeship and technical education, was partly reassuring for future taxpayers, provided that the rules were well determined.

Long parliamentary debates

As the lawyer and deputy Maurice Bokanowski (a member of the Democratic Republican Left) wrote a few months later, the Finance Act of 13 July 1925 was conceived during long and complex debates, in which he was one of the players. During the second passage through the House, on 1 July, the article concerning the apprenticeship tax was criticised. Like the senators, the deputy for the Seine, Emmanuel Evain (left-wing Republicans), as well as his colleague from the North, Louis Nicolle (Democratic Republican Union), asked, for the apprenticeship issue to be made separate in order to obtain a more in-depth study. Evain claimed to be the representative of the chambers of commerce and trade unions, who were unanimous in their concern about the increase in taxes and the announced takeover of vocational schools by the State.[92] The Minister of Finance, Joseph Caillaux, recalled the principle of the universality of the budget, which prohibited the formal use of funds from the apprenticeship tax exclusively for apprenticeship and technical education, but supported his colleague Yvon Delbos, Under-Secretary of State for Technical Education, who defended the spirit of a "special" tax and the need to provide the necessary resources. Louis Nicolle unsuccessfully called for exemptions to be mandatory rather than optional: the possibility of being exempted, which was finally retained in the law, was conditional upon an assessment by the departmental technical education committees of the quality and importance of the support for apprenticeship and technical education cited in support of the request for exemption, whereas an obligation would allow employers not to have to justify the expenses cited.[93] The exchanges led to articles 25 and 26 of the Finance Act of 13 July 1925, which decided in particular on the allocation of the sums collected and the rules for exemption:

> The proceeds of this tax are allocated to the expansion of trade schools, practical schools of commerce and industry, national vocational schools, vocational courses or any other works whose purpose is to renew apprenticeship or prepare children for a commercial or industrial profession, as well as to the operation and development of pure and applied science laboratories. The above expenditure includes, in particular, apprenticeship grants and the allocation of premiums to small employers who train apprentices.

92 *Journal officiel de la République française. Débats parlementaires, Chambre des députés*, meeting of 1 July 1925, 3055.

93 Ibid., 3058.

> [...] Partial or total exemptions may also be granted to taxpayers, under the following conditions, in consideration of the measures taken by them to promote technical education and apprenticeship, either directly or through the intermediary of trade unions, chambers of commerce or any associations devoting part of their resources to this purpose. The exemptions shall be granted by the departmental committees for technical education [...].[94]

This conclusion reflects the opportunism of the Directorate of Technical Education. It benefited from the abstention of the defenders of educational freedom and school proportionality, who were reluctant to oppose a scheme that could provide private resources to private technical and vocational schools and courses without burdening the state budget.[95] In contrast to the proponents of the single school systems, who failed to impose their views despite their rise to positions of power in the government of the *Cartel des gauches* and basically obtained the creation of a commission, the DET carried out its project away from school issues, succeeding *in extremis* in convincing employers of the modesty and coherence of the apprenticeship tax, and relying on an old idea, born in the wake of the 1905 bill, and which had evolved significantly under various influences.

Conclusion

From its intellectual elaboration to its political construction, any reform, in education or training as in other fields, is part of multiple temporalities.[96] Not only did debates arise in Parliament on the appropriateness of the creation of the apprenticeship tax, but it is necessary to qualify the idea that technical education would be "in a way, a neutral ground where the union of classes and parties takes place"[97] according to the deputy Jean Locquin, who for Jean-Michel Chapoulie is a privileged source for the understanding of this period. The divergences were long-standing, and despite the rapprochement shown by the agreement of some of the employers on the principle of a tax, they did not disappear at the time of the vote creating the apprenticeship tax. The mechanism of exemptions certainly opened the door to negotiations between the government and employers' representatives, while the central role given to the departmental technical education committees gave hope for local management which involved the stakeholders. However, in the wake of the creation of the tax, uncertainty prevailed as to the practical arrangements for its implementation.

Beyond the technical details, the stakes of this creation were important. They were of three kinds. First, it made technical and vocational education a real subject, which was discussed by parliamentarians each year not only to examine the Directorate of Technical Education budget, but also to evaluate the development of technical schools and vocational courses. Secondly, the tax laid the foundations for a negotiat-

94 Thérèse Charmasson, Anne-Marie Lelorrain and Yannick Ripa, *L'Enseignement technique de la Révolution à nos jours, tome 1: 1789–1926* (Paris: INRP, Economica), 1987, 536–37.

95 Jean-Étienne Dubois, "Les droites françaises face aux questions scolaires au temps du Cartel des gauches," *Carrefours de l'éducation*, no. 48 (2019), 16.

96 Alain Chatriot, "Réformer le social sous la Troisième République," *Revue d'histoire moderne et contemporaine*, no. 56–4 bis (2009), 40–53; Antoine Prost, *Du changement dans l'école: les réformes de l'éducation de 1936 à nos jours* (Paris: Seuil, 2013).

97 Chapoulie (2005), 37–39.

ed construction involving the government on the one hand, and the enterprises and their representatives, on the other. Although the mechanism can be read as a management tool for the State, it was in fact based on the possibility of local agreements under the control of the Directorate of Technical Education and the national employers' organisations. The tax could therefore be read both as an obstacle to the freedom of companies, and thus as an instrument of a form of state control of vocational training through taxation, and as a means of reconciling the freedom of companies with the need to train a workforce whose need was increasingly clearly felt in various economic sectors. Therefore, the model of bureaucratic centralisation embodied by the French vocational training system deserves to be analysed in its complexity.[98] If the State does play a role in this system, it is not so much at the central level as through the local management provided for by the legislation through the role devolved to the departmental committees for technical education. The creation of the tax was tantamount to the introduction by the legislator of a regulation intended to remedy long-standing difficulties; it was presented as a temporary solution to compensate for the inequalities in the way training was paid for by different enterprises. The mechanism of exemptions presupposed careful administration while introducing a possibility for escaping taxation: the opposition between the liberal market economy and the coordinated or administered market economy would be replaced by the idea, supported by the Technical Education Department, of close governance intended, in the medium term, to ensure the freedom of enterprises and to guarantee their competitiveness thanks to a trained workforce.[99]

A final issue is more qualitative. The apprenticeship tax is not just about the sums it collects: it has an impact on the organisation and quality of technical education and apprenticeships. In order to obtain partial or total exemptions, it is necessary to comply with standards that make it possible to evaluate the achievements claimed. These assessments, which were generally entrusted to departmental technical education inspectors, often former traders or industrialists, were also intended to reconcile the views of central government and company managers.[100]

Several decades later, the taxation of companies remains one of the mechanisms for financing vocational training: the issue of how to finance education and training is a permanent one.[101] Although this issue has partly shifted to higher education, a review of the debates that accompanied the birth of the apprenticeship tax

98 Peter Hall and David Soskice, *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford: Oxford University Press, 2001).

99 Pepper D. Culpepper, *Creating Cooperation: How States Develop Human Capital in Europe* (Ithaca: Cornell University Press, 2003), 2.

100 Stéphane Lembré, "Les inspecteurs départementaux de l'enseignement technique et les besoins de formation dans l'industrie en France (1911–1946)," in *Former la main-d'œuvre industrielle en France. Acteurs, contenus et territoires (fin XIX^e^ et XX^e^ siècles)*, *Cahiers d'histoire du CNAM* 9–10 (2018), 149–66; Stéphane Lembré, "Les inspecteurs départementaux de l'enseignement technique dans le Nord de la France. Des inspecteurs comme les autres? (1888–1945)," in *Les personnels d'inspection. Contrôler, évaluer, conseiller les enseignants. Retour sur une histoire, France-Europe (XVIIe–XXe siècle)*, ed. Jean-François Condette (Rennes: Presses universitaires de Rennes, 2017), 145–60.

101 Odile Join-Lambert, "La formation professionnelle: qui oriente? qui finance? qui contrôle?," in *Dictionnaire historique du patronat français*, ed. Jean-Claude Daumas et al. (Paris: Flammarion, 2010), 889–93; Lynn Gambin and Terence Hogarth, "Who pays for skills? Differing Perspectives on Who Should Pay and Why," in *The Oxford Handbook of Skills and Training*, ed. Chris Warhurst, et al. (Oxford: Oxford University Press, 2017), 652–70.

reminds us that there is no obviousness in the choices made: in the field of vocational training, the complexity of the collection and financing mechanisms and the questions raised by their yield are equal to their political implications for the present and future of societies.

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Funding of Progressive Education, 1891–1954: A Swedish Case

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Abstract • It is a well-known fact that several of the early progressive schools were privately, not publicly, funded. This has been observed in studies of progressive schools in, for instance, Japan and England. However, more specific analyses of the nature of this financing are rare. The overarching purpose of the article is to analyse and describe the funding of progressive private upper secondary schools (läroverk) through a case study including two schools in Gothenburg and Uppsala in the early 1900s. Using primary material, such as minutes from the annual meetings of shareholders and final accounts, a broader understanding of conditions and motives is accomplished. A combination of donations from local philanthropists, public funding, and student fees funded the schools. Gradually, the importance of philanthropic capital decreased. In addition, it also turned out that the schools were hardly driven by profit motives.

Keywords • Private upper secondary school, school finance, progressive education, local elite, philanthropy

Introduction

It is a well-known fact that several of the early progressive schools were private and did not receive financing from public funds. This has been observed in studies of progressive schools in, for instance, the U.S., Germany, England, and Japan. At the same time as it has been established that the progressive schools were often privately funded, more extensive analyses of the nature of their financing and how it affected their operations are largely lacking. Instead, studies tend to focus on the pedagogical ideas included in accounts of progressive education, which means that the fundamental conditions for actually implementing it have not been thoroughly examined before.[1]

The historical conditions in Sweden were similar regarding operations and financing, even though some progressive education was offered within the framework of mass schooling. We start out from economic history and education history research interested in mixed forms of financing of various types of services, organisations, and schools that existed alongside the emergence of the modern welfare society

1 Larry Cuban, *How Teachers Taught: Constancy and Change in American Classrooms, 1890–1980* (New York: Longman, 1993); Marjorie Lamberti, *The Politics of Education* (New York: Berghahn Books, 2002); RJW Selleck, *English Primary Education and the Progressives 1914–1939* (London: Routledge, 1972/2013); Yoko Yamasaki and Hiroyuki Kuno, *Educational Progressivism, Cultural Encounters and Reform in Japan* (London: Routledge, 2018).

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financed by taxes. This kind of mixed funding often included elements of non-profit funding, donations, share capital, and public funds.[2]

To understand the financing of progressive education better, we follow the education history tradition of focusing on "The black box of schooling," which means that we are primarily interested in the actual running of schools and how financial and operational issues were handled at the local level, rather than state regulations or public inquiries into the financing of particular schools.[3] We have focused on two upper secondary schools that were run as public limited companies (*aktiebolag*) with a strong financial position in the local context: Göteborgs högre samskola (1901) and Uppsala enskilda läroverk (1891).[4]

The overall aim of the article is to analyse the funding of progressive private upper secondary schools. We will do this partly through describing the financing of private schools in Sweden, and partly through studying the funding of two progressive private schools in terms of operations and financing. Our research questions are the following: What were the different sources of funding for the private upper secondary schools? How did the sources of funding change over time? How did the funding relate to the local philanthropy of the city?

The period treated is 1891–1954. The selection of this period reflects changes in the way private upper secondary schools were funded, starting from a 1908/09 decision when the principles for this type of financing were determined. The decision stipulated that, in order to receive state funds, private upper secondary schools had to offer teaching based on new and modern ways of organising schools and education, among other things.[5] This is also a period of significant changes in the entire Swedish school system. A landmark decision about education design was made in 1950, which favoured a discontinuation of the segmented school system, but the execution of it would however be preceded by a trial period.[6] The idea was to collect material to find out how a new form of elementary school could best be organised.[7] We see this as an important turning point in terms of principles, since the standing of the private upper secondary schools as central and unique institutions for testing new methods and ways of organising education was no longer in place.[8]

The article begins with an account of the context of the private upper secondary schools in terms of education history. Then follows a review of previous research and

2 Johannes Westberg, *Funding the Rise of Mass Schooling: The Social, Economic and Cultural History of School Finance in Sweden, 1840–1900* (London: Palgrave Macmillan, 2017); Madeleine Michaëlsson, *Privata bidrag till folkskolan: Järnbruken och det svenska folkskoleväsendet 1850–1930* (Acta Universitatis Upsaliensis, Diss. Uppsala: Uppsala universitet, 2016); Pernilla Jonsson and Silke Neunsinger, *Gendered Money: Financial Organization in Women's Movements, 1880–1933* (New York: Berghahn Books, 2012); Karolina Wiell, *Bad mot Lort och Sjukdom: Den privathygieniska utvecklingen i Sverige 1880–1949* (Acta Universitatis Upsaliensis, Diss. Uppsala: Uppsala universitet, 2019).

3 Cf. Sjaak Braster et al., *The Black Box of Schooling: A Cultural History of the Classroom* (Brussels: Peter Lang, 2012). Note that the book mainly looks at teaching and the character of the classroom.

4 "Samskola" was a coeducational upper secondary school for boys and girls studying together. Note also that "enskilda skolor" were the equivalent of private schools. In this context private schools is interpretated as schools owned and run by private actors.

5 See Kungl. Maj:ts Nåd. Proposition N:o 163, 1908.

6 For an explanation of the concept, see Figure 1.

7 SOU 1961:30, *1957 års skolberedning 6 Grundskolan: betänkande* (Stockholm, 1961), 52–3.

8 We will describe the role of the private upper secondary schools as experimental schools below.

theoretical starting points, as well as a discussion of sources. The more empirical sections of the article are introduced by a descriptive overview of the position and role of private upper secondary schools in Sweden during the first half of the twentieth century. This is followed by an in-depth case study of two private upper secondary schools, Göteborgs högre samskola and Uppsala enskilda läroverk. The article concludes with a summary and discussion.

Background

Progressivism is a relatively broad phenomenon which usually designates various features of schooling and education that emerged towards the end of the nineteenth century. In Swedish and international debates on education, a number of more or less synonymous concepts are often used, such as for example "New Education" and "child-centred education."[9] With reference to John Dewey, what was seen as a traditional and conservative society was critiqued more and more intensively around the turn of the twentieth century, at the same time as the role of education for creating a democratic and modern society was highlighted.[10]

When defining progressivism, there are a few aspects of this movement that usually are stressed. Progressivism typically involved a holistic view of education and society; schools were supposed to change alongside societal change. Progressivism is also associated with the fundamental view that schools were based on democracy and that all citizens, regardless of class and gender, were to have the right to education. In addition, progressive teachers and educators usually agreed on a view of curricula and pedagogical organisation that allowed contemporary challenges and students' interests to play a decisive role in the planning and implementation of teaching.[11]

In Sweden, the progressive reform movement gathered around ideas about the importance of local development through initiatives taken at particular schools.[12] It is also important to note that the creation of material and knowledge required for change was seen as part of the mission. Experiments, trials, and science were supposed to support reform, not tradition.[13] This view was partly shared by the authorities. In the early twentieth century, progressive upper secondary schools were granted government grants precisely for testing different methods, for example. Two of the upper secondary schools that received such grants are examined in the present article.

9 Cuban (1993); *Progressive Education Across the Continents*, ed. Hermann Röhrs and Volker Lenhart (Frankfurt am Main: Peter Lang, 1995); Laura Tisdall, *A Progressive Education? How Childhood Changed in Mid-Twentieth-Century English and Welsh schools* (Manchester: Manchester University Press, 2020).

10 John Dewey, *Demokrati och utbildning* (Göteborg: Daidalos, 1997/1916).

11 William J. Reese, "In Search of American Progressives and Teachers," *History of Education* 42, no. 3 (2013), 320–34; Thomas Popkewitz, "Inventing the Modern Self and John Dewey: Modernities and the Traveling of Pragmatism in Education-An introduction," in *Inventing the Modern Self and John Dewey: Modernities and the Traveling of Pragmatism in Education,* ed. Thomas Popkewitz (New York: Palgrave Macmillan, cop., 2005), 20–32.

12 Donald Broady and Annika Ullman, "Ständigt var man i farten med att grunda och stifta: Om fält, offentligheter och nätverk vid sekelskiftet 1900," *Kvinnovetenskaplig tidskrift* 2, no. 27 (2001), 27–31.

13 Popkewitz (2005), 21–9; Alessandra Arce Hai et al., *Reimagining Teaching in Early 20th Century Experimental Schools* (Cham: Palgrave Macmillan, 2020), 27–43.

At the same time, the progressive ambitions should be placed in a context that reveals the proportions of the contemporary school system, both in terms of the number of students and in terms of financing. In Sweden and internationally, nineteenth and early twentieth century school systems were segmented. Schools funded by local school districts, and increasingly by central government subsidies, provided a basic education for the masses, while the children of an elite attended schools that prepared them for higher education. The early twentieth century saw, however, reforms that attempted to strengthen mass schooling, which lead to higher enrolment and attendance rates.[14]

The state funds allocated to mass schooling were also significantly lower in relation to the cost per student compared to the funding for upper secondary schools. The proportions vary between 1868 and the 1880s; initially the funds for upper secondary schools were three times the funds allocated to primary schools, despite the fact that the latter had more than a hundred times as many students, and during the 1880s state funding for an upper secondary school student was more than four times the funding for a primary school student. Between the world wars, the proportions in terms of funding were similar.[15] In this context, it should be added that, although the private upper secondary schools might have had a progressive profile, the excessive school reform was about the public upper secondary schools, which were not characterised by progressive ideals at this point in time. Rather, it can be said that as an institution it was characterised by obvious conservative features. There was a skepticism among many teachers towards a student-centered pedagogy, for example. Furthermore, there were formal links to conservative institutions such as the church. But at the same time, it is important to point out that the image of the upper secondary school as a traditional institution is not all black and white.[16]

The private secondary schools under investigation were established in a time when women's democratic rights were limited. In Sweden, women were given the right to vote in 1919. This situation also involved women's access to education. Their chances of entering higher education were limited, for instance, and while it was primarily girls' schools that allowed females to receive education beyond elementary school, the girls' schools typically did not offer the baccalaureate degree. The public

14 Laurence Brockliss and Nicola Sheldon, *Mass Education and the Limits of State Building, c. 1870–1930* (New York: Palgrave Macmillan, 2012); Yasemin Nuhoğlu Soysal and David Strang, "Construction of the First Mass Education Systems in the Nineteenth-Century Europe," *Sociology of Education* 62, no. 4 (1989), 277–78. For a description of the context of early conditions of mass schooling in Sweden, see Esbjörn Larsson, *En lycklig Mechanism: Olika aspekter av växelundervisningen som en del av 1800-talets utbildningsrevolution* (Uppsala: Historiska institutionen, 2014), 22–30; Lars Petterson, "Folkskolans varför och hur: En historisk betraktelse över behov och metodik i svensk folkundervisning under 1800-talets första hälft," in *Skolhistoriskt arkiv* (Helsingfors: Svenska Skolhistoriska Föreningen i Finland, 2009).

15 The calculations are based on records of the number of students and the economic conditions in Bidrag till Sveriges officiella statistik, Undervisningsväsendet P: Folkundervisningen 1868–1911; Allmänna läroverken 1876–1911; 1851–1911, and funds allocated between the world wars are taken from sources included in Table 1 and information about the number of students in Gunnar Richardson, *Svensk skolpolitik 1940–1945* (Stockholm: Liber Förlag, 1978), 16–19.

16 Johan Samuelsson, *Läroverken och progressivismen: Perspektiv på historieundervisningens praktik och policy 1920–1950* (Lund: Nordic Academic Press, 2021); Christina Florin and Ulla Johansson, *"Där de härliga lagrarna gro": Kultur, klass och kön i det svenska läroverket 1850–1914* (Stockholm: Tiden, 1993) Germund Larsson, *Förbrytelser och förvisningar: bestraffningssystemet i de svenska läroverken 1905–1961* (Acta Universitatis Upsaliensis, Diss. Uppsala: Uppsala universitet, 2018).

upper secondary schools were closed to females until 1927. However, girls were able to seek the baccalaureate as independent students.

