

Labour Market Adjustments in the Long Run

Are there Cliometric Findings for the Guidance
of the Educational Policy in Ireland?

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The Swan Group: Educational Policy & Economic
Growth

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Origin and *Renaissance*

- ▶ The study of the relations between “Education and economic growth in the long run” originated during my doctoral dissertation: European Commission ⇒ Stimulation Plan for Economic Science, 1992-1994.
- ▶ *Renaissance* during the time my research was financed by the Centre National de la Recherche Scientifique ⇒ Action incitative du CNRS “Aides à Projets Nouveaux, 2001-2003”: “Cliometric analysis of the relation between education and economic growth in Europe in the 19th and 20th centuries.”
- ▶ Study on Education and economic growth commissioned by the French ministry of education and research (2005).
- ▶ Contract for a study on Education, labour markets and economic growth from the French ministry of foreign affairs (2005-2006).
- ▶ Study on Patents and economic growth commissioned by the Scientific Council of the Louis Pasteur University in Strasbourg (2008).

Research Program

- ▶ To foster the meeting of macroeconomic theory, time series analysis and cliometrics with the aim to discuss the multiplicity of erroneous representations in economic history ⇒ kill the myths!
- ▶ To make systematic use of historical archives, mathematical theoretical models, applied models and cross-national and longitudinal empirical studies of certain fields considered as having priority: human capital especially.

Program for this meeting

My research on higher education and labour markets in the long run: endogenous or exogenous shocks; economic interpretation of the results (stylised facts and the model)...

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Ambition & Assumption

- ▶ Ambition: better understanding of the strategy of students in their career choice \Rightarrow extension of my previous publications on education and labour markets \Rightarrow based essentially on the cyclical phases of saturation and shortage in the numbers of students enrolled at universities over a century and a half.
- ▶ Assumption: regular shocks are superposed by irregular shocks which appear rarely (infrequent large shocks) \Rightarrow includes the question whether the long-term development of higher education is caused (or not) by such extraordinary shocks such as wars, political measures and institutional changes. If this was the case, educational development could probably not be explained as a systematic endogenous process but would have to be traced back to specific historical events.

