

English as economic value: facts and fallacies

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ABSTRACT: This paper offers an overview of the economic approach to the question of the ‘value’ of English.¹ In the first section, I discuss the reasons why this question is attracting increasing attention, showing that it reflects an increase in the objective frequency of contact between speakers of different languages, as well as a concern for the role of English in those contacts. Section 2 presents five important analytical distinctions which help to structure the investigation: they address the direction of causality considered; the ‘regulated’ or ‘unregulated’ nature of the context being examined; the difference between market and non-market effects; the micro- as opposed to the macro-economic level; and the contrast between, on the one hand, the issue of (more or less efficient) allocation of resources between uses and, on the other hand, the issue of the (more or less equitable) distribution of resources among actors. Section 3 turns to the labour market value of English language skills in Switzerland, presenting first some methodological aspects and then providing some fundamental statistical results. Switzerland currently is the only country in which English is neither a majority nor an official language for which the data necessary for such estimations are available. These results indicate that, for Switzerland taken as a whole, English language skills can be associated with remarkably high and statistically robust wage premia which, in the models estimated here, range from 12% to 30%. Section 4 discusses the implications of these results with respect to long-term trends and policy orientations; the tentative prediction made is that the labour market value of English, relative to other skills, will erode in the long run, as a result of the dynamics of the labour market. This paper combines concepts from sociolinguistics on the one hand, and quantitative economics on the other hand. The presentation is kept non-technical throughout, in order to make it accessible to practitioners of both disciplines.

1. A CONVERGENCE OF CONCERNS

The question of the ‘economic value’ of languages is one that has, in just a few years, acquired a surprising visibility in the public debate and in scientific research. This evolution is particularly manifest in Europe, in contrast to what can be observed in the United States and Canada. In the North American context, some of the connections between ‘economic’ and ‘linguistic’ issues had been receiving some attention since the mid sixties; in Europe, however, research on language matters (as well as public debate about them) were clearly assigned to the realm of linguistics, language education, cultural issues in general, or politics.

The Swiss case referred to in this paper is no exception, despite the fact that, because of the official plurilingualism² of the country, various dimensions of ‘language-in-society’ more frequently come to the fore.³ Not only were the *economic* dimensions of language issues largely ignored; even the *political* dimensions were prudently canalised through a unique arrangement balancing the principles of territoriality, personality and subsidiarity – insulating language, as it were, from potentially contentious issues (Grin, 1999a, 1999c).⁴

Within a remarkably short time, this situation has changed, both in Switzerland and abroad. At almost any conference on ‘language-in-society’ (particularly when language policies are addressed), the question of the economic dimensions of language is now

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brought up in some way or other. The substance of the issues raised can vary; frequently mentioned issues include:

1. the relevance of language as a defining element of economic processes such as production, distribution or consumption;
2. the relevance of language as an element of human capital, in the acquisition of which individual actors may have a good reason to invest;
3. language teaching as a social investment, yielding net benefits (market-related or not);
4. the economic implications (costs and benefits) of language policies, whether these costs and benefits are market-related or not;
5. language-based income inequality, particularly through wage discrimination against groups of people defined by their language attributes;⁵
6. language-related work (translation, interpretation, teaching, etc.) as an economic sector.

The above list, though not exhaustive, coincides to a large extent with the set of issues analysed in 'language economics'. Before we move on to a discussion of language economics as a field of research, it is useful to ask ourselves why these issues are now attracting more attention than before – or, to put it differently, why language matters have, as it were, 'spilled over' from the perspectives in which they were traditionally analysed, and are increasingly being considered in relation with economic dimensions of human experience.