The issue of coeducational instruction was intensively investigated and discussed, and coeducational upper secondary schools turned out to be one way for women to get a degree. The private coeducational upper secondary schools served as pioneering schools in terms of coeducational instruction, even though there were also public coeducational schools. Generally speaking, these schools, girls' schools and coeducational schools, were aimed at an educated and financially stable social class.[17] The political and reform-related context of the schools that we study, that is, private coeducational schools, was thus an increasingly intense debate regarding women's rights to higher education, as well as a tradition of private schools where progressive ideals were typically explicit.

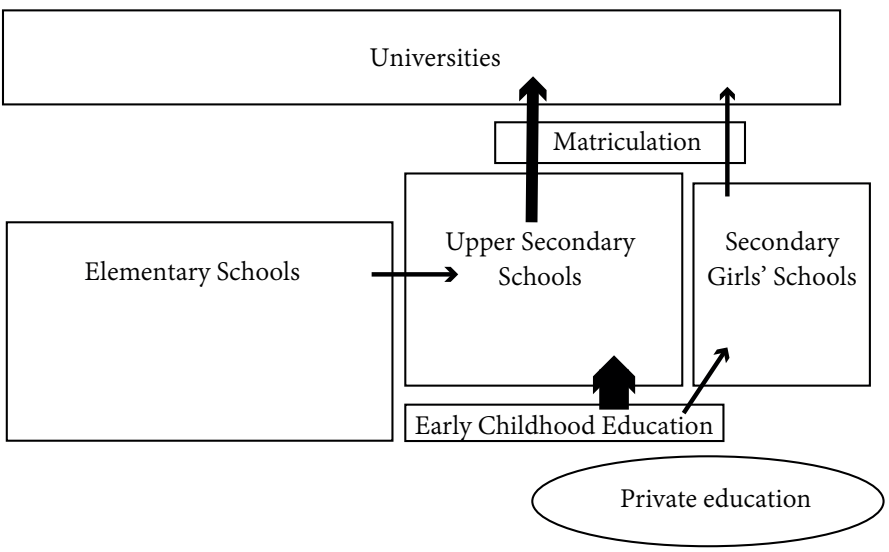

Figure 1. Overview: The Swedish Education System, circa 1900
Note: a) In addition to the universities, there were also other institutions for higher education, such as the KTH Royal Institute of Technology, the Swedish University of Agricultural Sciences, and the medical university Karolinska Institutet, b) the elementary schools had a largely local organization and financing, c) in elementary school co-education was practiced for about six years, d) in 1870, women were given the right for a matriculation examination, which initially took place at the public upper secondary schools; around the turn of the century, some co-educational schools and upper secondary girls' schools also received graduation rights, but few women took the matriculation examination, e) from year 1874 the upper secondary girls 'schools received a small state subsidy, but were mainly financed by tuition fees, f) the upper secondary education lasted for nine years while the upper secondary girls' schools lasted for eight years, g) the upper secondary schools could have a private operating and were then called private upper secondary schools.

17 Marie Nordström, *Pojkskola, flickskola, samskola: samundervisningens utveckling i Sverige 1866–1962* (Lund: Lund University press, 1987), 50–57; Gunhild Kyle, *Svensk flickskola under 1800-talet* (Göteborg: Göteborgs universitet, 1972); Sara Backman Prytz, *Borgerlighetens döttrar och söner: Kvinnliga och manliga ideal bland läroverksungdomar, ca. 1880–1930* (Acta Universitatis Upsaliensis Diss. Uppsala: Uppsala universitet, 2014), 16–20. It should also be noted that the girls' schools can be seen as progressive in the sense that they provided girls with access to higher education. In these schools, it was not unusual to find a student-centred progressive pedagogy.

Previous research and theoretical background

A starting point for the study is that the establishment of different types of education should be related to social, economic, and cultural processes. This does not mean that government decisions and directives are unimportant, but that the emergence of different educational institutions must be related to local contexts.[18] This has affected the kind of previous research we have included here. However, there is also a lack of Swedish studies of private upper secondary schools, and of how their operations and funding affected education, which has influenced the choice of previous research.

Therefore, we have chosen to base our study on two research areas. First, studies concerning financing of schools and other public activities. In particular, we have identified how mixed forms of financing have been present in many contexts. Second, studies that focus on philanthropy and its role in funding school and education.

Research has noted how various forms of education, which were largely dependent on private efforts, are characterised by the way in which they based their activities on the support of several different sources of funding.[19] For instance, Johannes Westberg's study of the development of preschool pedagogy in Sweden includes an analysis of sources of income between 1845 and 1943 which shows that the activities were funded by various revenues of different kinds: municipal funds, donations, interests, fees, and events.[20]

Westberg states that it is possible to accomplish a new and broader explanation of the emergence of mass schooling through a detailed analysis of the school building process. He sees that the financing and planning of the construction involved regional actors of various kinds such as the regional credit market. However, construction was also dependent on monetary and non-monetary taxation at the local level, although the proportion of non-monetary taxation gradually decreased.[21]

Other Swedish studies have also found that funding for the school could involve a number of different sources. In a study of private contributions to elementary school, Michaëlsson identifies financing from school districts, government grants, businesses, student fees, donations, gifts, and wills.[22] An analysis of the financing of teacher salaries around the turn of the century 1800 in the then Helvetic Republic, now Switzerland, also demonstrates that there were several sources of income.[23] Similar conclusions have been reported regarding the American context; in a study of local education markets in New York 1815–1850, Nancy Beadie shows that activities were

18 Cf. Westberg (2017).

19 Nancy Beadie, *Education and the Creation of Capital in the Early American Republic* (Cambridge: Cambridge University Press, 2010); Madeleine Michaëlsson, "From Tree Felling to Silver Lining: Diverse Ways of Funding Elementary Schools Among Swedish Ironworking Communities, 1830–1930," in *History of Schooling: Politics and Local Practice*, ed. Carla Aubry and Johannes Westberg (Frankfurt am Main: Peter Lang, 2012).

20 Diagram 1 in Johannes Westberg, *Förskolepedagogikens framväxt: Pedagogisk förändring och dess förutsättningar* (Acta Universitatis Upsaliensis, Diss. Uppsala: Uppsala universitet, 2008), 58.

21 Johannes Westberg, "Multiplying the Origins of Mass Education: An Analysis of the Preconditions Common to School Systems and the School Building Process in Sweden, 1842–1900," *History of Education* 44, no. 4 (2015), 434–6. See also Westberg (2017).

22 Michaëlsson (2016), chapters 3 and 4.

23 Ingrid Brühwiler, "Teacher's Salaries in the Helvetic republic, c. 1800," in *History of Schooling: Politics and Local Practice*, ed. Carla Aubry and Johannes Westberg (Frankfurt am Main: Peter Lang, 2012), 78.

funded through gifts, labour, donated material, and voluntary subscriptions.[24]

However, this funding model was not unique to the school. Other activities that we would usually regard as public today were also based on a form of mixed funding. For example, bathhouses with saunas were built in the early twentieth century through a system of mixed funding which included the builders' own labour, fund assets, and some public aid. Yet another example concerns museums, as private donations were key components of their funding. Previous studies indicate that there were strong local networks of donors, contributing financially, in the cultural sphere particularly.[25] Military activities also benefited from a form of mixed financing comprised of private and public funds, through non-governmental organisations such as "Landsstormen."[26] We are mainly interested in the management and organisation of schools, but it can be noted that the debate on how various kinds of services should be managed and organised has been going on for a long time.

Especially, in one of the cities, a local donation culture with elements of philanthropy came to play a role when the school was initiated. In short, we want to say something about this phenomenon. Philanthropy research has noted that the social and material context of a donation is key to understanding the motivation behind philanthropic contributions. This approach may reveal that the conditions for making donations are different for saunas compared to philanthropic acts in the domain of welfare. Interrelations between different actors can therefore suggest various motives for a donation: the desire to appear as a responsible and influential person, the positive effect of a boost in self-confidence on the part of the donor, or the opportunity to enjoy a self-image of oneself as a person so dignified and capable that others expect contributions to groups and causes in need.[27] Previous studies also show that there were regional differences regarding donations and philanthropy. In Gothenburg, for example, funds that supported education were larger than in other cities. This can be understood in relation to the character of the city's financial elite which was markedly liberal.[28]

In summary, we want to highlight some aspects from previous research that we see as important when we are to understand the establishment of private schools. An explanation that has been suggested for the multiple sources of income is that the early schools, like cultural institutions, depended on social capital; in other words, their funding mirrored the surrounding local network.[29] Lately, researchers have begun to offer a broader picture of the historical conditions that underpin a school system. Westberg, for instance, shows that a great number of social, economic, and cultural processes enabled the construction of new school buildings.[30] From this per-

24 Nancy Beadie, "Tuition Funding for Common Schools," *Social Science History* 32 (2008), 111–12 and Beadie (2010).

25 Jan Christensen, *Rikedom förpliktigar* (Göteborg: Lindelöws Bokförlag, 2020); Wiell (2019).

26 Fia Sundevall, "Money, Gender and Military Training: Women as Economic Agents in Military Affairs (Sweden 1924–1942)," *Militärhistorisk tidskrift* (2017), 76–80.

27 For a detailed discussion of donations in school contexts and the motives behind them, see Michaëlsson (2016), chapter 6.

28 Christensen (2020), 79–85.

29 See Beadie (2008), 111–2. See also Larsson (2014), chapter 3.

30 Johannes Westberg, *Att bygga ett skolväsende: Folkskolans förutsättningar och framväxt 1840–1900* (Lund: Nordic Academic Press, 2015), 292–4.

spective, several factors can have a simultaneous impact, such as governmental regulations, the labour of unpropertied workers, changes on the credit market, and a growing population. Through this type of analysis, more of the contemporary structures that were required to secure resources for activities can be identified.

Our starting point is that this multi-factor model of explanation is relevant for the private upper secondary schools as well. They responded to a need for alternative pedagogy and coeducational instruction, but practical solutions at the local level were dependent on a number of different factors such as for instance educational traditions, access to networks, and the potential presence of a culture of philantrophy.

Method and material

For this study, we have selected private upper secondary schools in Swedish cities with different traits.[31] We wanted to select upper secondary schools where we initially judged that there was a relatively substantial amount of material available for the period of time examined in the study. Moreover, we selected two upper secondary schools that were founded before the governmental funding of private upper secondary schools was formalised in 1908. The reason for this was that we wanted to be able to trace the development of the schools before and after the introduction of the government grant. It was furthermore important for us to be able to find reasonably similar source material, and that the archives were relatively accessible.

As a result, we selected two schools, one located in Uppsala and the other in Gothenburg. Uppsala is a typical university town with one of Sweden's oldest, and around the turn of the century 1900 by far the largest, university. At the time, Uppsala University had more than 1,400 students, while Lund University, the second largest, had around 600.[32] The town of Uppsala was characterised by students and student associations to a great extent. Around the turn of the 20th century, the share of female students was still negligible, but this began to change a decade or so later. Uppsala also had industries, such as for instance Ekeby Bruk which produced bricks, as well as food, textile, and manufacturing industries. Gothenburg, on the other hand, can be seen as a town characterised by engineering industries and trade. Companies such as SKF, Ostindiska Kompaniet, and Götaverken, together with the textile industry, constituted important industries.[33] Gothenburg at the time had an institute of technology, Chalmers, with more than 300 students.

When it comes to sources, there have also been some limitations in the material that have influenced the focus of our study. The ways in which the private upper secondary schools handled bookkeeping and reporting on financial management were examined already in the 1920s. In 1925, it was investigated how the financial management of private upper secondary schools could be made more transparent and uniform, among other things. The investigation discovered problems so severe that it even produced suggestions for templates that could be used for financial reporting. The investigators also highlighted the fact that it was generally difficult in many cases

31 See below for a more detailed account of the motives for selecting upper secondary schools for this study.

32 *Statistisk* årsbok för Sverige 1914 (Stockholm: Kungl. Boktryckeriet, 2014), see table 137.

33 Lars Magnusson, *Sveriges ekonomiska historia* (Stockholm: Prisma, 2002), 270–90, 360–80, 420–40.

to comprehend on what grounds profits and losses were reported. In addition, it was noted that many school companies reported expenditures and revenues on unclear grounds, and some information was described as "misleading."[34]

The lack of transparency in financial reporting is also reflected in the archives of the upper secondary schools included in the present study. The source material is certainly relatively extensive, but the character of the material varies over time, and also between the two archival collections. The material that we have used comprises annual reports, minutes from board meetings, audit reports, directors' reports, lists of shareholders and company statutes, and these provide a picture of funding and operations that features certain gaps, since access to the different categories of material has varied. One example of something that has made it difficult to trace the development of funding over time is the lack of directors' reports for the entire period. In Gothenburg, there are for instance no directors' reports from the early part of the period, while they are available for the latter part. In the Uppsala town archives, there are no directors' reports that include financial reporting. We have been forced to supplement our sources with newspapers and anniversary books in some cases when there have been gaps in the specifically economic material. In sum, we have had to use a mix of sources and partly approach them as a jigsaw puzzle.

Since we are interested in finding out what types of groups and actors invested, donated, and in other ways contributed to the founding and early activities of the schools, we have also used material that can relatively simply provide a picture of the backgrounds of various financial supporters. For reasons of delimitation, we have not studied their economic and social standing closely in this context. It would have been possible to use inventories of property and tax calendars, for example, for a more in-depth survey. We have decided, however, to draw attention to professional titles and find support mainly in general overviews and biographical material. This approach has contributed to a broad general picture of their social position.

Private upper secondary schools between 1900–1950: Experimental activities in a traditional framework

In order to better understand the funding and operation of private upper secondary schools, we will first consider their role in the Swedish school system at a more general national level. In Sweden, like in other countries, private upper secondary schools were progressive nodes of sorts by the turn of the century 1900. These upper secondary schools usually catered to an affluent middle class, which turned out to be significant for the general development of upper secondary schools during the first half of the twentieth century. Their role for the dissemination and establishment of progressive education has been discussed in research interested in various types of networks.[35] It is important to note that the schools we study here were thus not part of the broad mass education. It should also be noted that even from an international perspective, the middle class was attracted to progressive schools.[36]

34 SOU 1925:1, *Utredning av vissa frågor rörande privatläroverken* (Stockholm: P.A. Nordsedt och Söner, 1925), 21–30. See also attachments where the investigation suggests various templates.

35 Broady and Ullman (2001); Emma Vikström, *Skapandet av den nya människan* (Örebro: Örebro University, 2021), 16–17.

36 William J Reese, "The Origins of Progressive Education," *History of Education Quarterly* 41, no. 1 (2001), 3–5.

In Sweden, the private upper secondary schools played a particular role in the history of Swedish education. In the late nineteenth century, these schools were increasingly present in public debates on the government grants issued to schools. These discussions foregrounded the role of the private upper secondary schools as reformers of pedagogy, but the issue of funding was also debated. In 1908, a government bill was proposed which clarified what types of private schools were eligible for government grants, namely municipal middle schools, girls' upper secondary schools, and, indeed, private upper secondary schools. The conditions for receiving grants were also specified. For grants to be issued, it was suggested that schools had to offer some form of experimental pedagogy, and this was ratified in the 1908 government bill. As has been mentioned above, "new forms and methods of teaching" were important to these upper secondary schools.[37] It was assumed that "new work plans and teaching methods could be tested and evaluated in practice" at these schools. Furthermore, the bill emphasised that experiences from upper secondary schools should also "benefit the public upper secondary schools."[38] It was seen as significant with such experience and such knowledge whether or not the experiments were successful. Failed trials could be "dismissed from the discussion of pedagogy," but if proven useful, they deserved "further application in state schools as well."[39]

The practical experiences achieved at private upper secondary schools were thus seen as potentially beneficial for the entire school system, which was an argument in favour of extending the government grant. However, this required experimental activities to go on "at a large enough scale, over a long enough time," which justified grants allocated to upper secondary schools in accordance with the government bill.[40] The assumption that it was the private upper secondary schools that would contribute to development was based on the idea that they "were driven to it out of the heat and excitement of conviction."[41] Moreover, this type of school also had greater opportunities than the public upper secondary schools to modify their organisation and teaching, and to pick their own staff.

Examples of private upper secondary schools that were associated with pedagogical reform during this period included, among others, schools where boys and girls were educated together, such as Sofi Almqvists samskola and Palmgrenska samskolan in Stockholm, Stockholms nya samskola, Göteborgs högre samskola, Djursholms samskola, Lundsbergs internatskola, Whitlockska samskolan as well as Uppsala enskilda läroverk.[42] The private upper secondary schools in Sweden around this time had certain social ambitions in the sense that many of them were coeducational and thus welcomed female students. At the same time, they were hardly schools for the lower rungs of society. The steep tuition fees presented an effec-

37 Sigurd Åstrand and Alice Kollén, *Två studier av pedagogiska pionjärinsatser* (Uppsala: Föreningen för svensk undervisningshistoria, 1985); Kungl. Maj:ts Nåd. Proposition N:o 163, 1908, 45.

38 Kungl. Maj:ts Nåd. Proposition N:o 163, 1908, 42.

39 Kungl. Maj:ts Nåd. Proposition N:o 163, 1908, 42.

40 Kungl. Maj:ts Nåd. Proposition N:o 163, 1908, 42, 49.

41 Kungl. Maj:ts Nåd. Proposition N:o 163, 1908, 40.

42 There were, however, a few schools for boys on scholarships, such as for instance Beskowska skolan in Stockholm, Fjellstedtska skolan in Uppsala, Lunds privata elementarskola and Eslöfs enskilda elementarskola för gossar. See Åstrand and Kollén (1985), 20–3; Kungl. Maj:ts Nåd. Proposition N:o 163, 1908, 55–6 and 171.

tive obstacle for lower-income students. The schools that we study, Göteborgs högre samskola and Uppsala enskilda läroverk, do not constitute exceptions in that regard.

What types of experiments did the private upper secondary schools conduct, then? They could for instance involve intensive study of single subjects and interdisciplinary study, but also a greater share of practical and student-driven components in teaching. Furthermore, there were examples of trying to organise the progression from one level of schooling to another in new ways.[43] The significance of such trials was also confirmed by the education authorities. When the Board of Education commented on the concrete traits of the experimental upper secondary schools, the main idea was "that they in terms of certain details of the organisation or curriculum or in relation to the methodology of certain subjects deviated considerably from other schools of equivalent kind; and it could not be denied that such deviations often constituted valuable experiments."[44] In other words, the school authorities and the politicians were in agreement regarding the role of the experimental upper secondary schools in the Swedish school system.

During the first half of the twentieth century, the private upper secondary schools were a controversial form of schooling discussed in public inquiries. However, this discussion was rarely linked to specific ideological standpoints. It was rather a question of the views of individual members of parliament, for example regarding the size of the grant allocated to this type of school.[45] In inquiries such as the 1918 school commission and government bills from the late 1920s, even though the number of private upper secondary schools was discussed, their existence as such was never threatened. It was yet again emphasised, though, that their role in the school system was to conduct pedagogical experiments. They were therefore considered important for the development of the public upper secondary schools as well.[46] The need for experimental activities in upper secondary schools was stated again in the 1936 report by experts on teacher education which was published in 1938.[47]

In one of the main Swedish school inquiries, the 1946 school commission, the idea of a so-called experimental upper secondary school, intended to test new reforms, remained. For instance, it was suggested that particular upper secondary schools of this experimental kind were to be established.[48] In the report itself, there were some references to experiences of experimental activities in private upper secondary schools, more specifically trials with a third programme of study alongside the "Latin" programme and the "Real" programme.[49] The "modern languages" programme was intended to be somewhat more general and incorporate connections to

43 Kungl. Maj:ts Nåd. Proposition N:o 163, 1908, 172–3.

44 Kungl. Maj:ts Nåd. Proposition N:o 163, 1908, 94.

45 Johan Enegren, *Friskolor och statsmakter 1830–2000* (Stockholm: Föreningen för svenska undervisningshistoria, 2011), 29–30. See also a description of the Social Democrat Oscar Olsson's engagement in Olofskolan in Enegren (2011), 40–3.

46 Skolkommissionen 1922:II, *Skolkommissionens betänkande. 2, Historiska översikter och särskilda utredningar* (Stockholm: Nordstedts och Söner, 1922), 93–96. Kungl. Maj:ts Nåd. Proposition N:o 116, 1927, 205–12.