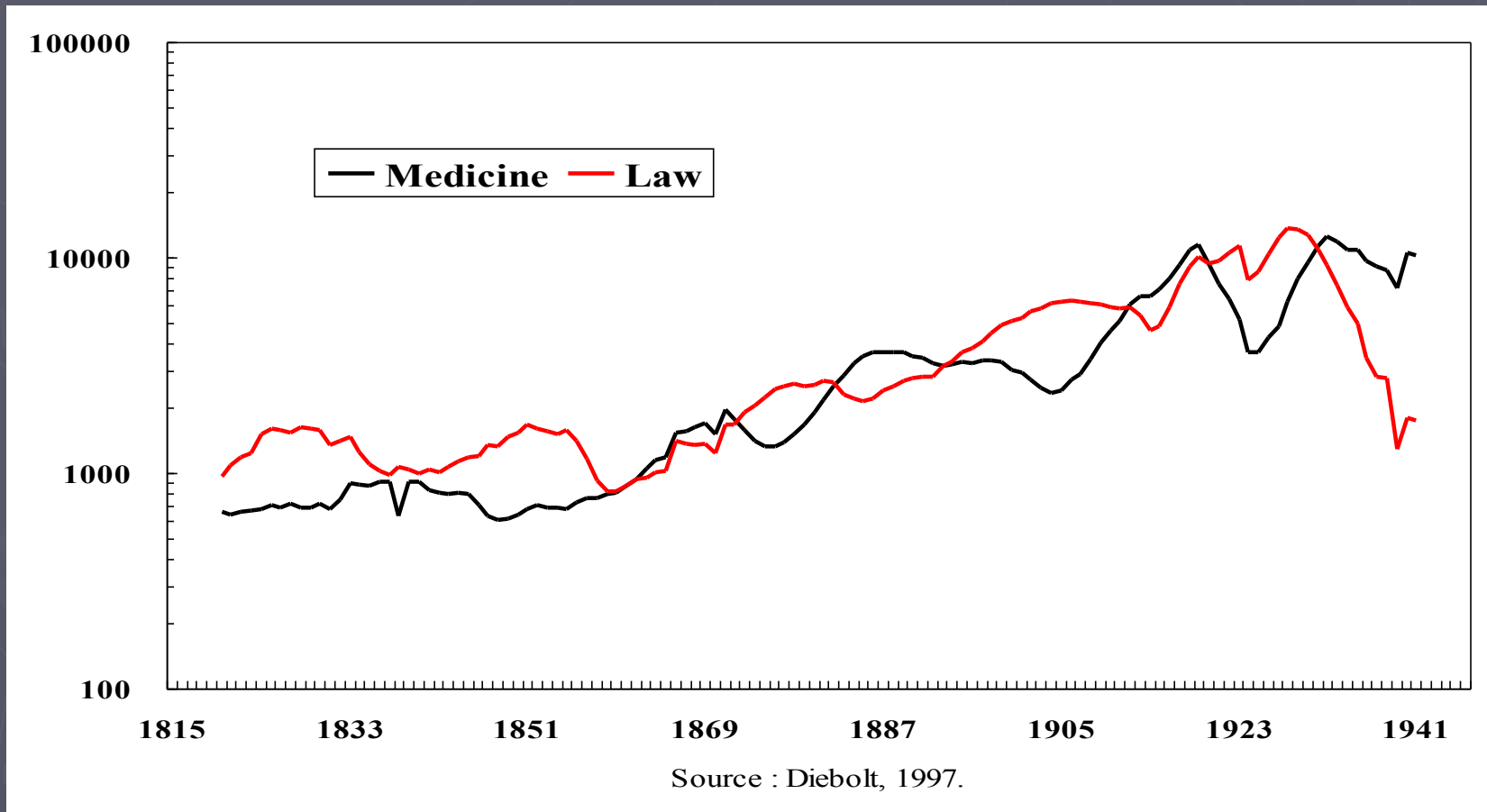
Pioneers & Time Series

- ▶ The pioneers: Becker [1964], Arrow [1973], Freeman [1971], Murphy & Co. [1991]... Ehrenberg [2004] \Rightarrow 'Econometric Studies of Higher Education' in *Journal of Econometrics*, etc.
- ▶ The production of new statistical series concerning Germany and Prussia \Rightarrow 1775-1989 \approx 1000 time series, Diebolt [1994, 1997] & Titze *et al.* [1987, 1995].
- ▶ These describe the social origins of the students, attendance patterns, occupational destinations, incomes, etc. In this paper \Rightarrow students enrolled in the protestant theology, law, medicine and literature faculties.

A twin hypothesis

- ▶ Student choice of curriculum is affected by expected rewards represented (i) by earnings on the labour market at a given moment; and (ii) by what they consider attainable over time.
- ▶ When a shortage occurs in different sectors of the labour market \Rightarrow an attraction effect associated with selected programmes of study \Rightarrow once the shortage has been made up, the demand effect continues \Rightarrow gradually, this may lead to the overproduction of qualified university leavers relative to labour market demand \Rightarrow the imbalance diverts potential new cohorts of students to other sectors of education or directly to the labour market \Rightarrow it causes a new skill shortage, leading to a cyclical pattern modulated according to job availability.

Students enrolled in the medicine and law faculties in Prussia, 1820-1941 (logarithms)



A multitude of methods for the same result

- ▶ Equilibrium model, translog function, cobweb model, causality tests, spectral analysis, etc.
- ▶ Throughout the period of our statistical window (1820-1941), cliometric tests display a substitutability effect \Rightarrow the effect of the substitutability between two faculties, H and J, means that the number of students enrolled at H moves in the opposite direction to the expected earning in J. \Rightarrow we observe also a complementarity movement of student numbers (at the universities and in the professions) and their respective yields \Rightarrow Diebolt & Co. [2001-2005].

Three explanations

- ▶ Student behaviour, when choosing a curriculum, is governed by expected earnings.
- ▶ Professional ageing may create a substantial demand for young graduates.
- ▶ Numerous vacancies may also explain such a demand.

When the three phenomena coincide

- ▶ Their effect on the rising generation is cumulative and forms a particularly strong attraction phenomenon.
- ▶ This acts on layers of the population which, because of their lowly social position, try to seize the opportunities created to enter professions in which there is a skill shortage.
- ▶ Each career is momentarily open to the social classes most remote from university training, before closing again once the opportunities are taken.

Duration of the cycles

- ▶ Considering the interaction of these different mechanisms, it can be seen that, in the long term, student numbers are kept in a fluctuating equilibrium.
- ▶ Each faculty enrolment cycle \Rightarrow twice the length of professional training, even with the addition of the years required to eliminate shortage and glut \Rightarrow Kuznets *vs.* Becker & Easterlin.
- ▶ In this situation, it is easy to see how periods of shortage lend themselves to accelerated change, since a shortfall in a specific area leads to greater mobility of both those exercising the profession and those aspiring to it.

The contemporary period and the impact of the results

- ▶ The growth of education from the 1960s onwards, combined with favourable economic prospects, meant that periods of shortage acquired long-term characteristics. Similar to a century earlier \Rightarrow the end of the 1970s was marked in Germany by a new period of overeducation created by an excess of demand.
- ▶ Like recent work on endogenous growth \Rightarrow our observations and results have important implications for economic policy, suggesting ways of stimulating growth by regulating higher education enrolment or by developing and perpetuating priority occupational sectors.

Future research on this topic

- ▶ International comparisons \Rightarrow why not Ireland!?
- ▶ New modelling \Rightarrow overeducation, overshooting, glutting cycles, gender studies, etc.
- ▶ Sectorial studies: law, medicine, etc. in historical and contemporary perspectives.
- ▶ Laboratory tests on the rationality of students in their career choice \Rightarrow experimental economics.
- ▶ Etc.