Possible explanations are probably not quite the same depending on the scale of the analysis; however, it generally holds true that *linguistic diversity in society* is an issue now taking on increasing relevance for an increasing number of people (in relative as well as absolute terms). This is due to the fact that the occurrence of contact between people with different language attributes is on the rise. This can, in turn, be traced back to the following trends:

1. the reassertion of local and regional identities, including the linguistic dimensions of these identities;
2. the diversification of migration trends, in terms of the various *combinations* of the countries of origin and countries of destination linked by migration;
3. the development of supra-national entities;
4. the rising international integration of the production, exchange and consumption of goods and services on the one hand, and production factors (capital and labour) on the other hand – a phenomenon with which 'globalisation' is often equated (Amin, 1993).⁶

For all the above reasons, people speaking language *X* (and living in a traditionally *X*-defined *linguistic environment*) are increasingly (and ever more 'normally') in contact with people speaking language *Y*; moreover, this evolution is affecting, on the whole, a growing range of aspects of life. As a result, linguistic diversity is a reality of increasing importance, affecting most aspects of human life, including economic activity. Of the various trends that contribute to the increasing relevance of diversity, some are embedded in economic activity, thereby establishing direct links between language and the economy, and prompting interest in those links.

Ideally, these trends should be included as explanatory variables in a general model of language dynamics. Although I believe that such a model is still, at this time, largely lacking, it seems reasonable to assume that the four evolutions listed above are relevant elements of such a model.⁷

The fact that perceived (or subjective) diversity has increased does not mean that objective linguistic diversity itself is globally on the rise. Quite the contrary, this diversity is

being eroded at a rapid rate, with the demise of numerous small languages, and links between linguistic diversity and biodiversity are attracting increasing attention (Skutnabb-Kangas, 2000). The point here is that the *relevance* of diversity (or the confrontation with diversity) is generally increasing, and that this fact stimulates the interest for the economic dimensions of language issues.

However, the attention devoted to the economic dimensions of language issues is often inspired not so much by a realisation that linguistic diversity is an important feature of modern life, abetted by globalisation (Grin and Rossiaud, 1999). It may also reflect concern over the long-term outcomes of these dynamics of diversity, in which some languages take a dominant position, with potentially disruptive long-term effects.

The increase in the presence of language *Y* in a traditionally *X*-defined environment is different depending on which languages play the role of *X* and *Y*, and it is always a risky business to suggest general patterns in language dynamics. However, few people would dispute the fact that the increased presence of *Y* in an *X*-defined environment is particularly manifest when *Y* stands for English, and *X* for just about any other language. For example, educated native speakers of German or French living in a mainly German- or French-speaking part of western Europe are no longer confronted with English *only* because they may choose to read a book in English from time to time, but also because they are increasingly expected to demonstrate professional mobility, sometimes on the international plane; more often than not, this mobility implies a command of English. Even among people (still the vast majority) who are not expected to compete individually on international labour markets, the presence of English makes itself felt because they consume goods branded or advertised in English, and are exposed to music with English lyrics. These trends are increasingly analysed and documented (Phillipson, 1992; Ammon, 1994; Pennycook, 1994; Crystal, 1997; Graddol, 1997), also in the case of Switzerland (Cheshire and Moser, 1994; Dürmüller, 1994).⁸ Economic forces are regularly singled out as one of the chief reasons explaining the spread of English, which also stimulates interest in the language-economy links.

The focus of this paper, however, is not on the potentially harmful nature of the spread of English;⁹ rather, its starting point is that discussion of the economic dimensions of language-related processes finds itself at the strategic intersection of two phenomena: the increasing relevance of linguistic diversity as a feature of the environment in which we live, and the spread of English as a global language. We will therefore be in the thick of things when investigating the position of English in the perspective of language economics, to which we now turn.

2. PARSING THE PROBLEM: ANALYTICAL DISTINCTIONS

The relative position of different languages is linked to economic processes; however, it is very difficult to get a grip on the links between linguistic and economic variables, let alone to venture explanations of how these variables actually *affect* each other, and to tease apart cause and effect.