47 SOU 1938:50, *1936* års *lärarutbildningssakkunniga* (Stockholm: Nord. Bokh, 1938), 224ff.

48 Minutes from the commission, April 25 1946, FIII, vol. 1. Skolkommissionen 1946–1952, Riksarkivet.

49 In the "Real" programme (*Reallinjen*), the studies were focused on science and mathematics.

the modern social sciences in addition to the modern languages.[50] Even though the private upper secondary schools, in the shape of experimental schools, were expected to play a role in the school system of the future, a general reorganisation of the reform politics was now proposed. Not only the private upper secondary schools were now considered as "experimental workshops." In the school commission, the entire school system was talked about as involved in a continually ongoing process of reform, and it was suggested that the experiments should be an integrated part of the ordinary school activities.[51] In 1950, a decision was made in principle to introduce a mandatory, uniform primary school. This change was implemented through a large-scale systematic experimental project. Through these decisions, the unique position of private upper secondary schools in the Swedish school system was undermined. The period around 1900–1950 can be described as a kind of golden age for the private upper secondary schools in their role as experimental workshops, which in turn justified the government grants that they received.

Institutional framework and general financing model

There were certain requirements that the private upper secondary schools had to fulfil in order to receive government grants, for instance in relation to wage-setting rules. Schools run by limited companies (*aktiebolag*) were subject to auditing and financial control in accordance with the regulations pertaining to such companies. Thus, these schools were subject to the Companies Act.

Depending on area of activity, supplementary directives could be added, which regulated the organisation and management of the limited company. The directives could for instance be about specific demands on the size of the basic funds, mandatory report to the King's commander, and special regulations concerning board and management. When the operations included deposits and lending, there were also special rules; for instance, a maximum duration of loans of ten years, and a requirement that the limited company keeps a ledger, a settlement book, a loan book, a register of the debtors, and a capital account. It was also not allowed for principals and board members to serve as officers in an organisation where deposits and lending took place.[52]

After some time, the rules pertaining to the operation and organisation of schools were clarified. For example, it was decided that state representatives had to be present on the board of directors in school companies. How schools were supposed to report to the authorities was also gradually formalised. In accounts submitted to the authorities, schools were for example supposed to describe how teaching was conducted, how many hours of instruction the students received, what the classrooms were like in terms of material standard, and so on. As a kind of early performance management, schools were also to report final grades to the authorities.[53] Despite the fact that they were private upper secondary schools, there were rules and requirements that had to be observed for them to receive government grants.

50 SOU 1948:27, *1946* år *skolkommissions betänkande med förslag till riktlinjer för det svenska skolväsendets utveckling* (Stockholm: Ivar Häggströms Boktryckeri, 1948), 281–83.

51 SOU 1948:27, 501–2.

52 Ernfrid Browaldh, "Konkurrensen på den svenska kreditmarknaden," in *Bankerna och samhället*. (Stockholm: Svenska bankföreningen, 1955).

53 SFS 1912:228.

An important part of the role of the private upper secondary schools in the Swedish school system was to test new ways of organising and conducting teaching. The state issued government grants to the schools if they could meet these demands, but as shown in Table 1 below, their role in the state education budget was relatively small. In Table 1, we present government grants issued to the various types of schools in existence during the period that we study. The overview is based on the government's budget bills. Please note that there was an extra grant issued for female teachers working in the private upper secondary schools.

Table 1. Government grants for different schools 1913–1970, SEK.

Year	Private upper secondary schools	Girls' secondary schools	Extra grant for female teachers	Public upper secondary schools	Elementary school
1913	170,000	400,000	280,000	6,000,000	12,000,000
1920	200,000	450,000	280,000	8,000,000	42,000,000
1930	230,000	470,000	530,000	9,000,000	55,000,000
1940	500,000	500,000	80,000	26,000,000	128,000,000
1950	1,000,000	300,000	16,000	67,000,000	234,000,000
1960	12,000,000			216,000,000	720,000,000
1970	27,000,000			1,100,000,000	3,000,000,000

Sources: Kungl. Maj:ts Nåd. Proposition N:o 1 år 1913, 1920, 1930; 1940, 1950, 1960 and 1970 area of expenditure Ministry of Ecclesiastical Affairs H and I, basic grant.[54]
Note. The number of students in elementary school was around ten times higher than the number of students in public upper secondary schools for most of this period.[55] Public upper secondary schools and elementary school had public principals, while private upper secondary schools and girls' schools had mainly private principals.

If we focus on the private upper secondary schools only, the central government expenditure was small in relation to the public upper secondary schools. If we combine private upper secondary schools and secondary girls' schools, we get a slightly different picture. The private alternatives then received around 10 percent of the budget for higher education (that is, schools other than elementary school) in the early part of the period. Over the period of time that we study, their share of the total budget for higher education decreases. This decrease coincides with their changing role in the Swedish school system alongside the introduction of major reforms between the wars. We cannot say if this was a result of experimental activities of a different character after 1950. However, there was not a strong public opinion against the private upper secondary schools, and for example among leading Social Democrats there was a very positive attitude towards certain private schools.[56]

A 1950 overview shows that there were two main forms of ownership for private upper secondary schools. Foundations were a common form, and an example of a

54 In 1908, it was suggested for the first time that private upper secondary schools should receive grants. The proposal was to grant them 110,000 SEK. See Kungl. Maj:ts Nåd. Proposition N:o 163, 1908, 56.

55 See report from Statistiska centralbyrån: *Innan grundskolan fanns* (Stockholm: SCB, 2019), 5–6.

56 Enegren (2011), 40–50; Gunnar Herrström, *1927 års skolreform* (Stockholm: Svenska Bokförlaget, 1966), 106–25.

foundation school is Palmgrenska skolan in Stockholm. The most common form of ownership was a limited company, and Göteborgs högre samskola is one out of nine examples.[57]

When the issue of teacher salaries in the private schools—that is, girls' schools, private upper secondary schools, and private middle schools—was investigated in the 1940s, there was a discussion of the financing of schools. According to the inquiry, student fees, amounting to more than 40 percent, constituted the largest source of income, followed by government grants that provided an almost equally significant part of the total funding. Municipal grants covered a little less than 20 percent.[58] The composition of the funding for private upper secondary schools is of particular interest to us, but apart from these numbers, no other data are available. We have also not been able to find that there were any other ways of financing the schools. In our two case studies, we will be able to provide a slightly more nuanced picture.

Uppsala enskilda läroverk under construction 1891–1901

On 7 December 1891, an advertisement was published presenting the Limited Company Uppsala enskilda läroverk as a company in the early days of construction.[59] The advertisement was formulated as a call inviting readers to subscribe for shares in the company and included a general presentation of the focus of its activities: to teach children from the early years until the baccalaureate degree with a great emphasis on moral education, and as far as possible through coeducational instruction. The call was signed by persons who had previously made a name for themselves through participating in debates on pedagogy, for instance in discussions regarding the idea of coeducational schooling.[60] The formulations in this first call were soon to be discussed intensely among the founders of the upper secondary school, and they were critiqued among other things for being too vague. Despite this criticised lack of clarity concerning the particular character of the school, the original call indicates clearly that it was a school with a reform profile, not least since the vision of a coeducational institution was explicitly stated.

During the period between the call in December 1891 and May 1892, private citizens subscribed for shares in the new school company equivalent to more than 20,000 SEK. A majority subscribed for shares worth 100–200 SEK, but a handful of shareholders also subscribed for 400–600 SEK, and a few people invested 1 000 SEK.[61] The founders had made clear already in the first advertisement that the shareholders could not count on a profit during the first few years, but instead emphasised the need for a new and supplementary upper secondary school in Uppsala.

The shareholders can be categorised as a broadly defined middle class including representatives from trade and authorities as well as academia; the list of attendees for the first meeting in the company includes for example building contractors,

57 Kungl. Maj:ts Nåd. Proposition N:o 232, 1950.

58 Kungl. Maj.ts Nåd. proposition N:o 232, 1950.

59 Addendum to minutes from the meeting on 21 May, 1892. A1a, vol. 1. Uppsala town, The private upper secondary school (UTP), Uppsala Municipality Archives (UMA).

60 Among them, the most well-known person is probably J. A. Lundell, see *Uppsala enskilda läroverk 1901–1960* (Stockholm: Beyrond, 1961), 12–14.

61 Minutes from the meeting on 21 May 1892; Addendum to minutes from the meeting 21 May 1892. A1a, vol. 1. UTP, UMA.

senior officials, and booksellers as well as professors, associate professors, and persons with a Ph.D., see Table 2.

Table 2. Subscribers and amount of investment, Uppsala enskilda läroverk, SEK.

Title and name	Investment
Associate Professor F. A. Tamm	1.000
Landowner P. A. Liljedahl	600
Wholesale Merchant H. W. Söderman	600
Chief Inspector G. F. Stadenberg	400
Captain C. E. Arborén	200
Butcher C. A. Bergman	200
Building Contractor E. Larsson	200
Merchant G. E. Malmlöf	200
Bookseller Lennart Wahlström	200
Associate Professor L. H. Åberg	200
Farm Owner A. J. Andersson	100
Building Contractor C. R. Gustafsson	100
Merchant Axel Hellstrand	100
Associate Professor K. F. Johansson	100
Medical Doctor I. Lundberg	100
Professor J. A. Lundell	100
Ph. D. G. A. Magnusson	100
Professor A. G. Noreen	100
Associate Professor K. F. Piehl	100
Associate Professor F. A. v. Scheele	100

Source: Minutes from meeting with subscribers for shares in the proposed Limited Company Uppsala Enskilda Läroverk, Saturday 21 May, 1892. A1a, vol. 1. UTP, UMA. Arranged first after subscribed capital in SEK and then alphabetically after last names.
Note. For comparison, it can be mentioned that the annual income of an agricultural worker was 173 SEK in 1890, in addition to free room and board, equivalent in value to 404 SEK.[62]

Several important decisions were made during the first meeting, among other things that all votes were going to be related to the amount of subscribed capital. The fact that influence was determined by subscribed capital is hardly surprising, but in this case there was a partly reversed relationship between the amount of invested economic capital and influence over the future activities; among the most influential actors were persons who had subscribed for shares equivalent to the lowest amount of capital.[63]

Professor Johan August Lundell is considered the founder of the upper secondary school and also seen as the most influential person in relation to its operations over

62 Lars Lagerqvist, *Vad kostade det? Priser och löner från medeltid till våra dagar* (Lund: Historiska media i samarbete med Kungl. Myntkabinettet, 2011), 142.

63 Carla Aubry, "The Value of Schooling: Rising Expenditures on Education in Winterthur, 1830–1850," in *History of Schooling: Politics and Local Practice*, ed. Carla Aubry and Johannes Westberg (Frankfurt am Main: Peter Lang, 2012), 90.

the first three decades, but as can be seen in Table 2, he only subscribed for shares worth 100 SEK. Lundell was a professor of Slavic languages at Uppsala University, and also played a prominent role in the contemporary debate on pedagogy. Among other things, he held a central position in the reform society Quesque tandem and argued publicly for reform in the area of language education. Lundell was an active writer with progressive ideas, and his writings were often published, for instance in the pedagogy journal *Verdandi*.[64]

Another professor, Adolf Noreen, was present for the first meeting and he too subscribed for the lowest recorded sum of 100 SEK (see Table 2).[65] During the meeting, Noreen expressed his concern that the proposed upper secondary school was only going to be a reform school in theory. He presented animated arguments for developing the progressive components more explicitly already from the beginning, for example in relation to coeducational instruction, and questioned why such instruction was planned for the primary school level only. A possible explanation why the influence of the professors was comparatively significant in relation to their subscribed capital could be that they instead controlled considerable educational resources.[66]

Uppsala enskilda läroverk was founded, then, in the form of a limited company, and over the first year another hundred or so shareholders subscribed, typically for one or two shares worth 100 SEK each.[67] These shareholders were not listed with titles neither in the minutes from meetings nor in the bookkeeping, which makes it difficult to assess their social position in the same way that the list of attendees for the first meeting enabled us to do.

As has been mentioned above, the progressive profile of the upper secondary school was expressed already in the first call to subscribe for shares and it was discussed intensely at the very first meeting. In later meetings and subsequent advertisements as well, the progressive ideas were explicitly stated. In an initial advertising campaign carried out to recruit students, it was highlighted that the balance between the students' physical and spiritual health was going to be approached with utmost care. Moreover, there was information about the coeducational profile and it was declared that the students' individual development was going to be a special priority. The advertisement emphasised that arts and crafts were going to be mandatory components, and that teachers were going to use so-called improved teaching methods both in language teaching and in other subjects.[68]

64 *Johan A Lundell*, https://sok.riksarkivet.se/sbl/artikel/9807, *Svenskt biografiskt lexikon* (article by Claes Witting), accessed November 4, 2021; *Uppsala enskilda läroverk 1901–1960* (Stockholm, 1961), 12–21; Board minutes A1a, vol. 1, 1892–1895, UTP, UMA.

65 It should be noted that Noreen was an influential linguistics scholar at the time, with a culturally radical profile. Among other things, he was actively involved in the 1906 spelling reform. For a Noreen biography, see *Adolf G Noreen*, https://sok.riksarkivet.se/sbl/artikel/8342, *Svenskt biografiskt lexikon* (article by Lennart Elmevik), accessed November 5, 2021.

66 Board minutes, addendum to minutes from the meeting on 21 May, 1892. A1a, vol. 1. UTP, UMA.

67 Bookkeeping, Ledgers 1893–1895. G1a, vol. 1–2. UTP, UMA; Board minutes A1a, vol. 1. UTP, UMA.

68 The advertisement was published in 1892 for instance in *Aftonbladet* on 23 June, 30 July, 9 August, and 18 August, in *Vårt Land* on 20 June, 30 June, 3 August, and 13 August, in *Stockholms Dagblad* on 18 June, 1 July, 5 August, and 16 August, in *Svenska Dagbladet* on 15 June and 15 August, in *Stockholmstidningen* on 16 June, in *Svenska Morgonbladet* on 20 June, and in *Gefle Posten* on 23 June. Local advertising campaigns before the first semester were run every two weeks from the beginning of June until the end of August in the newspapers *Uppsala*, *Uppsala Nya Tidning*, and *Fyris*.

A summary of the fundamental ideas about pedagogy that were communicated and widely used for marketing the upper secondary school indicates the following: practical schoolwork was given considerable weight, while the theoretical aspects of teaching were not explicitly foregrounded in the same way. In marketing materials, it was continually emphasised that the school applied so-called modern methods.[69]

Through looking at the initial marketing and advertising, it is possible to show that the recruitment of students to the upper secondary school was expected to happen both locally and nationally, and that the student fees were the same regardless of place of residence. Advertising in national press differed from that in local papers, for instance in terms of a more detailed overview of the board and a thorough presentation of it, information about accommodation in Uppsala, and more detailed descriptions of the subjects taught. In the local advertisements, there was also information about preschool, which was lacking in the national campaign. First-year students paid a fee of 20 SEK per semester, second-year students 30 SEK, and third- and fourth-year students 40 SEK per semester. The advertisements also explained that the fourth year was equivalent to the first year in a public upper secondary school. Already from the first semester, the limited company had an organisation for assigning students from other parts of the country lodging and suitable accommodation in Uppsala. In the national advertising campaign, names of contact persons for housing were also included. The reason why the board wanted the school to be marketed also outside Uppsala was twofold. It was partly a question of ensuring an influx of applicants, and partly an explicit desire to disseminate the progressive ideas more broadly.[70]

Already in the first advertisements, the ambition to take students all the way to a degree in the "Latin" programme or the "Real" programme was expressed. It was, however, not until 1901 that the upper secondary school was given the right to award degrees. The anniversary book *Uppsala enskilda läroverk 1901–1960* describes the problem of wanting to start a reform upper secondary school where degree-awarding powers were a precondition for attracting a sufficient number of students for the activities to be economically viable. Indeed, the struggle to achieve degree-awarding powers caused discussions on the board of directors and among the teaching staff about adapting the teaching to make it more similar to traditional upper secondary school, for instance in terms of longer semesters and less individualisation. A conflict which was on the one hand about the progressive profile of the school and on the other hand about the coveted right to award degrees was therefore contingent on financial circumstances.[71]

69 *Uppsala enskilda läroverk 1901–1960* (Stockholm: Beyrond, Stockholm, 1961), 24–26. The minutes from board meetings indicate that board members were skeptical of overly extensive studies in Latin and too much homework, see Board minutes 1892–1895. A1a, vol. 1. UTP, UMA.

70 See the advertisements published in 1892 for instance in *Aftonbladet* on 23 June, 30 July, 9 August, and 18 August, in *Vårt Land* on 20 June, 30 June, 3 August, and 13 August, in *Stockholms Dagblad* on 18 June, 1 July, 5 August, and 16 August, in *Svenska Dagbladet* on 15 June and 15 August, in *Stockholmstidningen* on 16 June, in *Svenska Morgonbladet* on 20 June, and in *Gefle Posten* on 23 June. Local advertising campaigns before the first semester were run every two weeks from the beginning of June until the end of August in the newspapers *Uppsala*, *Uppsala Nya Tidning*, and *Fyris*. Addendum to minutes from meeting on 21 May. A1a, vol. 1. UTP, UMA.

71 *Uppsala enskilda läroverk 1901–1960* (1961), 38–47.

Mixed funding

During the first few years, the funding of the upper secondary school in Uppsala was mixed. It was made up of a foundational resource of share capital and of student fees. The latter amounted to around 2 500 SEK the first year of operation, and then than sum was doubled for a full academic year. Over the first five years of operation, the tuition fees made up a more or less constant share of the funding. On the expenditure side, the main costs concerned salaries and rental of premises, but also furniture, teaching materials, and cleaning.[72]

In the written records of the school, around fifty bonds per year are noted in the ledgers for the years 1893–1895. The accounts show that these were basic promissory notes of 75–375 SEK each where the limited company was the debtor and the creditors were listed alphabetically, but without titles. The limited company paid most of the debts as the finances turned increasingly solid, but up until 1895 they constituted an important aspect of financing the operating activities. Around one in ten bonds was waived without reimbursement, which can be interpreted as indicating that what was initially a loan was later turned into a donation. Yet another source of income was interest on loans granted, which comprised around 10 percent of the revenue. In sum, the total funding was distributed as follows: 40 percent was made up of student fees, 50 percent of borrowed capital, and 10 percent of revenue accrued from interest.[73]

The limited company was dissolved on 29 October, 1898, and two months later the operations were taken over by Sällskapet Upsala Enskilda Läroverk. This change had been preceded by several divisions of the school, for instance into a technical college and a private upper secondary school, respectively. The outcome of such divisions was that activities were dispersed to various buildings in Uppsala, and that each one had their own bookkeeping. This in turn means that the grounds for studying the funding of Uppsala enskilda läroverk as a singular unit are no longer in place.[74] However, we will also make a minor supplement of material from the 1930s found in the archives of Göteborgs högre samskola.

Göteborgs högre samskola

When Göteborgs högre samskola—an upper secondary co-education school—was founded, Gothenburg was a quite different city than Uppsala. Gothenburg was, after Stockholm but before Uppsala, a leading city of philanthropy around the turn of the century 1900. There was a long tradition of contributing to the cultural and educational institutions of the city among affluent middle-class groups.[75]

Apart from the state funded secondary schools, several private schools had already been established in the city, primarily girls' schools.[76] There was also around

72 Ledgers 1892–1895. G1a, vol. 1. UTP, UMA. On 10 December, 1894, the board decided to establish a vocational school for household economics which was going to start in the spring semester of 1895, see Minutes from the meeting on this date, A1a, vol. 1. UTP, UMA. The decision incurred additional expenditure for rentals of property and led to partly shared bookkeeping between the different divisions.

73 Ledgers 1892–1895. G1a, vol 1. UTP, UMA.

74 Agreement on 18 February 1899 in minutes from the meeting on that date of AB Upsala Enskilda Läroverk. A1a, vol. 1, UTP, UMA.

75 Christensen (2020).

76 Kyle (1972), 38–50; 118–30.

1900 a local debate on the limited number of students that could be educated in upper secondary schools in the city, and a discussion regarding the need of a new upper secondary school. In addition, the large class sizes in upper secondary schools were highlighted. It was pointed out that there was a significant shortage of well-educated girls in Gothenburg, a trading city risking stagnation if the commercial sector did not have access to a sufficiently large workforce. In the article, it was defined as unreasonable that girls who wanted further education had to pay for expensive private lessons, and it was also noted that coeducational instruction was a good way of organising their education. However, the problem remained a year later, and in 1901 there was a call in the papers where interested persons were offered to subscribe for shares in a planned reform school for "boys and girls," initiated by upper secondary school lecturer P. G. Laurin, among others. Laurin was an associate professor in mathematics and a lecturer at the Latin upper secondary school in Gothenburg.[77]

Progressivism as marketing

The call can be regarded as a form of advertisement for subscription for shares and the school itself. Interest in the school could surely have been created in other ways than through the local papers, for instance through social networks, but the press was chosen as a forum for attracting people who would like to invest in a school. What kind of selling point was used, then? The key message was an explicitly progressive view of schooling and pedagogy. Teaching was to be conducted in coeducational form by male and female teachers. In addition, there was an emphasis on the secondary school in the next stage that was planned to be open to female students wanting to complete a degree. The small class sizes were also highlighted.[78]

As for the stance on knowledge and education, it was seen as important for students to acquire a holistic view of various areas of knowledge. The various subject courses were going to be "rid of a lot of less important details." In this way, more extensive adaptation to the interests and talents of individual students was possible to manage. Received knowledge was still important, but a more educational perspective on teaching indicated that such knowledge would be enhanced as well through a greater focus on procedural knowledge.

Apart from the organisation and implementation of teaching itself, it was important to have an active and creative teaching staff, and this is obvious when studying the first years after the founding of the school. A great interest in pedagogical conversations and school development is visible in anniversary books and contemporary archival material, for instance, and the teachers organised study groups focused on current societal and educational issues.[79]

77 *Paul J G Laurin*, https://sok.riksarkivet.se/sbl/artikel/11093, *Svenskt biografiskt lexikon* (article by Karl Englund), accessed September 10, 2021.

78 Högre samskola i Göteborg," Göteborgsposten, February 4, 1901. (Author and page number are missing), see also *Göteborgs högre samskola 1901–1911: minnesskrift* (Göteborg: Gumpert, 1911), 1–9.

79 Meeting minutes, February 5 1902. A5, vol. 1. Gothenburg co-educational upper secondary school (GES), Regional Archive for region Vest and the City of Gothenburg (RARV); *Göteborgs högre samskola* (1911). It is not possible to draw very confident conclusions about the ways in which teaching was conducted based on the anniversary books that the schools themselves produced, but this school and other schools at least wanted to promote an image of themselves as progressive and modern schools.

Gothenburg donors, operations and funding the first few years

Ideas about the education offered at the school can in many ways be seen as part of a progressive movement in relation to the organisation and implementation of teaching, and this was obviously an important aspect of the marketing of the planned school since it was explicitly stated in the published call. However, the call also made clear that people were invited to subscribe for shares in the school company. It was also possible to make economic contributions to the school. It was hoped that the school in this way would accumulate a total of 50,000 SEK, and this goal was also reached relatively soon.[80]

Who subscribed for shares in what was later established as the Limited Company Göteborgs högre samskola? If we look at documents listing shareholders and those who signed the call, we find a group of affluent citizens, mainly with connections to Gothenburg.[81] We can see that several of the persons (and families) that subscribed contributed to what economic historian Arthur Attman called the "spirit of philanthropy" in Gothenburg. Studies show that a number of wealthy Gothenburg residents were engaged in various causes in the city through donations. Among those who subscribed for shares in the future limited company were for instance Erik Wijk, Gerd and Gustav Ekman, Fredrik Heyman, Carolina Röhss, Emely and George Dickson, Fiedler & Lundgren, Ivar Waern and Pontus Fürstenberg. The Ekmans, Wijks, and Waerns were at the time extremely wealthy families known to have liberal values. They honored a tradition of making donations to and investing in the cultural life of the city, but they also invested money in education. The Ekman family, for instance, gave contributions to Sigtunas humanistiska läroverk and an agricultural college in the western Götaland region. Göteborgs högskola also received gifts from the Ekmans, and they supported higher education in Stockholm as well. The right-wing manufacturer Melcher Lyckholm was another well-known benefactor in the city.[82]

Yet another famous Gothenburg family that participated in the establishment of the upper secondary school through signing the call and buying shares was the Mannheimer family, first through Charlotte Mannheimer and then Otto Mannheimer. Table 3 shows who the main shareholders were.

80 Laurin (2021).

81 *Göteborgs högre samskola* (1911), 8–9, IX.

82 Arthur Attman, "Donationernas stad. Göteborg," *Svenska turistföreningens* årsskrift (1978), 80–95; Christensen (2020), 107–14. Document, not dated, with shareholders. G7, vol. 1. GES, RARV; *Melcher Lyckholm*, https://sok.riksarkivet.se/sbl/artikel/9971, *Svenskt biografiskt lexikon* (article by Artur Attman), accessed October 5, 2021.

Table 3. Subscribers and amount of investment, Göteborgs högre samskola, SEK.

Title and name	Investment
Manufacturer Melcher Lyckholm	1,000
Emily Dickson	1,000
Carolina Röhss	600
Charlotte Mannheimer	600
Engineer James Gibson	400
Gustav Ekman	400
Manufacturer Erik Mellgren	400
Merchant Fredrik Heyman	400
Commercial lawyer Otto Mannheimer	400
Mrs Hanne Mannheimer	400
A.G Lillienhöök	400
Industrialist Hjalmar Wijk	400

Source: Document, not dated, with the first shareholders. G7, vol. 1. GES, RARV. The documents list all shareholders who were involved already at the time of the establishment of the limited company. *Göteborgs högre samskola* (1911), 8–9, IX.

On 24 April, 1901, the limited company Göteborgs högre samskola arranged its first constitutional meeting. The first article established that the company was a coeducational school for boys and girls. In the same article, and in line with progressive ideas about education, it was stated that the study periods were to be limited in such a way that physical development could be combined with theoretical study. The first board of directors included persons who were shareholders in the company, among them Otto Mannheimer, J. J. Gibson, P. G. Laurin, and Gerda Ekman.[83] The board housed representatives from the wealthy families of the city, but also members with knowledge of schooling and education.

Donations and student fees in a financing model

When it comes to the funding and operation of activities over the first few years, there are considerable gaps in the source material. There are for instance no financial statements or audit reports in the archives for the early period. Materials with slightly more systematic information exist starting from 1926 in the form of directors' reports.[84] Not until the 1930s were audit reports kept that provide a clear overview of revenue and operating expenditure. Starting from the 1930s, then, it is relatively easy to find out in detail how the school was funded and managed. We will return to this below.

However, some material makes it possible to make reasonably qualified estimates of the way in which the school was run and funded during the pioneering years. It is also possible to find out about the significance of local philanthropy in Gothen-

83 Certificate of registration from the Patent Office, December 23 1901, with related articles of association, dated 24 April 1901. F6, vol. 1. GES, RARV.

84 Compare this with our line of reasoning in the methods and sources section regarding gaps in the financial accounts of the private upper secondary schools. Concerning directors' reports, see Directors' report 1926–1927. G7, vol. 4. GES, RARV.

burg. The material that we have used consists of the meeting minutes of the board of directors at the school. In these documents, the board discussed everything from the importance of teachers leading school development and the purchase of desks from Nääs manufacturers to recruitment issues. Operations and funding were treated, although no financial accounts were enclosed. It was noted, however, when a major contribution was donated by the owners or other benefactors.[85] Another material that we have used to form an idea of financial matters comprises the annual reports of the school.[86]

The overview below is based on these sources. When we give an account of expenditure, we report major expenditures. Please note that it has not been possible to find further information in the material beyond the number of teachers. We have therefore made general estimates of wage costs based on average salaries. For student revenues, we have estimated an average value calculated on 120 SEK per student and semester. We have done so in order to be able to estimate overall costs and revenues.

Table 4. Göteborgs högre samskola. Operational costs, 1902, SEK

Rent	Salary, principal	Salary, teachers	In total
1,500	6,000	23,400	30,900

Sources: Meeting minutes, February 5 1902. A5, vol 1. GES, RARV.; Annual reports for Göteborgs högre samskola 1902–1903. F2, vol. 1; 2. GES, RARV. According to the annual report, 13 teachers were employed in 1902.[87]

Table 5. Göteborgs högre samskola. Revenues, 1902, SEK

Student fees	Donations	In total
32,400	3,300	35,700

Sources: Meeting minutes, February 5 1902. A5, vol. 1. GES, RARV.; Annual reports for Göteborgs högre samskola 1902–1903. F2, vol. 2. 2. GES, RARV.

It is possible to discern a financing model for 1902 in which student fees and donations were important parts. In the expenditure column, the actual construction of the school has not been included. Donations were also bestowed in the form of gifts. These mainly involved school materials such as books, desks, artworks, and libraries. Many of them were included in the annual report as gifts from "friends of the school."[88]

During the initial stage, the school also received donations in the form of money to cover minor repairs and other unspecified expenditures. The material does not reveal how often donors had to supply funds, but in anniversary books and meeting minutes it is pointed out that donors gave the school money recurrently. When we investigated who did so, we found that it was primarily shareholders and also

85 Meeting minutes, February 5 1902. A5, vol. 1. GES, RARV.

86 Annual reports for Göteborgs högre samskola. F2, vol. 1; 2. GES, RARV.

87 There were previous renovations of the building that cost almost 10,000 SEK. The builder who carried out the work, a man called Krüger, was at the same time a shareholder in the school. It is not known if the school received a discount off the bill for the renovations. Meeting minutes, July 6 1901. (p. 30ff) A5, vol. 1. GES, RARV; Annual reports for Göteborgs högre samskola 1907/08 F2, vol. 1; 2. GES, RARV.

88 Annual reports for Göteborgs högre samskola 1904/05 and 1906/07. F2, vo1. 2. GES, RARV.

well-known Gothenburg-based donors from families like the Mannheimers, Wijks, Magnus, and Heymans.[89]

In sum, we can see that the school was initially managed and funded to a great extent by a local "philanthropic elite" in possession of liberal values and plenty of capital. The individuals and families that invested in the school were generally greatly engaged in societal issues. Donations were given partly as money, and partly as concrete gifts of various kinds. It is difficult to estimate the monetary value of these gifts, but they were considered significant enough for inclusion in the annual report of the school.[90]

It is obvious that local philanthropy played an important role for the initial formation of the school, but it is hard to assess its significance for the actual operations. As mentioned above, contributions intended to cover operational costs were sometimes given by persons associated with the board of directors. At the same time, the sums of those contributions are relatively small compared to the revenues accrued through student fees.

Funding 1930–1954, a brief overview

As we have seen in the section on the development of private upper secondary schools at the national level, the government started issuing grants to private schools in the early 1900s.[91] We have chosen to look more closely once again at a moment in time for which we have almost identical source materials for the two upper secondary schools in our study. The sources connected to Uppsala enskilda läroverk are particularly deficient for later periods, but an account of its operations during one year in the 1930s existed in Gothenburg. It seems reasonable to assume that the schools had some kind of exchange where the issue of financial accounts was a part.

Table 6. Funding, overview, SEK, Göteborgs högre samskola and Uppsala enskilda läroverk, 1934–35.

	Government grants	Municipal funding	Student fees	Other revenues	In total
GHS	67,000	6,000	154,000	400	227,400
UEL	94,000	4,000	145,000	1,000	244,000

Source: Statistics for Uppsala enskilda läroverk och privatgymnasium 1934–1935. G7, vol. 4. GES, RARV. Please note that the document was found in the archives of Göteborgs högre samskola. Directors' report 1934–1935. G7, vol. 4. GES, RARV.

Based on the information in this table, Tables 4 and 5, as well as accounts from Uppsala Enskilda Läroverk, it can be established that public funds were now replacing the support received from donors and shareholders. The tables show that the municipal grant was higher in Gothenburg, but that type of funding is still limited in relation to the revenues that both schools earned from student fees and government grants. The greatest expenditure by far for both upper secondary schools involved teacher salaries, amounting to 174,000 SEK for Göteborgs högre samskola, while the equivalent figure for Uppsala enskilda läroverk was 188,000 SEK.

89 Meeting minutes, May 5 1902. A5, vol. 1. GES, RARV.

90 Annual reports for Göteborgs högre samskola 1902/03 and 1904/05. F2, vo1. 2. GES, RARV.

91 Note that financial support had already been extended to girls' schools.

As these two local examples clearly illustrate, the private upper secondary schools progressed from basing their financing model on student fees and the contributions of local philanthropists to largely separating the donors from the actual operations of the school and replacing their support with public funds. Alongside this development, the early owners mainly retained their operational power. If we look at Göteborgs högre samskola, Hjalmar Wijk and Carl Mannheimer (chair) were for example still on the board of directors in 1934. One of the founders of a trust associated with the school, the Louise Magnus trust, was also represented through Erik Magnus, the deputy auditor.[92]

We have no material for Uppsala from the 1950s, but we will let Göteborgs högre samskola represent the 1950s through a look at the year 1954. The financing model was probably relatively constant until the 1950s, although a considerable change was that the share of the total funding made up of student fees decreased sharply at the same time as the government grants and municipal funding to cover operational costs became increasingly more important.[93]

Table 7. Proportions of funding, Göteborgs högre samskola, year 1954, SEK.

Government grants	Municipal funding	Student fees	Other revenues	In total
437,000	61,000	274,000	10,000	782, 000

Source: Inventory with balance sheet. G7, vol. 3. GES, RARV. The "other revenues" mainly comprise income from a building that was rented out.

Teacher salaries remained the largest expenditure, costing the school 650,000 SEK in 1954. Some changes can be seen concerning who were involved in the school, even though we have not been able to find complete information about who were members of the board in 1954. We can see in anniversary books that for the first time in 1945 the school appointed as chairman of the board someone who had moved to Gothenburg and probably did not have any links to the local culture of philanthropy, the Finnish-Swedish literary scholar and journalist Henning Söderhjelm. Söderhjelm succeeded Carl Mannheimer, although there were probably still board members who had been around since the foundational years.[94]

State and local capital working together

Recent reports that have attracted a great deal of attention prove that studying the funding and ownership of private schools can be challenging. However, studies in education history, such as the present article, show that this is not a new phenomenon by any means. In the concluding discussion, we will first highlight a few important results, and then as a final point return to the question of challenges that have been identified in relation to the historical study of funding for private schools.

92 Directors' report 1934–1935. G7, vol. 4. GES, RARV. The board of directors included, among others, Carl Mannheimer, Elisabeth Mellgren, Ada Edberg, Sven Lönborg, and Hjalmar Wijk.

93 We have no information about the funding of the school in the 1940s, but there is data for the period 1926–1935, Directors' report and accounts 1926–1935. G7, vol. 4. GES, RARV. Generally speaking, the funding stayed similar in character during this period, and it is reasonable to assume that it did not change during the 1940s.

94 *Göteborgs högre samskola 75 år* (Göteborg, 1976), 90. In 1962, there were for example two representatives of the Mannheimer family on the school board, see Management report 1961–1962. G7, vol. 3. GES, RARV. Information about Söderhjelm also from https://www.uppslagsverket.fi/sv/sok/view-170045-SoederhjelmHenning.

Previous research on the establishment and development of schools has shown that a number of different sources of revenue, such as municipal funds, donations, fees, and events, were important.[95] This is supported by our two case studies. We can see changes over time in the sense that the private upper secondary schools become increasingly dependent on public funding to cover operational costs, even though there are gaps in the source material. The period that we study is usually seen as the emergence of the strong welfare society, which includes the idea of an increasingly wide-ranging public responsibility for education. It is worth noting that the private upper secondary schools that were founded around the turn of the century 1900 in fact became less dependent on the financial goodwill of residents in their respective cities, at the same time as their reliance on public funding grows. In practice, however, the private upper secondary schools, both our two cases and similar schools nationally, actually retained a form of mixed funding for operational costs throughout the entire period of study. At the same time, the original founders kept their influence through being involved on the board of directors, at least at one of the schools in our study.

The very existence of the private upper secondary schools was justified by the state in terms of their status as a form of progressive nodes and experiment schools that could achieve development. The significance of these schools as a kind of local laboratories for new pedagogy was seen in several ways. In concrete terms, it was a question of their pedagogy. Looking at our two examples, it is obvious that they espoused a clearly progressive pedagogy with characteristic traits such as visionary pedagogy and a student-driven approach. We can see that several teachers who worked at Göteborgs högre samskola, in particular, later contributed to the work involved in school reform. John Almgren, Arthur Attman, Ingemar Düring, and Ester Hermansson are examples of teachers associated with the school who also later participated in the 1946 school commission.[96] Göteborgs högre samskola was also appointed by the school commission to carry out a small experimental project to find out how progressive teaching might be implemented at higher levels of education. The school commission was later responsible for the direction towards a more democratic and cohesive school system after the second world war, and constituted a major influence on the substantial reform package implemented in Sweden, especially during the 1960s.

Bildung capital and merchant capital

When we look at what we have called the foundational years, a common feature was the combination of educational capital and economic capital. In Uppsala, there were on the board and among the owners a significant share of well-established academics. Among the shareholders, six out of twenty were professors or associate professors. In Gothenburg, the academics were fewer, three out of twenty-six. In Gothenburg especially, the initiators and the first shareholders were strongly associated with the culture of philanthropy in the city, and this culture featured a long-standing interest in making contributions to education.[97] In Gothenburg, we have identified

95 Diagram 1 in Westberg (2008), 58.

96 We use information from *Göteborgs högre samskola 75 år* (1976) and SOU 1948:27.

97 Cf. Christensen (2020).

persons with connections mainly to business and trade. They were generally liberal in their values. However, Göteborgs högre samskola also had several prominent academics and professors involved in the operations.

Those who involved themselves in the schools typically had an obvious local connection to their city. Running a private school and investing in a school company did not generally seem to attract people living outside the city where the school in question was located. It is also notable that, in Sweden around the turn of the 20th century, there was not a very strong interest in funding schools that did not also receive public funds. Local elites obviously did invest in the schools, both capital and their own commitment, but at the same time their contributions are relatively small.

Progressivism and marketing

The schools in our study were part of a local context where there was an urgent need for new secondary schools. In both cities, there was a tradition of running more or less progressive girls' schools, in particular. When the two schools published advertisements and calls in the local papers, it is therefore not surprising that the progressive elements of the planned secondary schools were emphasised.

Again, it is important to note that around the turn of the 20th century, it was usually the private schools that offered alternative and progressive teaching.[98] The schools in our study were therefore not an atypical phenomenon internationally. We can also see that the schools had to adopt a progressive profile in order to receive public funding, even though the public inquiry that heralded that decision was performed after the founding of the schools examined in the present study.

The challenges of studying the funding of private upper secondary schools

As has been shown in this article, there are significant challenges involved when studying the financing and operation of private upper secondary schools (and other forms of privately funded education). Part of the reason is that it used to be a relatively unregulated sector in terms of requirements for audits and financial accounting, which was also pointed out in public inquiries at the time. In relation to our case studies, this means that the two upper secondary schools, founded around the same time and run as limited companies, have almost diametrically opposed types of source material. In Uppsala, getting access to administrative material is relatively easy, while this type of material is lacking in Gothenburg. On the other hand, getting access to directors' reports and accounts clearly indicating operational costs after 1926 has been easy in Gothenburg, but no material of this kind has been available in Uppsala.

What the two case studies clearly show, and perhaps especially the Gothenburg case, is the significance of informal social networks for the establishment, operation, and development of the schools. Gifts, services carried out by a company belonging to one of the owners, and access to political networks were apparent resources, but these are difficult to assess simply in terms of value.

In order to create more comprehensive knowledge about the foundational years in particular, more material, especially about operational issues, would probably have been required to form a clearer picture of the period before the 1920s. There are some

98 Yamasaki and Kuno (2018); Lamberti (2002).

possible strategies for getting a better grasp on the pioneering period. One alternative would be to study other private upper secondary schools such as for instance Whitlockska samskolan or Sofie Almquist samskola for other examples of the ways in which private upper secondary schools were funded. Another relevant approach would be to investigate the value and significance of obtaining the right to award degrees. It seems fair to assume that this made the owners more interested in getting involved in the operations of the school, and it is also likely that degree-awarding powers constituted a competitive advantage.