For example, for Crystal (1997), the spread of English is, *with hindsight*, associated with the success of British colonial expansion, the rise of the United States to world-wide economic and political prominence, the role of English-speaking countries collectively as the place where major technological innovations have taken place, the weight of international trade in world production (together with the fact that English is the most

frequently used language of international trade), sheer demographics, etc. There is little doubt that all these factors *are* relevant, and the assumption that the relative position of a language, *ceteris paribus*, is positively correlated with the aggregate purchasing power of its speakers is highly plausible, but a list of presumably relevant factors still falls short of an explanation, and we need to take a closer look at their actual role.

First, the various phenomena called upon as causes for the spread of English are themselves linked to one another by causal relationships, which need to be clarified before we can suggest an actual explanation.

Second, even if a strong coincidence between two phenomena can be established (for example, the increased share of traded goods in gross world product (GWP) on the one hand, and the spread of English on the other hand), a correlation does not prove that these two phenomena are connected through a *causal relationship*, nor does it, as such, tell us much about the allocation of roles (as cause or effect) in this relationship.

Third, the actual question is not always clearly stated. For example, Coulmas's (1992) reflections on the links between economic and linguistic variables take the form of a valuable *discussion around the fact* that variables are connected, without, however, elaborating on the logic connecting them.¹⁰ In particular, two types of questions are often bundled together: how do economic variables (for example, the development of international trade) influence patterns of language use, spread, or decline? And how do language variables (for example, the distribution of language skills among the population) influence individual or aggregate economic performance?

There is, therefore, a significant risk of circularity in the study of the links between language and the economy;¹¹ of course, it would be futile to look for simple, unequivocal and unidirectional causal links, but an understanding of how variables influence each other requires us to impose more structure on the problem, and first to parse it, as a first step towards accounting for those links.¹² This is one of the tasks addressed in 'language economics'.

The reader can find elsewhere (e.g. in Grin, 1996a, 1996b, 1999b; see also pioneering integrative work by Vaillancourt, 1985) overviews of the economics of language as a field of research, and this exercise will not be repeated here; it will suffice to recall that the economics of language, as a field of research, mainly focuses on the theoretical and empirical analysis of the ways in which linguistic and economic variables influence one another, usually within the framework of orthodox (or 'neo-classical') economics. Let us briefly discuss some of the analytical distinctions which can prove useful to assess the language-economy relationships in the case of English. This will pave the way for our approach to a more specific set of questions, namely: does English have economic value? How can we know? And if it does, how much?

Before proceeding, it is important to note that these distinctions should not be seen as *indispensable*, or even *necessary*. Their epistemological status is more modest: they should merely be seen as *convenient* for arriving at meaningful statements about the issues at hand.

1. The first distinction has to do with the causal direction: are we interested in how 'something linguistic' (a set of variables we can symbolise by {L}) affects 'something economic' ({E}), or the reverse? In what follows, we shall emphasise the first type of causal direction, and try to find if there is any evidence suggesting that a certain degree of mastery of English does *result* in higher earnings (in other words, this paper addresses relationships of the {L} ⇒ {E} type).