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From Dismantling the Class Society to Investing in Human Capital: The Rise and Fall of the Selective Student Finance System in Sweden 1939–1964

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Abstract • The article highlights the history of the early gift-based and selective student finance system of the social democratic welfare state in Sweden, targeting students from the working classes. This lesser-known system, introduced in 1939, preceded the present loan-financed and universal system established in 1965 designed to reach students from all classes. The arguments for launching the selective system, how this system met the objective of broadening the social recruitment of students and the arguments behind the dismantling of the system are analysed. The equalising effect of the selective system was strong, but student loans were nevertheless more compatible with an emerging idea, imported from the Chicago School, that education could be considered an (loan-financed) *investment* in human capital, that provides future yields rather than a *right*. Historical institutional theory is used to analyse the shift between two diametrically opposed models that took place within the same Social Democratic regime.

Keywords • Student finance, social recruitment, human capital, historical institutionalism, critical junctures.

Introduction

Sweden is the archetype of a universal or general social democratic welfare system that is generally contrasted with selective liberal means-testing systems.[1] This study addresses the lesser-known selective precursor of a general model for student finance in Sweden. Research on higher education funding primarily addresses changes after World War II. By starting the study in the 1930s, this article makes a contribution by examining a hitherto unexplored selective model that raises theoretically interesting questions about continuity and change. Two very different systems are contrasted: the gift-based system of in-kind scholarships for talented but poor students, introduced by a Social Democratic government in 1939, and the loan-based system for students from all social classes, established by a Social Democratic government in 1965. The Social Democrats were in power continuously between 1932 and 1976 (with the exception of a few months in 1936). Two diametrically opposed social welfare models were thus launched under the same social democratic regime.

1 See the typology of different welfare models in Gøsta Esping-Andersen, *The Three Worlds of Welfare Capitalism* (Cambridge: Polity, 1990), 27. The article was written as part of the "Study loans, wage and wealth within higher education. Social groups and their study financing" project funded by the Swedish Research Council. I would like to thank Bo Stråth and Andreas Melldahl for constructive comments.

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Theoretical framework: continuity and change

Comparative research on student finance systems in different countries, which generally corresponds with the research on different types of welfare regimes (liberal, conservative and social democratic), has shown that a system, once established, remains active.[2] In the analysis of historical institutional theory this is labelled "path dependency". The example highlighted here—a cross-temporal study starting in the 1930s within one and the same country, rather than a cross-national study comparing different clusters of countries during the post-World War II era—shows the opposite to be true. The reform-orientated Social Democratic Party of the 1960s did not follow the path the party had embarked on in the 1930s. On the contrary, it seems to have completely changed track. "The borrower is slave to the lender" was the catch phrase in the 1930s.[3] Twenty years later, the Social Democrats presented a loan finance system to its traditionally supposedly loan-averse base voters. The study also shows that the objective shifted over time: the idea of education as a *right*—breaking "the class-dependent education monopoly"—was toned down, while the idea that education can be considered an *investment* in human capital—the "human capital approach"—emerged.[4] This is clearly not a question of "path dependency", but rather of a moveable goal and a radical departure in terms of the means for achieving the political goals (loans instead of gifts). To understand how the Swedish state student finance system changed in a longer-term perspective we need to apply supplementary theoretical tools from historical institutional theory. An analysis of gradual change and more rapid upheaval must be added to the analysis of continuity.

Historical institutionalism shows that *positive feedback effects* have hindered changes to the student finance system. Individuals who have (or have not) themselves received state student finance will expect others to receive it (or not). Such self-reinforcing mechanisms lock countries into different *path dependencies*. This analysis might explain why the Swedish student finance system has remained more

2 Julian L. Garritzmann, "Attitudes Towards Student Support: How Positive Feedback-Effects Prevent Change in the Four Worlds of Student Finance," *Journal of European Social Policy* 25, no. 2 (2015); Julian L. Garritzmann, *The Political Economy of Higher Education Finance: The Politics of Tuition Fees and Subsidies in OECD Countries,1945–2015* (Cham: Springer International Publishing, 2016).

3 "Den som är försatt i skuld är inte fri." This biblical-sounding quotation, which is frequently, but incorrectly, assumed to have been uttered in 1932 by Ernst Wigforss (Minister for Finance 1925–1926, 1932–1949) captures the negative connotations of borrowing among a working-class population who had experience of being in debt to—and dependent on—both employers (loans for housing) and traders (consumer credit). The resistance to debt was also linked to an emerging culture of conscientiousness within the working-class movement. See e.g. Swedish Government Official Reports (*Statens offentliga utredningar* hereafter *SOU*) *2013:78, Överskuldsättning i kreditsamhället? Betänkande* (Stockholm), 33–34, 39. Cf. e.g. Peder Aléx, *Den rationella konsumenten: KF som folkuppfostrare 1899–1939* (Stockholm/Stehag: Symposion, 1994), 128, 141, 228; Göran Persson, *Den som är satt i skuld är icke fri: min berättelse om hur Sverige återfick sunda statsfinanser* (Stockholm: Atlas, 1997), 9–10; David Graeber, *Skuld: de första 5000 åren* (Göteborg: Daidalos, 2012), 365.

4 Citation no. 1 from economist and Social Democratic politician Gunnar Myrdal's review of how Social Democratic school reforms changed over time (Gunnar Myrdal, *Hur styrs landet? Del 1*, Stockholm: Rabén & Sjögren, 1982, 38). Citation no. 2 from a government report on education that shows how theories on human capital and investments in education were first applied in investigations in the 1960s (*SOU 1972:23, Högre utbildning: regional rekrytering och samhällsekonomiska kalkyler*, Stockholm, 132, 139).

or less intact since 1965.[5] If the period of study is extended, however, it becomes clear, as has been shown, that this is not a question of continuity. Several theoretical concepts from the tradition can be applied. *Formative moments*, periods of instability when actors can rewrite the rules and design future institutions, is one term used within historical institutionalism to explain the discontinuity. The changes can be abrupt, caused by economic crises (*critical junctures* at macro level) or perhaps a radically changed balance of power within a board of directors (*critical moments* in organisations at micro level). But transformations can also occur more gradually.[6] The historical institutionalist Peter Hall's typology of policy changes can be applied to analyse the changes in Swedish student finance. Following Hall, I will note and distinguish between continual minor adjustments of the activity (first order change), the introduction of new instruments of policy but retained goals (second order change) and the introduction of both new means and goals (third order change or paradigm shift).[7] Research questions are stated after a brief background section which places the state student finance system in a wider historical context.

Historical background, previous research and research questions

In-kind scholarships were one in a series of reforms that the Social Democratic party, which came to power in Sweden in 1932, launched in the 1930s. The aim was to help talented but poor students—who were reluctant to take a loan—to study at university. The financial support was very generous. The students selected essentially had their education funded by the state. The reform was well-received in most political camps, particularly by the political Left where it was seen as a step in the effort to abolish the class society. The Communist Party's representative stated in parliament in 1939: "We are satisfied that the initiative is a first important step on the part of the government towards tearing down at least some of the barriers that the privileges of wealth have raised around the higher education institutions in this country."[8] As far back as 1918, Social Democratic motions had resulted in interest-free state student loans "for talented, poor pupils", but as will be shown few such loans were granted, and those that were awarded lower amounts.[9] The considerably more generous reform in 1939 was seen as a paradigm shift.

5 Garritzmann (2015), 140; Garritzmann (2016), 3–5, 28–35.

6 A presentation of various approaches in historical institutionalism, see Kaare Aagaard, *Kampen om basismidlerne: historisk institutionel analyse af basisbevillningsmodellens udvikling på universitetsområdet i Danmark* (Aarhus: Dansk Center for Forskningsanalyse, 2011), 25–63 and 443. Cf. Wolfgang Streeck and Kathleen Thelen, "Introduction: Institutional Change in Advanced Political Economies," in *Beyond Continuity: Institutional Change in Advanced Political Economies*, ed. Wolfgang Streeck and Kathleen Thelen (New York: Oxford University Press, 2010), 8–9. The term "critical moments" is borrowed from Luc Boltanski and Laurent Thévenot, "The Sociology of Critical Capacity," *European Journal of Social Theory* 2, no. 3 (1999), 359, 374–75.

7 Peter A. Hall, "Policy Paradigms: Social learning, and the State. The Case of Economic Policy Making in Britain," *Comparative Politics* 25, no. 3 (1993), 279.

8 Sven Lindrot, Minutes of Parliament's first chamber [hereafter *FC minutes*], *Riksdagens protokoll: stipendier åt studerande vid universiteten* (FK, band 2, no. 25, April 22, 1939), 17.

9 *SOU 1937:44, Betänkande med utredning och förslag angående understöd i form av fria bostäder och fri kost åt studerande vid universiteten i Uppsala and Lund samt Karolinska mediko-kirurgiska institutet* (Stockholm), 2, 93.

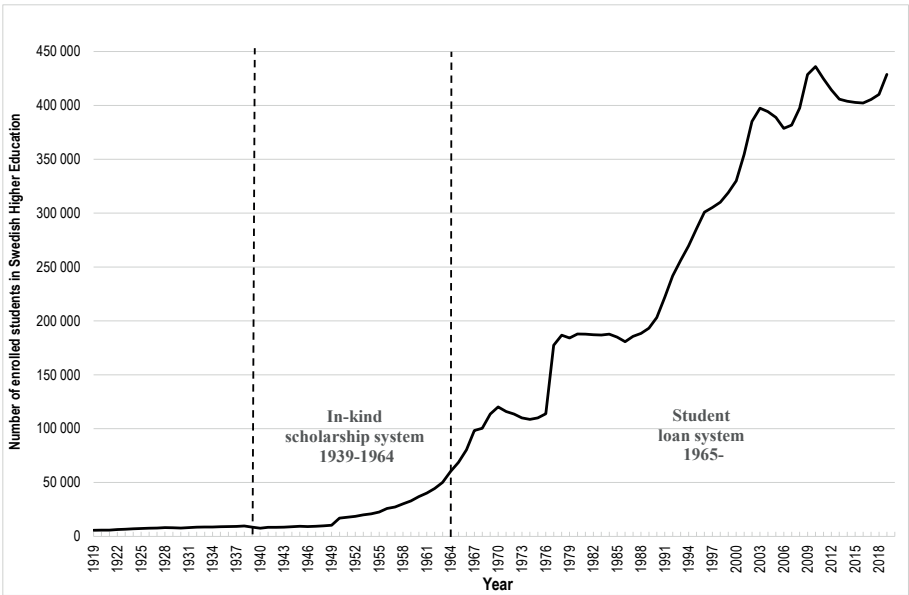

Figure 1. Two student finance systems—against the background of the number of students registered in higher education 1919–2019
Source: Years 1919–2014 from Statistical Yearbook of Sweden, *Statistisk årsbok för Sverige 1924–2014* (Stockholm: SCB), years 2015–2019 from Statistics Sweden, "Students enrolled by sex 1977/78–2019/20," https://www.scb.se/ (accessed November 7, 2020).

Until the 1950s Sweden had a pronounced *elite system* of higher education, characterised by the fact that only a small percentage of the population reached higher education.[10] In 1950, for example, newly registered students accounted for just 2 per cent of the country's 20-year-olds.[11] The expansion of higher education subsequently gathered pace (see Figure 1). By the mid-1960s Sweden had reached the threshold that was recognised as marking the entry into a *mass university system*, namely an inflow of students of around 15 per cent of an age cohort.[12] The in-kind scholarship system of 1939–1964 thus coincided with the final decades of the Swedish elite university. It was succeeded by the diametrically opposed student loan system in 1965, which was thus of an age with the emerging mass university. In-kind scholarships were gift-based and selective; only students with top grades whose parents had a low income and/or fortune, "the talented sons and daughters of the poor", were eligible.[13] The requirements were eased over time (the minimum grades threshold was

10 Martin Trow, *Problems in the Transition from Elite to Mass Higher Education* (Berkeley: Carnegie Commission on Higher Education, 1973), 4.

11 New enrolments at universities and higher education institutions, Autumn term 1946–1950, Statistical Year Book of Sweden 1951 (*Statistisk årsbok för Sverige 1951*), tab. 291, 277; "Sweden's population (in one-year categories) by age and sex," 20-year-olds in 1950, Statistics Sweden (SCB), https://www.scb.se (accessed November 7, 2020).

12 Martin Trow, *Twentieth-Century Higher Education. Elite to Mass to Universal* (Baltimore: Johns Hopkins University Press, 2010), 559; Mikael Börjesson, "Studentexplosionen under 1960-talet: numerär utveckling och orsaker," *Praktiske Grunde*, no. 4 (2011), 20.

13 Sven Lindrot, *FC minutes* (1939), 17.

lowered while the maximum parental income threshold was raised). The grants were at first paid out in kind, in the form of free food and/or free accommodation, and towards the end increasingly in cash.[14] In contrast, the new system was based mainly on loans and also general. Now less talented students from wealthy families could benefit from public support: "dull children with rich parents", according to the critics.[15] Both means testing and aptitude testing were retained (an example of continuity), albeit based on new principles (an example of change within a tried and tested order). Means testing implied that it was now the student's own financial situation that was assessed, rather than that of the student's parents. Study aptitude was based on the results achieved after enrolment to higher education (students were expected to produce credits at a normal study rate), while final grades from secondary school were no longer taken into account.[16]

As already stated, research on higher education funding primarily addresses changes after World War II.[17] One exception is the economic historian Anders Nilsson, who studied the variation in social recruitment to higher education during periods of different student finance systems. During the period of selective in-kind scholarships, the social imbalance in recruitment to higher education declined notably (above all during the 1950s), while social equalisation began to slow after the introduction of the general student loan system (the social imbalance increased during the 1970s).[18] Students from well-educated and high-income groups utilised student loans more than students from other social groups.[19] There are no studies on how the scholarship system worked in practice. This study contributes to earlier research by studying which social groups used the in-kind scholarship system at one of Sweden's oldest and biggest higher education institutions, Uppsala University, at the beginning and the end of the period. The rise and fall of the scholarship system is generally unexplored. The examination of the social recruitment of recipients is supplemented by a study of the national political debate in the 1930s when the scholarship system was introduced and during the 1960s when it was abolished.

14 Ringfenced support for poor groups not considered capable in the US, a "liberal welfare regime", has a rather negative association (cf. Viviana A. Rotman Zelizer, *The Social Meaning of Money*, Princeton, N.J.: Princeton University Press, 1997, 121). The Swedish in-kind state scholarships had, as will be shown, a more positive association.

15 Lars F. Tobisson, "Studiemedlen," *Svensk Tidskrift*, no. 4 (1974), 199.

16 Bengt Gesser, *Utbildning, jämlikhet, arbetsdelning* (Lund: Arkiv, 1985), 194; Anders Nilsson, *Studiefinansiering and social rekrytering till högre utbildning 1920–1976* (Lund: Lunds universitet, 1984), 129–30.

17 See e.g. Garritzmann (2016); John. C. Weidman, ed., *Economics and Finance of Higher Education* (ASHE Reader Series, Boston: Pearson, 2014); D. Bruce Johnstone and Pamela N. Marcucci, *Financing Higher Education Worldwide: Who Pays? Who Should Pay?* (Baltimore: Johns Hopkins University Press, 2010). In Sweden, research on the general student finance system established in 1965 dominates, see e.g. Sven-Eric Reuterberg and Allan Svensson, *Statliga studiemedel: utnyttjande och effekter* (Göteborg: Göteborgs universitet, 1981); Sven-Eric Reuterberg, *Studiemedel och rekrytering till högskolan* (Göteborg: Göteborgs universitet, 1984); Sven-Eric Reuterberg and Allan Svensson, *Studiemedel: medel för jämlikhet? En granskning av studiemedelssystemets effekter under en tjugoårsperiod* (Stockholm: UHÄ, 1987); Sven-Eric Reuterberg and Allan Svensson, *Social bakgrund: studiestöd och övergång till högre studier* (Stockholm: Allmänna förlaget, 1992).

18 Nilsson (1984), 141, 146–47.

19 Gesser (1985), 201; SOU 1971:61, *Val av utbildning och yrke* (Stockholm), 162–64. Cf. Greta Swärd, *Studentekonomiska undersökningen 1968* (Lund: Sociologiska institutionen, 1968), 79.

The overarching theoretical question is about how the rise and fall of the early selective student finance system can be understood. To that extent, the study is more about change, the transition from one system to another, than about continuity. Should the reorganisation in 1965 be regarded as a paradigm shift or a somewhat less dramatic turning point within the Social Democratic regime? Against the background of the research situation and the theoretical framework, the following more detailed empirical research questions are also articulated:

What was discussed in the debate and what positions were taken when the selective system was introduced in 1939? How was the system applied in relation to the goal of recruiting "poor talented students"?[20] Which groups received state scholarships? Was there a change in recruitment over time in line with adjustments to the means and aptitude testing (changes of the first order)? Was the system abolished because it was not considered to live up to the political objectives of broadening recruitment? What was discussed overall when the selective system was abolished in 1964 and what arguments did the government use to gain approval for a loan-based system among a supposedly loan-averse working class? How comprehensive was the 1964 reform, and did it change not only the means but also the ends of the policy (change of the second or third order)?

Method, material and research design

Two sub-studies have been carried out. The first sub-study which addresses the arguments behind the introduction, and later the dismantling, of the in-kind scholarship system is based on, among other things, public inquiries, bills, debates in the parliament's 1st and 2nd chambers and responses to proposals circulated for consideration stored in committee archives from the years around 1939 and 1964. Arguments for scholarships *vis-à-vis* loans are compared and how the discussion changed over time and between different groups are analysed. The second sub-study which addresses how the system worked in practice in terms of social recruitment of scholarship recipients is based on a large and to date unexplored archive from the State Scholarship Board (*Statsstipendienämnden*) in Uppsala. It makes use of descriptive statistics; in other respects the study is qualitatively orientated. In order to study both continuity and change in this area the study must be designed to include the 1930s, when social democracy came to power in Sweden. Starting after 1945—which has been common in many studies on the growth of the welfare system—misses a key change in direction, and over-emphasises the path dependence of politics.[21]

20 *Proposition: stipendier åt studerande vid universiteten i Uppsala och Lund samt karolinska mediko-kirurgiska institutet m.m.* (Stockholm, no. 61, 1939), 11.

21 Cf. the early feminist and gender history studies' criticism of research on the welfare state which starts its studies after WWII and thus misses the first phase in the development of the welfare state during the 1930s, when reforms were directed towards matters connected to reproduction (maternity allowance, 1937, state subsidy for childcare 1944). Christina Bergqvist, "Myten om den universella svenska välfärdsstaten," *Statsvetenskaplig tidskrift* 93, no. 3 (1990), 224, 227. Social scientists, such as Walter Korpi ("Contentious institutions: An Augmented Rational-Action Analysis of the Origins and Path Dependency of Welfare State Institutions in Western Countries," *Rationality and Society* 13, no. 2, 2001: 256–66), who do work with longer research periods have also used institutional models of welfare states that are more sensitive to historical change. Cf. Klas Åmark, *Hundra år av välfärdspolitik: välfärdsstatens framväxt i Norge och Sverige* (Umeå: Boréa, 2011), 275–76.

The introduction of the state scholarship system in 1939

The class-segregated, parallel Swedish school system, with a 6-year elementary school (for the children of the working class) and a separate grammar school which was intended to lead to university studies (for the children of the resource-rich families) had gradually been broken up by reforms driven by the liberals and social democrats during the 1920s.[22] These reforms of the lower levels of education, which saw more middle class children attending elementary school and more working class children attending grammar schools, form part of the background to the basic education reforms implemented in the early 1930s. The Social Democratic government now had a central goal, which was to ensure that the continued studies of young working class pupils should not be hampered or hindered by their financial circumstances.[23] The path from elementary school to the various levels within the grammar school—a 6-year lower secondary (designed to provide a general civil education) that might lead to a 4-year upper secondary education (in preparation for university studies)—had been long and difficult; continuing from upper-secondary on to university appeared to be an even greater challenge. The government therefore had to "help the students across the threshold between grammar school and university".[24]

National and international Sonderweg

The Swedish welfare policy that took shape during the 1930s came to be characterised by general reforms and monetary support (the line of policy of the Social Democratic Minister for Health and Social Affairs, Gustav Möller), rather than by selective support to specific disadvantaged groups, earmarked in kind, which was the case for students in higher education (the Social Democratic Minister for Education, Arthur Engberg's line, which is examined here).[25] In-kind scholarships were also out of step with the times internationally. As this was a new form of government support in Sweden, the student finance systems in 15 other countries were studied in 1937.[26] One observation was that the support was more extensive in other countries. Another was that it was given mainly in the form of cash grants. In-kind scholarships were not awarded in the other countries.[27] The Swedish government nonetheless set out on its own course.

Previous investigations initiated by student bodies and university teachers had

22 It took a long time to abolish the parallel school system. The reform of basic education came to a standstill during the 1930s but picked up again during the 1940s. A period of experimentation during the 1950s was followed by the implementation of a compulsory elementary school in 1962, which led to the lower level of the old elementary school—primary school—being merged with lower-secondary school to become a 9-year primary-lower secondary school for all children. A new 3- 4- year upper-secondary school was introduced in 1964, which meant that the upper level of the old grammar school which had educated a limited elite now became a secondary school for all young people. Gunnar Richardsson, *Svensk utbildningshistoria: skola och samhälle förr och nu* (Lund: Studentlitteratur, 2010), 104–07, 114–18, 123–26.

23 Engberg in *Proposition* (1939), 45.

24 Engberg, *FC minutes* (1939), 8.

25 Bo Rothstein, *Vad bör staten göra? Om välfärdsstatens moraliska och politiska logik* (Stockholm: SNS, 1994), 213–14.

26 Belgium, Denmark, England, Finland, France, Germany, Greece, Holland, Hungary, Iceland, Italy, Norway, Poland, Scotland and Spain. *SOU 1937:44*, 6–19.

27 *SOU 1937:44*, 20; Engberg in *Proposition* (1939), 44.

shown that the situation for students had deteriorated. As a result of inflation, the cash grants covered ever less of living costs. There were three problems with the student loans available. Too few loans were granted, the amounts awarded were generally low, and the loan "burdened the student's future economy".[28] Although the conditions for these interest-free loans were favourable, the money still had to be paid back. Since the purpose of the report was to make it possible to choose education without incurring a financial burden, the original brief did not include an enhanced state loan system. During the process, however, the committee found that state support in the form of grants would be most effective if it was combined with credit that was interest-free and without suretyships. The government agreed to investigate loans as a complementary form of support.[29] There was no support for loans as the main form. Of 18 consulted bodies who responded to the report's proposal in 1939, only one, The Swedish Agency for Public Management (*Statskontoret*), which falls under the Ministry of Finance, were in favour of loans on the grounds that grants were more costly for the state than support that must be repaid.[30] The remaining 17 bodies consulted, the committee itself and the government considered that grants were the best way to improve social recruitment and thus to be preferred. The discussion centred on whether the grants were best disbursed in cash or kind, and who should be entitled to receive them.

The majority of the authorities and bodies consulted, 16 of 18, agreed with the Minister, Arthur Engberg, that in-kind scholarships in the form of board and lodging were to be preferred. Their argument was based on control and quality. They did not fully trust young students to handle cash.

> Giving young people at university cash in hand always carries a risk. No-one calculates the nature and direction of temptation, and consequently no-one can know if the means received are utilised in an appropriate manner.[31]

Utilising the means "in an appropriate manner" was not just about covering the most essential costs for food and accommodation—the bare necessities of life—before the money was spent on other temptations. The food must also be healthy, "sufficient and nourishing" and the housing of a good standard and "fit for purpose".[32] Under the proposed in-kind system, new local state scholarship boards would regulate the quality and allocate "the scholarship recipients among suitable eating places and housing approved by the board".[33] The few critics of the in-kind argument—the afore-mentioned The Swedish Agency for Public Management and the teaching faculty at the medical university Karolinska institutet—believed, in contrast, that the government should trust the students to manage their accommodation themselves. This would also be a less costly administrative solution.[34] The same argument

28 *SOU 1937:44*, 2.

29 *SOU 1937:44*, 2–4, 93–94. Cf. Nilsson's (1984) analysis of motivation for the response 1937, 60.

30 *Proposition* (1939), 42.

31 Engberg, *FC minutes* (1939), 8. All quotes are translated from Swedish.

32 *SOU 1937:44*, 3, 112, 119. Engberg, *FC minutes* (1939), 8.

33 *SOU 1937:44*, 114.

34 *Proposition* (1939), 35, 42.

for in-kind support was found in social policy (after means testing, families with children would receive shoes, clothes and such which met approved quality standards), but here the critics of this selective form of support won the day (means testing was degrading, created administrative problems and should therefore be avoided).[35] Engberg, however, did not attach any great importance to this criticism. As of the 1939/40 budget year, scholarships in the form of free accommodation and free food for a maximum of three years were introduced, and could be combined with interest-free student loans.[36]

Middle class protests and expansion of the system 1950–1964

In-kind scholarships do not appear to have been stigmatising. Surveys carried out at the end of the 1940s showed that the majority of recipients questioned (75 per cent) were happy to receive the support in kind.[37] Further, those who would have preferred to see the support paid out in cash (15 per cent) had the future ahead of them. Cash payments became increasingly common during the 1950s.[38] In the final year of selective support (1964) the finance reform was even described as a "state grant in the form of free board and lodging *or* the equivalent cash benefit".[39] At the same time, the fact that the system achieved the intended effect—encouraging talented students from poor homes to start studying at university—gave rise to new concerns in the class society.

There was little room in the discussion at the end of the 1930s for the question of where to draw the line between groups with varying degrees of limited financial resources: those with "no means" (who were eligible for scholarships) and those with "lesser means" (who could only apply for interest-free loans). Only one body consulted, the Swedish Central Government Agency for School Issues (*Skolöverstyrelsen*), raised the problem. They feared that a limited group of students might benefit unduly while others with similar merits were excluded.[40] This discussion of the boundaries of the student finance system gained momentum during the 1940s. The dissatisfaction of the educated middle classes is apparent in the comments submitted to the 1948 report. Although middle class households had seen the value of their assets fall as a result of inflation and increased tax burdens, the State Scholarship Board in Uppsala wrote, they are still considered to be "of lesser means" and are therefore ineligible for in-kind scholarships. They are now less able to give their children a higher education "than those of no means".[41] Gothenburg School of Busi-

35 Rothstein (1994), 213–14.

36 *Proposition* (1939), 47–53. Cf. *SOU 1937:44*, 121, 132.

37 *SOU 1948:42, Betänkande och förslag angående studentsociala stödåtgärder* (Stockholm), 149.

38 At the start of the 1950s the grants were sometimes paid out in cash, e.g. to students living at home with their parents (interview 19 September 2017 with Sven Fritz, grant recipient 1952/53). Cf. *SOU 1948:42*, 152. Towards the end of the 1950s recipients appear to have had greater freedom to decide whether the grant should be paid in kind or in cash (email exchange 24 May 2017 with Christina Florin, grant recipient 1958/59–1960/61 and interview 22 November 2017 with Anita Clarhäll, grant recipient 1957/58 and 1959/60).

39 App. no. 18 to minutes February 17 1964, § 15, State Scholarship Board in Uppsala (*Statsstipendienämnden in Uppsala*, hereafter *SsnUU*), A1:20, Regional State Archives in Uppsala (*Landsarkivet i Uppsala*, hereafter *LAU*). My italics.

40 *Proposition* (1939), 38.

41 State Scholarship Board in Uppsala report cited in *SOU 1948:42*, 95.

ness (*Handelshögskolan i Göteborg*) stated that in addition to their own as yet unpaid student debts they were now expected to pay not only for their own children's education, but also, via income tax, for the education of the children of the working class, which was unreasonable.[42]

The 1948 report captured these attitudes and revised the financial qualification requirement. State scholarships and interest-free loans should be extended to students who came from less well-off homes; that is, those "who belong to society's large middle classes". The proposal to "raise considerably" the highest parental income threshold met these demands from the dissatisfied middle class.[43] The report's other proposal, to lower the study aptitude requirement to allow students with lower grades to apply for scholarships, was less well-received by the educated middle classes.[44] The Stockholm School of Economics (*Handelshögskolan in Stockholm*) opposed the idea of spending huge sums on scholarships for "mediocre students from the lower classes and the large group in the middle". Student loans with a repayment obligation were a better alternative.[45] The committee ignored the criticism. The measures to support students were intended to "remove the economic differences between students from different social groups".[46] They could thus not be based on loans, as there was a widespread "psychological resistance to debt" within the very social groups for whom the government wanted to ease entry to higher education.[47] From 1950 onwards the state scholarship system underwent a series of reforms to meet the findings of the 1948 report. More higher education institutions and more students were drawn into the system.[48] The highest parental income threshold was raised successively while the student grades required were lowered in stages.[49] This influenced the number of scholarships awarded. In some years at the end of the 1940s up to 70 per cent of applicants were rejected because they did not meet the required standard of "academic ability". At the beginning of the 1960s this had fallen to around 25 per cent.[50]

42 Gothenburg School of Business, response to SOU 1948:42. Ministry of Ecclesiastical Affairs (*Ecklesiastikdepartementet*, hereafter *ED*), cabinet meeting December 28 1956, Akademikerbyrån [*hereafter Ab*] no. 41, 1471a 41–42, National Archives (*Riksarkivet*, hereafter *RA*).

43 *SOU 1948:42*, 158. Adjusted income thresholds in *SOU 1963:53, Studiesociala utredningen: studentrekrytering och studentekonomi* (Stockholm), 25, 28 and minutes April 24 1964, SsnUU, A1:20, LAU. The middle classes generally became more and more included in the Swedish welfare state during the 1950s when universal welfare programs giving basic security to all citizens were combined with earnings-related benefits for the economically active population. Walter Korpi and Joakim Palme, "The Paradox of Redistribution and Strategies of Equality: Welfare State Institutions, Inequality, and Poverty in the Western Countries," *American Sociological Review* 63, no. 5 (1998), 670 and note 88 below. By including the growing middle classes in the welfare systems, the Social Democrats broadened their electoral base in a period when the rural working classes were decreasing. Korpi (2001), 266. Such a shift in social alliances can lead to—certain parts of—institutional orders being shifted in new directions.

44 Adjusted grade thresholds in *SOU 1948:42*, 157; *SOU 1963:53*, 25–29.

45 Reserve William William-Olsson, the Teachers' Council at the Stockholm School of Economics, response to SOU 1948:42. ED, cabinet meeting December 28 1956, Ab no. 41, 1471a 41–42, RA.

46 *SOU 1948:42*, 153. Cf. Nilsson's (1984) analysis of motivation for the response 1948, 90.

47 *SOU 1948:42*, 146.

48 *SOU 1948:42*, 94, 179. Cf. *SOU 1963:53*, 24–25.

49 *SOU 1963:53*, 25–28.

50 *SOU 1948:42*, 95; Compilation of "State scholarships, student loans and book grants" Uppsala University academic year 1939/40–1952/53 and 1953/54 (F3:1) and Annual report 1963/64, App. 96 to minutes August 19 1964 §70 (A1:20), SsnUU, LAU.

The rising cost of scholarships highlights the strong expansion of this government gifting institution: measured in 2019 prices, the spending on state scholarships rose from around six million SEK in the 1939/40 academic year to almost three hundred million SEK at the peak in 1962/63.[51] The system grew particularly rapidly in its final years. Around 25 per cent of newly registered students in higher education in the 1957/58 academic year received a state scholarship; five years later, in 1962/63, it was almost half of new students in Sweden.[52]

Social recruitment of state scholarship recipients

There is no previous research on how the state scholarship system worked in practice and changed over time. Studies at local level are completely lacking but some government reports that examined the system at national level at the end of the period suggest the support was not only in line with the general ongoing social equalisation which had gained momentum in the 1950s but also almost certainly actively contributed to a broader recruitment of students from the working class.[53] It is, however, difficult to determine exactly how much, since many factors were involved. The aim in this section is more limited: to complement earlier research through a case study of Uppsala University of which social groups received state scholarships when the system was new at the end of the 1930s and when it was at its peak at the start of the 1960s.

An unexplored but challenging archive

Uppsala University, the oldest university in the Nordic region, founded in 1477, gathered half of the country's state scholarship recipients at the start of the period studied and around a third at the end.[54] According to the Uppsala Scholarship Board's own figures, 94 applications were granted for the 1939/40 academic year, about 3 per cent of the total number of students registered (3,673). In the 1963/64 academic year 3,405 applications were successful. There were now considerably more state scholarship recipients in Uppsala; the group comprised around 26 per cent of the total number of students registered at the university (12,901).[55] Studying the recipients' social background requires information on their parents' occupations, a necessary indicator of social background in recruitment studies. I have obtained this

51 According to the Ledger for budget years (*Statsliggare*) 1939/40 and 1962/63 spending rose in regular instalments from 211,200 SEK till 26,269,700 SEK, expressed in 2019 year's prices from 6,067,652 SEK to 294,268,841 SEK (converted using the "Cost-of-living index/CPI, historical figures," Statistics Sweden, https://www.scb.se/, accessed November 14, 2020).

52 Reuterberg and Svensson (1981), 6; *SOU 1963:74, Studiesociala utredningen: rätt till studiemedel* (Stockholm), 28. See also Reuterberg and Svensson (1987), 2; Reuterberg and Svensson (1992), 12; Bertil Östergren, *Inflationskronor, skattekronor, egna kronor: SACO:s utspel 1965 om reallöner, skatter och penningvärde* (Stockholm: SACO, 1966), 83; Urban Dahllöf, *Svensk utbildningsplanering under 25 år: argument, beslutsunderlag och modeller för utvärdering* (Lund: Studentlitteratur, 1971), 95; Tobisson (1974), 197.

53 *SOU 1963:74*, 22.

54 Martin Gustavsson, "Tre mål mat om dagen på Dagnys: det äldre statliga studiestödsystemet in natura 1939–1962" (paper presented at *Svenska historikermötet*, Sundsvall, Sweden, May 10, 2017), 6.

55 Compilation of "State scholarships, student loans and book grants" academic years 1939/40–1952/53 and 1953/54 (F3:1) and "Annual Report 1963/64" App. 96 to minutes August 19 1964 §70 (A1:20), SsnUU, LAU. Total number of students from Uppsala University directory (*Uppsala universitets katalog*) Autumn term 1939, 229 and Uppsala University directory Autumn term 1963, part II, 368.

information from the index cards of state scholarship recipients at Uppsala University between 1939–1964, an unexplored archive, together with birth and baptism records from the parishes in which the students were born. The name and date of birth shown on the index cards, and place of birth visible in a database of Sweden's population in 1970 (*Sveriges Befolkning 1970*), have enabled me to find information in the church records on the parents' occupation (in practice often only the father's occupational title) at the time of the recipient's birth. The recipient's full name, the first step in the search for information via the index cards, is easily accessible in the first cross section: the names of all 1939/40 state scholarship recipients are listed in the University directory. There is no such list of named recipients for the other cross section. An explanation of how I worked with the index cards to make comparisons over time is necessary here.

Briefly, there are twenty-nine boxes of records with over 17,000 index cards for named students who were state scholarship recipients and/or loan takers in Uppsala in the period 1950–1964. The cards are arranged by surname, not by the year when student support was granted. The first step was thus to arrange the material according to academic year and form of finance (grant or loan), then delimit it in order to make it manageable. I have counted all the index cards in the twenty-nine boxes (17,472 in total) by hand and systematically worked through every seventh box in this series (five boxes with 2,915 cards).[56] This information has enabled me to estimate the number of individuals who received state scholarships (and often also loans) and those who only took a loan in different academic years. A thorough examination of the five boxes of records revealed that 597 individuals received a state scholarship for the 1963/64 academic year. If I work on the assumption that the balance of state scholarship recipients and loan takers in the remaining twenty-four boxes was similar (on average, the proportion of scholarship recipients in the five examined boxes was 60 per cent) the total number of state scholarship recipients in 1963/64 comes very close to the number the scholarship board itself reports (3,567 according to my estimation; 3,405 in their figures). The list of 597 named recipients thus appears to be a stable and reasonable framework for selection. To make the work in this examination of social background manageable, 50 per cent of these, 299 individuals, are included in this sub-study. This appears to be a feasibly sized group to track down in *Sveriges Befolkning 1970* and in the birth and baptism records in the parish archives. The 299 individuals were randomly selected using a function in the Excel calculation program.[57]

State scholarship recipients in Uppsala 1939/40 and 1963/64

To enable a comparison between the data utilised in this paper and state investigations which examined social recruitment to higher education during this period, the same system has been used to group the occupations of students' parents. This is a classification of eight main occupational groups (A–H) with a number of

56 One box of records (D2:1) contains material on government grant recipients from the first decade, academic year 1939/40 until approx. 1949/50, 29 boxes (D2:2–D2:30) index cards from the following period until Autumn term 1964, SsnUU, LAU.

57 The Excel function SLUMP allocated all 597 individuals a random value. I classified these in order of size and selected the 299 that had the highest random value as allocated by the calculation program.

sub-groups.[58] The sample is quite small and should therefore be interpreted with care. A number of tentative conclusions can however be drawn. Table 1, where main groups of occupations are combined into different social classes in line with the model used by sociologist Göran Therborn[59], shows that the percentage of recipients at Uppsala University from a working class background increased over time, from 28 to 44 per cent between the 1939/40 and 1963/64 academic years. However, the Table also shows that the majority of recipients came from other social backgrounds. These were the sons and daughters of less well-off clergymen, professors, elementary school teachers and others (totalling 71 per cent in 1939 and 51 per cent in 1963). The gradual liberalisation of both means and aptitude tests that began in 1950 does not appear to have increased the incidence of state scholarship recipients from the middle classes; on the contrary, the percentage of bourgeoisie, middle class and, above all, petite bourgeoisie recipients at Uppsala University fell over time according to Table 1. The numbers of the petite bourgeoisie were also falling dramatically in society as a whole. They constituted 31 per cent of those in full-time employment in 1930, but only 14 per cent in 1965.[60] The result was that a social background in the petite bourgeoisie became less common over time.[61] The working class percentage of the population, however, remains almost constant during the period of study: they

58 The main occupational groups are **A** = Farmers, **B** = Elementary school teachers and others, **C** = Academics: grammar school teachers, professors, clergymen, officers etc., **D** = Large business owners: directors, factory managers, etc., **E** = Small business owners: traders, merchants and certain tradesmen, **F** = Senior government and local government officials, and individual service, **G** = Junior officials and **H** = tradesmen and workers. See *SOU 1936:34, Utredning rörande de svenska universitets- och högskolestudenternas sociala och ekonomiska förhållanden* (Stockholm), 25; *SOU 1947:25, 1945 års akademikerutredning* (Stockholm), 60; *SOU 1948:42*, 28; *SOU 1949:48, 1945 års universitetsberedning, IV: studenternas sociala ursprung, betyg i studentexamen, vidare utbildning, yrkesval m.m.* (Stockholm), 43–44 and modified versions in Official Statistics of Sweden, *SOS, Sveriges officiella statistik: högre studier 1956/57* (Stockholm, 1959), 106–107; *SOU 1963:53*, 53–55 and *SOS, Sveriges officiella statistik: högre studier 1961/62* (Stockholm, 1964), 36; cf. Sven Moberg, *Vem blev student och vad blev studenten? Statistiska studier rörande härstamning, studentbetyg, vidare utbildning, yrkes-, inkomst-, förmögenhets- och familjeförhållanden bland fem årgångar svenska studenter under perioden 1910–1943* (Lund: Gleerup, 1951), 347–48 and Carl-Erik Quensel, *Studentekonomi: studieutgifter och finansieringssätt åren 1951–1952* (Lund: Gleerup, 1957), 26.