2. A second useful distinction can be made between the 'regulated' or 'unregulated' cases. These terms are slightly awkward, and it is important not to attach any value judgement to them. 'Unregulated' refers to a causal system governed by 'pure' market forces, in which we examine the language-economy links in the absence of state intervention. Such a causal system is largely an analytical construct more than an empirical reality; its prime example is 'the market'. However, it remains relevant as a device for studying some of the fundamental forces at work in economic life. 'Regulated' then refers to the case where there is state intervention which modifies the ways in which linguistic and economic variables influence each other.¹³
3. Thirdly, it is important to remember that 'economics' as a discipline studies a very wide range of human experience, and that 'economic' is not synonymous with the production, consumption or exchange of goods, services and production factors, or with the associated financial flows; there are 'non-market' as well as 'market' issues in economics (Becker, 1976), and the non-market ones are particularly important in the economic analysis of language (Grin, 1996a; 1999e). However, these non-market effects (which can be characterised as 'symbolic' effects; Grin and Vaillancourt, 1997) are conceptually more complex, and more difficult to identify and to measure. In what follows, our discussion will focus on market effects, that is, those that result in changes in prices, salaries, interest rates, quantities, etc. observable on a market.
4. A classical distinction exists between the micro- and the macro-economic level. The micro-economic level is that of the single actor – though not necessarily 'real individuals'. The typical micro-economic 'agent' is 'the firm', the 'consumer', 'the worker', 'the investor', etc. (an abstract construct, the use of which, in other disciplines, is sometimes viewed as characteristic of a rather macro-level approach). The macro-economic level is concerned with *aggregates* (gross domestic product, the trade balance, etc.). Both levels are relevant in the study of the language-economy links; in what follows, we shall position ourselves at the micro-economic level.¹⁴
5. A fifth (and often overlooked) distinction must be made between the allocative and the distributive perspective. The first is concerned with the allocation of resources, and particularly with the efficiency of this allocation, as reflected in the prices and quantities that prevail in a certain place, at a certain time, on a certain market. The second is concerned with the resulting (in)equality in the distribution of these resources between social actors. The bulk of economic research (not just in language economics) focuses on allocative issues, and this will be the main focus of the rest of this paper.¹⁵

3. THE ECONOMIC VALUE OF ENGLISH: IDENTIFICATION AND MEASUREMENT

The questions I now turn to are the following:

1. Does English have economic value in Switzerland – and more specifically, on the Swiss labour market?
2. If English does have economic value, how much?
3. How can we know?

Referring to the above distinctions made in the preceding section, we will now focus on:

- the effect of linguistic variables on economic ones (how skills affect earnings);
- market effects (we will consider the influence of English-language skills on wages, which can be observed on the labour market);
- the micro-economic level (our unit of analysis is the typical wage earner, not a national economy);
- the allocative dimension (we observe wage-setting as influenced by language skills, not the degree of justice or injustice in the distribution of incomes resulting from it);

- the ‘unregulated’ case, because we are interested in the wage effects of language skills, without examining possible regulations that would affect the way in which language skills affect labour income.¹⁶

We shall therefore look at one particular manifestation of the economic meaning of English. It is essential to state this fact – implying that the following examination only addresses one part of the issue.

There is a sizeable amount of literature on the value of English as an element of human capital; however, the bulk of this literature (which is empirical rather than theoretical) concerns Spanish-speaking immigrants to the United States (see Bloom and Grenier, 1996, for an overview); the rest addresses the economic value of proficiency in English (and French) in Quebec. This is precisely the limitation of the US and Canadian results.

The former group shows that immigrants stand to gain handsomely from a good command of English. This, however, is hardly surprising, given that English is the dominant language of the US, even if there are large pockets of immigration with submarkets where English can (for certain jobs) be dispensed with almost entirely. Since such results are obtained at any given level of education and earnings, they prove that speaking the dominant language of a country is rewarded for its own sake (i.e., it is a valuable skill in its own right, as distinct from, say, education), and it is certainly interesting to know that in 1990, Hispanics (at comparable levels of education and experience) suffered a penalty of 8% to 15% in the case of men, and of 6% in the case of women (Bloom and Grenier, 1996) – but while this illustrates the role of English as the dominant language of the US, it tells us nothing about the value of English as an *international* language.

More interesting for us are the Canadian results, particularly those for Quebec, where the majority of the population (over 85%) has French as a native language. Hence, rates of return to English calculated there can give us some first pointers about the value of English as an international language. Results show, among other effects, that Quebec bilingual francophone men (i.e., those whose mother tongue is French but who know English) did, in 1985, earn a 6.32% premium over their unilingual counterparts with equivalent education and experience (Vaillancourt, 1996). However, even these results only indirectly address the question of English as an international, or more to the point, as a global and ‘glocal’ language, because Quebec is a Canadian province, and Canada’s main language is English.¹⁷ In addition, even in Quebec, English has played not just an important, but a dominant role since the late eighteenth century. Hence, the fact that English remains valuable there is not much more surprising than in the case of the US, and other data on some other context are required to assess the labour market value of English as a global/glocal language.