59 Göran Therborn, "Om klasserna i Sverige 1930–1970," *Zenit*, no. 28 (1972).

60 Therborn (1972), Table 27, 35.

61 Cf. the discussion about structural mobility caused by the decline in the *petite bourgeoisie* and peasantry (and the rise of a new middle class) in Hartmut Kaelble, *Historical Research on Social Mobility: Western Europe and the USA in the Nineteenth and Twentieth Centuries* (London: Croom Helm, 1981), 74, 120–22. This type of enforced mobility, affected by structural changes in the labour market, provides little information regarding society's degree of openness. The over-all rate of mobility remained fairly constant in Sweden during the first part of the period examined here, according to Gösta Carlsson, *Social Mobility and Class Structure* (Lund: Gleerup, [1958] 1969), who studied males born between 1899 and 1923 divided into three age-groups, where only the youngest would have had the opportunity to be affected by the in-kind scholarship system 1939–1964 (males born 1917–1923 who may not yet have reached their final station in life in 1950, when the study ends), 91, 98, 100, 105, 108, 189. Although social mobility increased in the latter part of the period, partly due to educational reforms in the post-WWII period, the intergenerational reproduction of status far from completely disappeared. Martin Dribe et al., "Did Social Mobility Increase During the Industrialization Process? A Micro-Level Study of a Transforming Community in Southern Sweden 1828–1968," *Research in Social Stratification and Mobility* 41, no. 1 (2015), 33, 37. The persistence in class and occupational status across multiple generations has actually been strikingly constant in Sweden during the last 200 years. Martin Dribe and Jonas Helgertz, "The Lasting Impact of Grandfathers: Class, Occupational Status, and Earnings over Three Generations in Sweden 1815–2011," *The Journal of Economic History* 76, no. 4 (2016), 975, 995.

made up 55 per cent of those in full-time employment in 1930 and 53 per cent in 1965.[62] That the number of scholarship recipients with working-class backgrounds nonetheless increased over time indicates that the state scholarship system was effective in reaching the target group.

Table 1. State scholarship recipients in Uppsala 1939/40 and 1963/64, categorised by main occupational groups, class and strata. Number and per cent

Father's occupation. Combined main occupational groups within different classes and strata	**Years 1939/40**		**Years 1963/64**	
	Number	**Per cent**	**Number**	**Per cent**
Bourgeoisie				
Directors etc. [D], academics [C] and senior officials [F]	16	17.0	36	12.1
Middle classes				
Junior officials [G] and elementary school teachers [B]	23	24.5	56	18.7
Petite bourgeoisie				
Traders [E], farmers [A2] and tradesmen [H1]	28	29.8	60	20.1
Working class				
Workers [H3]	26	27.7	132	44.1
Missing data				
No information on title	1	1.0	15	5.0
Total	**94**	**100.0**	**299**	**100,0**

Comment: Occupational groups are classified in line with the above-mentioned model showing eight major occupational groups A–H and a number of sub-groups (see footnote 58). The division into classes and strata is done in dialogue with Therborn (1972). Classification of the occupation of parents of scholarship recipients into classes and sub-classes is reported in more detail in Gustavsson (2017), Appendix 4, 20–21.
Source: List of state scholarship recipients in Uppsala University directory, Autumn term 1939, 240–41; index cards 1939/40 in D2:1 and randomly selected 1963/64 index cards in boxes D2:2, D2:9, D2:16, D2:23 and D2:30, State Scholarship Board in Uppsala records (LAU); *Sveriges Befolkning 1970* (Stockholm 2002); birth and baptism records (digitalised church records).

To gain a clearer picture of the effect state scholarships had on recruitment, the social mix of recipients needs to be compared with the social mix of the student body as a whole. There is very little material on this. It is, however, possible to obtain a point of comparison with students at around the time for the first cross section.

62 Therborn (1972), Table 27, 35.

Table 2. Comparison of social background of state scholarship recipients 1939/40 in Uppsala with social background of all students in Uppsala 1930/31 and five large higher education institutions 1935/1940. Per cent

Father's occupation (combined occupational groups)	**State scholarship recipients Uppsala Univ. 1939/40 (n = 93)**	**Active students Uppsala Univ. 1930/31 (n = 2,279)**	**Students at five higher education institutions 1935/1940 (n = 2,042)**
Directors, factory managers [D]	1.1	9.9	11.4
Academics [C] and senior officials [F]	16.1	40.1	48.4
Elementary school teachers [B] and junior officials [G]	24.7	17.1	15.0
Traders [E] and farmers [A2]	21.5	20.3	18.7
Tradesmen [H1] and workers [H3]	36.6	12.7	6.5
Total	**100.0**	**100.0**	**100.0**

Comment: Only students of known parentage (dropouts: 1 individual 1939/40, 16 individuals 1930/31 and 364 individuals 1935/1940).
Source: Table 1 above (state scholarship recipients 1939/40); *SOU 1936:34*, Table 78, 163 (students Uppsala University 1930/31); *SOU 1947:25*, Table D, 19 (newly registered students 1935 and 1940 at Uppsala and Lund universities, medical university Karolinska institutet, Stockholm and Gothenburg university colleges).

Table 2 reaffirms that the state scholarship system had a noticeable effect on social recruitment. A significantly higher number of recipients at Uppsala University came from the working class (in which the state investigations included tradesmen) than did other students there and at other large higher education institutions in Sweden during the 1930s (around 37 per cent, to be compared with around 13 and 7 per cent). On the other hand, few state scholarship recipients in Uppsala came from academic or senior official homes (only around 16 per cent), a social background in which studies were encouraged and which produced almost half (around 48 per cent) of students registered at various faculties in the country.

It is even more difficult to find comparable source material from the 1960s. The social mix of scholarship recipients at Uppsala University in the 1963/64 academic year cannot be compared with the social mix of the student body at this particular institution as a whole, but it can be compared with the national mix around the same time. Such a comparison (Table 3) shows that the system's social recruitment capability remained strong. Significantly more of the scholarship recipients had grown up in the more broadly defined working class (around 49 per cent) than of all students in higher education (around 16 per cent).

Table 3. Comparison of social background of state scholarship recipients 1963/64 in Uppsala with social background of new students nationally 1961/62. Per cent

Father's occupation (combined occupational groups)	**State scholarship recipients 1963/64 Uppsala University (n = 284)**	**New students 1961/62 nationally (n= 12,051)**
Directors, factory managers	0.7	7.8
Academics and senior officials	12.0	40.0
Elementary school teachers and junior officials	19.7	15.6
Traders and farmers	19.0	20.9
Tradesmen and workers	48.6	15.7
Total	**100.0**	**100.0**

Comment: Only students of known parentage (dropouts: 15 individuals 1963/64, 577 individuals 1961/62).
Source: Table 1 above (state scholarship recipients 1963/64); *SOS* (1964), Table 6, 36 (newly registered students 1961/62).

The state scholarship system was also seen as a success at the time. According to a government report from 1963, the system attracted mainly students from working-class homes, which was its purpose.[63] The working class young generally had a "particularly strong" inclination to study. The proportion of newly registered students in this group had risen from 8 per cent in 1947 to 14 per cent in 1960 (Table 3 shows a later academic year and includes tradesmen in the working class).[64] Yet although it had almost doubled in just over a decade, higher education was far from equitable. The working class comprised 53 per cent of the electorate, while working class children made up only 14 per cent of students.[65] In the eyes of the British Marxist historian Perry Anderson, who examined the almost "mythological" welfare state of Sweden in positive terms in two articles in the *New Left Review* 1961, these recruitment figures were a disgrace: "The full scandal of SAP [Social Democratic Party] indifference to social equity appears if one looks at university recruitment figures [...] only 14.3 per cent—1 in 7—of all freshmen came from working-class families."[66] The scholarship system helped too few students, Anderson continued, and student loans were effectively a way of financing the middle class, "and the principle of students having to pay for their own education in this way is pernicious in any case: they clearly should have wages or a salary like anybody else engaged in responsible valuable work".[67]

Thus, the selective student support system worked well. The system raised moral questions (not least among the middle classes) about who should be denied support, but there was nothing in way the system worked that provides a clear explanation for why it was dismantled. What caused the Social Democratic government to suddenly dismantle the state scholarship system with its strong equalising effect—at a time when the education gap in society was still wide—and replace it with a loan-based

63 *SOU 1963:44, Studiesociala utredningen: akademikernas skuldsättning* (Stockholm), Table 22, 61. Cf. Nilsson (1984), 159.

64 *SOU 1963:53*, 56.

65 *SOU 1963:53*, 55–57. Data from Table II:4, 55.

66 Perry Anderson, "Sweden: Mr. Crosland's Dreamland. Part 1," *New Left Review* 7, no. 1 (1961), 11.

67 Anderson (1961), 12.

system? To generate an answer to that question, the focus in the next section shifts from social recruitment to the ideological legitimation of different types of welfare system solutions.

Discussion on dismantling the system in 1964

The government report which paved the way for the introduction of the student loan system in 1965 proposed that the focus of the support should be redirected to the transition between junior and upper secondary school. Studies had namely shown that social selection was strongest before the final year school exams, not after. It was the "doors to upper secondary school" that must be forced, not the doors to university at which the state scholarship system had aimed in 1939. The main focus of the 1965 reform was thus on reforming upper secondary school.[68] The need for public economic efforts to help students at university and higher education institutions had not declined (social recruitment to higher education was, as has been shown, highly imbalanced), but the economic scope to direct the major share of the resources in that direction had.[69] It is clear that an analysis of the reasons for the Social Democrats' ideological change of direction in the question of student finance must include an economic dimension. There was a feeling that the financial situation of the government was coming under increasing pressure at the end of the 1950s. The welfare state was faced with many essential costs. In August 1959, the rationalisation inquiry (*Besparingsutredningen*), which was looking into ways of cutting costs within state activities and was working at pace with the socio-economic student inquiry (*Studiesociala utredningen*), suggested making "a significant shift" from grants to loans in this area.[70] Ideological arguments against grants and for loans was supported by economic arguments (to which, however, the socio-economic student inquiry initially paid no attention).

The existing research on the student finance reform, and the written notes of members of the socio-economic student inquiry, further highlight the government's financial deliberations as an explanation for the ideological u-turn in the question of student finance. As the education sector—and the entire welfare state—expanded, so the argument went, the economic scope and the arguments for particularly generous student finance reforms based on scholarships to increasing numbers

68 *SOU 1963:74, Studiesociala utredningen: rätt till studiemedel* (Stockholm), 22; *Proposition: studiesocialt stöd till studerande ungdom* (Stockholm, no. 138, 1964), 1; Olof Ruin, *Studentmakt och statsmakt: tre studier i svensk politik* (Stockholm: Liber, 1979), 51. The findings of the socio-economic inquiry which was appointed 20 years later to assess the effectiveness of the student finance system were similar to the analysis from the 1930s: the social selection that applied to transfers from elementary school to upper-secondary school was not enough to explain the strong social imbalance in recruitment to university during the 1980s. There was also a "significant selection process on transfer from upper-secondary school to traditional higher education". As had already been expressed in the 1930s many students needed a helping hand to cross the threshold. *SOU 1987:39, Studiemedel: betänkande från Studiemedelskommittén* (Stockholm), 69. Cf. Jan Johansson, *Det statliga kommittéväsendet: kunskap, kontroll, konsensus* (Stockholm: Stockholms universitet, 1992), 158, 164.

69 Reuterberg and Svensson (1981), 16, 18.

70 *SOU 1959:28, Besparingsutredningen: besparingar inom statsverksamheten* (Stockholm), 204.

of students, tended to decline.[71] This is nonetheless in striking contrast to the debate on student finance at the time, which is reported below. There was surprisingly little room for budget-related questions (the socio-economic student inquiry, for example, does not refer to the rationalisation inquiry mentioned). The discussion was ideological and centred on different views of grants and loans. And although no social democratic arguments *for* student loans actually emerged, the ideology was nonetheless later changed and adapted to the new actual economic conditions.

Continued widespread resistance to student loans

Opposition to repayment-free student loans was strongest within the Conservative party, which had proposed a motion at the start of the 1960s to abolish state scholarship subsidies. The right wing favoured a finance system of loans. There was, however, a strong antipathy to student loans among the political majority. The most favoured form of support was still repayment-free state scholarships, now also termed "general grants" (by the Liberals) and "a student wage" (by the Social Democrats). The groups who advocated a strong expansion of state scholarships included student and teacher organisations (*Sveriges Förenade Studenter* SFS and *Sveriges akademikers centralorganisation* SACO) and most political parties (the Communists, Social Democrats and Liberals).[72]

Four arguments for scholarships (and against loans) dominated the debate in the 1950s and 1960s; most are recognisable from the debate in the 1930s. Firstly, scholarships were still considered more effective in social recruitment. Even the government report that proposed the new student loan system concluded that the aim of the reform policy—to remove economic and social barriers to educational opportunity—would be fully realised through general grants. The report continued that making the grants both *general* and *cash* (student pay) would end the moralising pointers on what the recipient should purchase (approved goods) as well as the potentially degrading means testing (compare Möller's general line).[73]

Secondly, a coherent argument for general grants was that they would remove the problem of debt. Grants would mean that young students did not start their professional life with "a large burden of debt hanging round their neck like a millstone", as a Conservative party member who broke rank expressed it.[74] The gains would be

71 The risk that the cost to the state of a general grant system would be unreasonably high is pointed out in Reuterberg and Svensson (1981), 19; Reuterberg and Svensson (1987), 4 and Henrik Berggren, *Underbara dagar framför oss: en biografi över Olof Palme* (Stockholm: Norstedt, 2010), 326. The importance of budgetary considerations is also pointed out in notes made by members of the socio-economic student inquiry: Ruin (1979), 84; Ulf Larsson, *Olof Palme och utbildningspolitiken* (Stockholm: Hjalmarson & Högberg, 2003), 68, 85 and Bertil Östergren *Vem är Olof Palme? Ett politiskt porträtt* (Stockholm: Timbro, 1984), 90–91. Cf. Lennart Bodström, "För allas rätt till utbildning: fackligt och politiskt arbete," in *Minnen och dokument IX. Spjutspets mot framtiden? Skolministrar, riksdagsmän och SÖ-chefer om skola och skolpolitik* ed. Gunnar Richardson (Uppsala: Föreningen för svensk undervisningshistoria, 1997), 166.

72 Ruin (1979), 20–22; Reuterberg and Svensson (1981), 11–13; Lars Jonung, "Ingemar Ståhl 1939–2014: ett porträtt," in *Ingemar Ståhl: en ekonom för blandekonomin*, ed. Christina and Lars Jonung (Stockholm: Dialogos, 2018), 16; Agneta Kruse, "Studiestödsystemet, socialförsäkringarna and den offentliga sektorn," in *Ingemar Ståhl: en ekonom för blandekonomin*, ed. Christina och Lars Jonung (Stockholm: Dialogos, 2018), 95.

73 *SOU 1963:74*, 34–35. Cf. SFS and SACO arguments in Ruin (1979), 34.

74 *FC minutes, Riksdagens protokoll: studiesocialt stöd till studerande ungdom* (FK, no. 27, May 26 1964), 97. Cf. *SOU 1963:74*, 35.

greatest for groups with small economic means for whom it is "an axiom, a matter of honour never to get into debt", declared a Social Democrat in the second chamber in 1964.[75] Thirdly, an argument stemmed from the Social Democratic discussions on student finance in the 1950s. This was that studies could be considered as productive work and should, therefore, as one Social Democrat expressed it in parliament in 1964, "be equated with all other paid work".[76] The inquiry's analysis pointed in the same direction. Since investing in education was expected to be highly profitable in the coming post-industrial society, the conditions should be right for such a change. "The report finds the thought of student pay attractive on a number of grounds."[77] Fourthly, closely allied with the recruitment argument there was an argument of equity, and an understanding that equity must be allowed to cost money.[78] Against this was an argument that the cost to the state of an expanded grant system would be much too high; yet this argument had a surprisingly small part in the discussion.[79]

One of the opposing side's arguments in favour of loans was that they encouraged moral discipline. Loans teach responsibility. Under this view, which was articulated primarily in the comments on the report of 1948, students in debt were forced to learn "to manage their affairs and plan for the future" while the "costs and risks for the state" were low.[80] Conversely, grants might "relax the sense of responsibility".[81] Another argument, raised by some academics and students, was that academic freedom increased when studies were financed by loans. Gifts always carried the risk of a demand for "something in return".[82] There was, however, a similar fear with regard to state loans, not least within the political Right, who wanted the loans to be managed by private banks, not the state. "Loans straight from the Treasury," claimed a Conservative MP in parliament in 1964, gave the government "better control over students. It is then natural for the government to exercise control over the direction of study, choice of occupation and so on."[83]

However, the main argument for loans, which the political Right had defended since the 1950s, was that education should be considered in the same way as any

75 Minutes of Parliament's second chamber [hereafter *SC minutes*], *Riksdagens protokoll: studiesocialt stöd till studerande ungdom* (AK, no. 27, May 26, 1964), 131.

76 *SC minutes* (1964), 146; Ruin (1979), 77.

77 *SOU 1963:74*, 16; *Proposition* (1964), 64 (citation).

78 Cf. Nilsson's (1984) analysis of motivation in the response 1963, 128 and Gesser (1985), 203.

79 The 1959 investigation directives opened up for a proposal for the socio-economic student policy that would be a *greater* burden on the budget than previously, but at the same time take into account the budgetary consequences. Four years later, the investigators briefly mention reduced budgetary possibilities in "the current situation". *SOU 1963:74*, 10–11, 38. Cf. Johansson (1992), 153–54, 173. See also Olof Palme, *FC minutes* (1964), 76; *Proposition* (1964), 64. According to Ernst Wigforss, Minister for Finance 1932–1949, student loans would not imply any greater financial strain than the proposed student finance system. Larsson (2003), 85. Economic arguments feature more prominently in retrospective analyses than in the socio-economic student inquiry and in the discussions at the time—see note 71.

80 The Executive Board of the Stockholm School of Economics March 7 1949, response to SOU 1948:42. ED, cabinet meeting December 28 1956, Ab no. 41, 1471a 41–42, RA.

81 The Teachers' Council at the Stockholm School of Economics February 5 1949, response to SOU 1948:42. ED, cabinet meeting December 28 1956, Ab no. 41, 1471a 41–42, RA.

82 SFS opinion March 9 1949 on SOU 1948:42, 8. ED, cabinet meeting December 28 1956, Ab no. 41, 1471a 41–42, RA.

83 *FC minutes* (1964), 64.

other investment. A Conservative Party member summed this up in parliament's second chamber in 1964:

> Given our view that studies are an investment, we believe that they should in principle be financed by students themselves. For those without means of their own, borrowing is, as with other investments—without a subsidy—a natural means of finance.[84]

The idea that education could be considered an investment in human capital gained traction and legitimacy at this time, largely due to the spreading of the works by Chicago economists Theodore Schultz and Gary Becker.[85] The Swedish Conservative Party, which within this tradition rather one-sidedly attached economic profitability aspects to education, also suggested that student borrowing be combined with the right to deduct study costs. The deduction was seen as a "parallel to the depreciation, the deduction for fall in value permitted for capital investment in machinery and other items".[86] No Social Democratic arguments in favour of student loans were ever put forward.

The architect behind the reform: a market liberal Social Democrat

The political scientist Olof Ruin, who was for a time secretary of the socio-economic student committee of inquiry set up in 1959, has described in detail how the inquiry came to change direction completely, albeit without a formal decision, from having worked for an extended scholarship system to presenting a system based on loans. The differences of opinion among the committee members—above all between the student and academic representatives on the one side and the other five members on the other—grew. After some years the inquiry ground to a halt. At that point, the social debater Ingemar Ståhl, who would soon be appointed to the inquiry as an expert and later became a professor of economics, put forward a proposal to the inquiry secretariat that according to Prime Minister Tage Erlander "sounded far too complicated" but which Olof Palme, the chair of the inquiry and future Prime Minister found interesting and a possible solution.[87] It was presented as an "inverse

84 *SC minutes* (1964), 99. Cf. Ruin (1979), 82.

85 The key contributions were Schultz's "Investment in human capital" (*American Economic Review* 1961) and Becker's "Investment in human capital: a theoretical analysis" (*Journal of Political Economy* 1962). Becker's book *Human Capital* was published 1964. See Claudia Goldin, "Human Capital," in *Handbook of Cliometrics*, ed. Claude Diebolt and Michael Haupert (Cham: Springer, 2019), 148–49 and Ralph Hippe and Roger Fouquet, "The Human Capital Transition and the Role of Policy," in *Handbook of Cliometrics*, ed. Claude Diebolt and Michael Haupert (Cham: Springer, 2019), 210. Cf. note 89.

86 *FC minutes* (1964), 60.

87 Ruin (1979), 17, 50; Tage Erlander, *1960-talet: samtal med Arvid Lagercrantz* (Stockholm: Tiden, 1982), 197; Bodström (1997), 168. Ståhl published a number of articles "based on a neoclassical human capital theory" in the Social Democratic student association's journal Libertas in 1961. Ingemar Ståhl, "Studiesociala randanmärkningar," *Libertas*, no. 6 (1961); citation from Ingemar Ståhl, "Att vara politisk ekonom i välfärdsstaten," in *Nya fält för marknadsekonomin: en bok tillägnad Ingemar Ståhl* ed. Lars Jonung (Stockholm: SNS, 1990), 233. He also presented his ideas to the inquiry's secretariat at the end of the year, starting the process which led the inquiry to change direction completely. Larsson (2003), 75. In January 1962 Ståhl submitted his first memorandum to the inquiry. ED, the Socio-Economic Student Inquiry (*Studiesociala utredningen*), vol. 5, PM 60, January 24 1962, RA. His ideas were later developed, including in a memorandum from April of the same year. Ståhl was not summoned to the inquiry as an expert until May 1962. *SOU 1963:74*, 5.

pension system" whose working name, the General Student Loan System (*Allmänt studiefinansieringssystem*) (ASF), also alluded to the 1959 Swedish pension reform, the General Supplementary Pension (*Allmän tilläggspension*) (ATP). Under this system, students would be given money (a loan) while they studied, which would be repaid in the future when they were working and had an income. Pensions work in the opposite way: you pay in over the years and build up a sum which the system pays out in the future.[88] The thinking behind Ståhl's proposal was—like the argument of the political Right shown above—that education is an investment in human capital which is expected to produce a future yield. A student loan system thus appeared to be the sensible solution. He had taken the argument from the Chicago School's theory of human capital, although there is no explicit reference in the report to the technical and "complicated" system's origins in this tradition.[89] Another argument that one would not expect to come from the working class environment is Ståhl's line of reasoning that the purpose of student finance is not distribution *between individuals*—a classic socialist idea—but purely for the individual *over her lifecycle*.[90] As a poor student she receives a loan, which she then repays when she has wealth (as long as the capital investment produces a return). Tax-funded grants/student wages, on the other hand, would lead to an unfortunate distribution of income from poorer citizens (who did not study) to—future—high earners.[91]

88 The general supplementary pension (ATP) meant that the state pension which was introduced in 1948—and linked to citizenship—was supplemented with a universal earnings-related pension program to all economically active individuals, under which the benefit was related to the input into the labour market and based on the principle of loss of income: the more the employee earned, the more they received. The student finance system works inversely: the obligation to repay could be waived in cases where the recipient was unable to meet the payments. Ruin (1979), 41–43; Kruse (2018), 95; Reuterberg and Svensson (1981), 17.

89 Jonung (2018), 16–17. The term "human capital" is not mentioned in *SOU 1963:74* but Appendix 2—where Ståhl tests a theoretical model argument with a calculation example—has been pointed out as one of "three examinations that can be said to be representative" of human capital investment in the early 1960s. The other two were Becker's *Human Capital* (1964) and Blaug's "The rate of return on investment in education in Great Britain (1965). See *SOU 1972:23*, 139. Ståhl himself declared that the Appendix was "the first Swedish study of the profitability of investments in education" (1990), 234. Cf. Bengt-Christer Ysander, "Varför högre utbildning," *Ekonomisk debatt*, no. 6 (1973), 375; Gesser (1985), 69, 83, 296 and note 4 and 87 above.

90 Cf. the wider discussion on selective models of welfare which stress vertical distribution (between socio-economic classes) and universal models of welfare which stress horizontal distribution (between stages in the lifecycle of the individual). While the former prioritises income equalisation ("the Egalitarian Welfare State") the latter favours the integration of all groups in society ("the Solidaristic Welfare State"). The Swedish model, which successfully integrated the new middle classes, was later developed in the direction of the latter, according to Alexander Davidson, *Two Models of Welfare: The Origins and Development of the Welfare State in Sweden and New Zealand, 1888–1988* (Uppsala: Uppsala universitet, 1989), 255–57, 264, 357–58. The paradox that selective welfare models that use the "Robin Hood strategy" of taking from the rich and giving to the poor in the end may still be less effective in reducing poverty and inequality than welfare models that follow the "Matthew principle" of giving more to the rich than to the poor is highlighted by Korpi and Palme (1998), 671–72. Cf. the principle of loss of income in note 88.

91 Jonung (2018), 17; Kruse (2018), 96–97. On the contrary, the aim of previous Social Democratic education reforms was to counter the ideal of "selfish private capitalists" within the field of education who invest in their own education without being trained in "collective cooperation". Alva Myrdal and Gunnar Myrdal, *Kris i befolkningsfrågan* (Stockholm: Bonnier, 1934), 262. Cf. Samuel Bowles and Herbert Gintis, "The Problem with Human Capital Theory: A Marxian Critique," *The American Economic Review* 65, no. 2 (1975), 74; Jerome Karabel and Albert Henry Halsey, "Educational Research: A Review and an Interpretation," in *Power and Ideology in Education*, ed. Jerome Karabel and Albert Henry Halsey (New York: Oxford U.P, 1977), 13.

Ståhl's line won the day. It was not, however, an easy victory, either within the inquiry or in society. It was followed by bitter struggles with some rather unexpected shifts in position. For example, in 1963 the Conservative Party anticipated the Social Democrats' 1964 proposal in a parliamentary motion on loans as a way of financing higher education studies. It was also remarkable that the Social Democrats' fundamental change of direction had taken place within the context of a public inquiry and not the party conference held every four years. The conferences in 1956 and 1960 had decided on a student wage, not loans. The new line caused some discontent within the party. A deep gulf had also arisen between SFS and SACO—the student and academic organisations respectively which were most affected by the reform—and the government.[92] There was also a widespread perception among those to whom the proposal had been sent for consideration that the new loans system would lead to those groups of students who had earlier benefitted from state scholarships being worse off.[93] Since there was still "an aversion to borrowing" among broad groups in society, the government would now have to "go out and persuade working and lower middle class families that in the future their children should borrow money to finance their studies", wrote a Social Democrat who deviated from the new party line, and that was "definitely not a task to look forward to".[94]

Different verbal concepts were used to gain acceptance for the new controversial loan system. While the proposal signalled the end of the policy of scholarships, it was presented in such a way that, with a little goodwill, it could be seen as a first step towards student pay, as it included a grant portion of 25 per cent. It stressed that a future expansion of student finance towards full student pay was not being "prevented or obstructed".[95] Even if the report advocates a loan system it initially points out that, as a form of finance, loans "are more likely to hinder than help students".[96] Here was wording that would be acceptable in different camps. The report also used

92 Ruin (1979), 55, 57, 70, 78, 81. Cf. Berggren (2010), 326–29.

93 See *SACO, Remisskritiken mot Studiesociala utredningen: en sammanställning* (Stockholm: Svenska akademikers centralorganisation, 1964), a published compilation of responses from around 100 bodies, 8–12, 14–17, 19–29, 31, 34–35, 38–39. Cf. Åke E. Andersson, "En ny fördelningspolitik," *Ekonomisk debatt*, no. 4 (1973), 254.

94 *SC minutes* (1964), 146. The government investigators had not examined whether it was an actual fear of debt that deterred young people from less well-off homes from applying to university and beginning a higher education (later studies show that this was the case, see e.g. *SOU 1987:39*, 85, 116; Claire Callender and Jonathan Jackson, "Does the Fear of Debt Deter Students From Higher Education?," *Journal of Social Policy* 34, no. 4 (2005), 529). Their investigations showed, however, that when working class youth did begin a higher education they incurred debt to a much greater extent than students from other social groups (since less well-off families were less able to provide financial support than well-off families), but that the amounts borrowed were smaller (since working class youth were more inclined than others to choose short courses). *SOU 1963:44*, 36, 81–82. The proportion of those in debt among all social groups rose over time; of those who graduated in 1959/60 it was still highest among students from working class homes [H] (83 per cent in debt) and lowest among the children of company directors [D] (46 per cent in debt). *SOU 1963:53*, 101–04. Cf. data of those in debt 1951/52 in Quensel (1957), 156. The wish to finance living costs during their studies independently of their parents was behind the decline in the reluctance of students to take a loan, according to *SOU 1963:74*, 25, 27. The question at issue was whether the state should rein in the need to go into debt or whether the risk connected to debt could be considered manageable through the construction of the new state loan system (long repayment periods, waiver of charges in cases of low ability for repayment). Ruin (1979), 31–33, 69.

95 *SOU 1963:74*, 38 (citation); *Proposition* (1964), 64; Ruin (1979), 66.

96 *SOU 1963:74*, 27.

a new language. Loans were not loans but "student finance with a repayment obligation".[97] This was a shift in terminology that met with criticism. It is more important to remove students' actual debt "than to abolish the terms loan and repayment", wrote SFS. SACO wrote that removing the *words* "debt" and "repayment" did not improve security for the borrowers.[98] But the technical vocabulary, and the fact that the "ASF" as a whole appeared complicated, in combination with a very short period of consultation, may have made protest more difficult and thereby facilitated the implementation.[99]

Another course of action was to work with the shift in perspective. The focus was moved from the aspects of scholarships that had been proved positive, their equalising capability in terms of *social recruitment* of students with little or no means, to their possible negative aspects: Ståhl's speech, referred to above, on an *unacceptable transfer* from all tax payers to a small group of academics.[100] The strong investment in supporting students at lower levels of education further moved the focus away from the continuing problem of an imbalance in recruitment to higher education and also reduced the scope for generous reforms at that level. "This strong effort clearly shows that it was not possible for purely budgetary reasons to maintain the original intention to invest heavily in the limited category of academics."[101] Applying means testing to the economy of students and not, as previously, their parents, a liberating effort that enjoyed wide support, finally moved the focus from a social imbalance in recruitment to a possible bad investment in human capital: "Seen in this way, the most disadvantaged are not students from a certain social or economic background. Rather, the most disadvantaged are those who in their working lives are unable to repay the student loans they have received."[102] As an unintended—we can presume—consequence of the liberation from the patriarchal family structures, the class perspective disappeared from the discussion.[103]

The shift within an overarching Social Democratic regime 1932–1976

When it comes to the 1939 reform, the analysis is straightforward: it was a third order change in Hall's sense. The 1930s were a formative period. The Social Democratic Party came to power in 1932, during an economic crisis (a macro level *critical juncture*) and began to introduce radical reforms in a number of areas. The student finance reform introduced both a new overarching goal (to pull down the social and economic walls around the universities) and new instruments to achieve this goal (state grants with linked interest-free loans). The system was then regularly adjusted (changes of the first order) to make the conditions increasingly generous until 1964. It is more difficult to assert what type of reform 1964 actually implied.

The Uppsala University case study showed that the state scholarship system succeeded in recruiting talented students from homes with little or no means, both at

97 *SOU 1963:74*, 102.

98 *Proposition* (1964), 124; *SOU 1963:74*, 294–95. Cf. *FC minutes* (1964), 97.

99 Ruin (1979), 85–86.

100 *SOU 1963:74*, 37; Ruin (1979), 42.

101 Olof Palme, *FC minutes* (1964), 76.

102 *SOU 1963:74*, 52.

103 Cf Nilsson (1984), 129: the legal competence argument conflicted with the argument of equality.

the beginning and the end of the period, which was what it had promised. The general feeling at the beginning of the 1960s, among both the committee of inquiry and the political majority, was that the system was a success. The criticism mainly concerned the financial means testing, the fact that those who did *not* receive support were left totally dependent on their parents. The state scholarship system should thus be extended and made general, something for all students, regardless of their parents' income. The fact that this did not happen is explained by the interplay between economic and ideological factors. This was partly due to an underlying concern that an expansion would over-burden government finances and partly the result of a changed ideological view of education and student finance. The view of education as a right, with government support in the form of gifts going to groups which were unfairly excluded, was being challenged by a view of education as an investment, with a state system of borrowing and repayment. Consideration for the budget was interwoven (but not communicated) in the ideological change of direction. For the government inquiry into student finance which was responsible for this, this was not, however, a gradual change along a set path. Rather, it was a sudden rupture, when a new member with new ideas that were better suited to a changed budgetary situation, persuaded the committee to advocate loans not grants (an organisational level *critical moment*). The creative rhetorical work the committee put into gaining acceptance for the view that the new loan-based system was not a true loan-based system indicates that the people behind it believed that many environments outside the inquiry, not least the traditionally loan-averse working class, were stuck in the old way of thinking.

This is clearly a question of new instruments of policy (loans instead of gifts or pay) and renewed goals (human capital investment instead of class recruitment) and is thus a third order change. But at the same time it is difficult to equate this historical break within the education sector with an overarching societal paradigm shift (Hall's own example is the transition from Keynesian to monetary macroeconomic regulation in Great Britain between 1976 and 1989).[104] The goal to reduce the social imbalance in recruitment to higher education had not officially been abolished in Sweden; it remained central on a rhetorical level. The Social Democrats also remained in power until 1976, when there was an economic crisis (another macro level *critical juncture*). Neither was there an articulated goal that made educational policy all about producing human capital. Rather, this was the beginning of a change of direction, where the focus on "abolishing the class system"—as an intrinsic value—was de-emphasised and thoughts on education as an investment in human capital to improve workforce productivity—to meet the need for growth—gradually became more central.[105]

104 Hall (1993), 283–84. Cf. the discussion on different levels of analysis in Aagaard (2011), 44.

105 Citation by Myrdal (1982), 37. On Swedish Social Democratic education policy during the postwar period as driven by "human capital thinking" in Jenny Andersson, *När framtiden redan hänt: Socialdemokratin och folkhemsnostalgin* (Stockholm: Ordfront, 2009), 195–96. Cf. Tina Hedmo, "Svenska universitetsreformer: autonomi och styrning i perspektiv," in *Det ostyrda universitetet? Perspektiv på styrning, autonomi och reform av svenska lärosäten* ed. Linda Wedlin and Josef Pallas (Göteborg: Makadam, 2017), 43. The same trend is identified in Europe: one the one hand, extending higher education was justified on the grounds of its anticipated contribution to economic growth; on the other, the expanding welfare state itself created "a continuing demand for people with skills in the applied social sciences". Trow (2010), 118–19.

On one level, it may also appear that the student finance reform was more of an adaption to the Social Democrats' paradigm of general reforms and monetary support (echoing the ideas of Gustav Möller). But the system of in-kind state scholarships was continually adjusted until it did pay out in cash at the end of the period if that was the wish of the recipient, and the failed proposal for a student wage was an example of a general reform. This interpretation further fails to recognise that the ideas behind the new general loan system that prevailed in 1965 came from Chicago, from an emerging, more market-oriented paradigm, although its big breakthrough in Sweden did not come until after the economic crises at the beginning of the 1970s and 1990s.

Epilogue: Formative steps towards a new order

Economic crises do not give rise to new political ideas; in Gramsci's words they can "only prepare the way" to spread certain ways of thinking, formulating problems and solving questions which can be "decisive for the continued development of the whole of state life".[106] Ingemar Ståhl, the man behind the 1960s student finance reform in Sweden, was a key importer and distributor of new market liberal ideas. In all areas of Swedish society, writes his biographer, from higher education to military defence, he tried as a government investigator from the 1960s, and as professor of economics from 1971, "to extend the territory of the market and thereby freedom of choice for the individual."[107] While his argument finally prevailed in the socio-economic student report (SOU 1963:74) it took time before these ideas were generally accepted by society. Ståhl, who is recognised as one of the hidden powers in Sweden,[108] was ahead of his time. Many of the ideas he launched remained controversial. These include the ideas on programme budgeting, also imported from the US, that Ståhl put forward in the Defence Report (SOU 1969:25) and whose goals–means approach was first fully recognised in the 1990s (compare Management by Objectives and Results and New Public Management).[109] But a market-oriented shift had been initiated, by a key Social Democrat (who later left the party). The irony of history had, as Ståhl himself stated towards the end of the 1900s when he reflected over the socio-economic student report, led to the Social Democrats' "most important social reform" being based on thoughts and models taken from neoclassical economists such as Gary Becker and Milton Friedman, who were also "keen advocates of a loans system rather than a scholarship system".[110]

106 Gramsci cited in Werner Schmidt, "Det socialdemokratiska projektets sönderfall," in *Det långa 1990-talet: när Sverige förändrades*, ed. Anders Ivarsson Westerberg, Ylva Waldemarson, and Kjell Östberg (Umeå: Boréa, 2014), 77. Cf. Streeck and Thelen (2010), 22.

107 Jonung (2018), 53.

108 Åke Ortmark, *De okända makthavarna: de kungliga, militärerna, journalisterna* (Stockholm: Wahlström & Widstrand, 1969), 207–08, 263–64.

109 Gunnar Eliasson, "Försvarsekonomi," in *Ingemar Ståhl: en ekonom för blandekonomin*, ed. Christina and Lars Jonung (Stockholm: Dialogos, 2018), 67–68; Gunnar Eliasson, "Bengt-Christer Ysander," in *Svenska nationalekonomer under 400 år* ed. Christina Jonung and Ann-Charlotte Ståhlberg (Stockholm: Dialogos, 2014), 520; Jonung (2018), 18–19, 37, 56–57. Cf. Göran Sundström, *Stat på villovägar: resultatstyrningens framväxt i ett historisk-institutionellt perspektiv* (Stockholm: Stockholms universitet, 2003), 99; Trow (2010), 102, 581.

110 Ståhl (1990), 234. Cf. Jonung (2018), 18.

The Social Democrats appropriated the idea of loans financing and gave it a new ideological connection. Tage Erlander, the Social Democratic Prime Minister 1946–1969, has also stressed the future Prime Minister Olof Palme's "boldness" as chair of the socio-economic student inquiry, his courage in breaking completely with his own ingrained ideas of a student *wage* system and daring "to accept something completely new", namely a student *loan* system, and then furthermore successfully implementing the system despite resistance.[111] It is clear that Ståhl initiated the change work; it has, however, not been possible within the framework of this study to establish the details of what happened when the resistance within the party was overcome. That question, like the wider implications of the result for research on the emergence and administration of a universal social democratic welfare system, must be put aside to be developed and discussed further in other contexts.

The fact that the Swedish student finance system has been perceived in very different ways should nonetheless be seen against the background in the history of ideas that has been portrayed here. On the one hand, there is a more positively charged picture that the student finance reform was not simply general welfare policy but also a generous Social Democratic innovation. As the Minister for Education and Ecclesiastical Affairs stated at the time of the decision in 1964: "No other democratic country has come so far in the area of student finance as we have with this decision."[112] In the words of a more modern assessment, the student finance system became "one of the most successful reforms in Swedish educational policy".[113] On the other hand, contrasting pictures show that, in the knowledge society, students have had to take over the state's costs for higher education. The costs of student finance, which are in the nature of loans and transfers, are included in a socio-economic calculation not as costs for the state but for the individual.[114] The contrasting view centres on that aspect. Higher education may be free of charge in Scandinavia but students carry a significant burden of debt. The general loan system implies "a transfer of costs from parents to students, not, as might have originally been intended (at least by the students and some of the political Left) to the government."[115] Sweden was a forerunner in this. The later implementation of loan reforms in other countries often met with resistance from students, who protested against the very fact that the investment in education so essential to society was being transferred to the individual.[116]

111 Erlander (1982), 198.

112 Ragnar Edenman, *FC minutes* (1964), 108.

113 Berggren (2010), 328.

114 *SOU 1973:3, Högskolan: sammanfattning av förslag av 1968 års utbildningsutredning* (Stockholm), 73.

115 Johnstone and Marcucci (2010), 86.

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A1:1, A1:20 Minutes with appendices.

D2:1 Older index cards A–Ö.

D2:2–D2:30 Index cards A–Ö.

F3:1 Documents relating to recommended housing and eating places.

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