Advances are made possible by fresh Swiss data. The Swiss case is relevant, because English is a mother tongue for less than 1% of the population, and is not one of the country’s official languages. If someone speaks English, it is most probably because he or she has learned it as a foreign or second language (two notions between which no distinction is made here, if only because it has marginal economic significance). In the rest of this section, I will present some data and results from this Swiss study.

One must remember that if proper evaluations of the labour market value of English are so few internationally, it is largely because the necessary data sets are rare.

- On the one hand, if one wishes to go beyond mere anecdotal evidence, such data sets must contain an adequate number of observations (it is practically impossible to carry out adequate statistical analysis with less than 100 observations, and many more are required for any detailed examination), and the observations must be representative.
- On the other hand, the type of information needed, which must include at least earnings, second language (L2) skills, education and age are typically not collected by national censuses (the long-form questionnaire of the Canadian census being one notable exception; there usually is no such thing in other countries). This means that one has to use survey data, and such surveys are expensive and technically demanding. At the same time, the quality of the observation obtained plays a major role. For example, if people are asked whether they 'speak' another language, what does this actually mean in terms of the level of proficiency they have?

The Swiss survey (sometimes referred to as the FLCS project, for 'Foreign Language Competence in Switzerland'; see Grin, 1999e), probably the first telephone survey of its kind, covers a representative (random-random) sample of 2,400 observations over three of Switzerland's four language regions.¹⁸ It contains questions on the following items:

- respondents' L2 skills, differentiating between the four skills (understanding, speaking, reading and writing) and for each skill, four skill levels (fluent, good, basic, none);
- non-school channels of L2 acquisition;
- L2 use on the workplace;
- standard socio-economic characteristics (education, etc.), including labour income.

This certainly makes the FLCS one of the richest data banks internationally in this field. Only a fraction of the information it contains is used in this paper. Since the focus of this paper is on the specific question of the value of English, I will not report on the level of skills and their acquisition, nor will I present the method used to ensure the comparability of respondents' self-assessment of their L2 skills (on these points, see Grin, 1999e), and will instead focus on the relationship between language skills and labour income.

The first point to establish is whether there is any kind of 'gross' association between competence in English and earnings. To this end, the simplest thing to do is to calculate the average earnings of groups defined in terms of their competence in English. This latter point, of course, requires some methodological choices: are we interested in active or receptive, oral or written competence? In this paper (and given that the correlation coefficients between the competence levels reported in all four skills are always very high), I have chosen to use an indicator based on the average score of declared competence in the four skills. Results are reported in Table 1 below. What this table immediately reveals is that there is a very strong correlation between earnings and competence in English. As competence rises, so do earnings, and this progression is stronger when computations are made using not the earnings actually reported, but the full-time equivalent of these earnings.¹⁹ These figures may be considered more relevant, because by showing what people would earn if they all worked full-time, they eliminate the 'noise' due to the fact that some people work part-time. On the other hand, the uncorrected figures (left-hand column in each panel of Table 1) give a truer reflection of actors' reality.

Are the figures in Table 1 enough to conclude that in the case of Switzerland, English is a vastly profitable investment for individuals? Certainly not. The reason is that English-language skills are correlated to other determinants of earnings, particularly education, and that higher earnings accruing to those who speak English may simply reflect the fact

Table 1. Mean labour income by fluency in English in Switzerland, 1994/95, monthly labour income before taxes and social security payments. Swiss francs and index values (100: no english language skills)

	Men (n = 1141)				Women (n = 803)			
	Reported		Full-time equiv.		Reported		Full-time equiv.	
	CHF	Index	CHF	Index	CHF	Index	CHF	Index
Fluent	7636	148	7896	150	4096	149	5468	143
Good	6603	128	6799	129	3934	143	5031	132
Basic	5767	112	6094	116	3268	119	4200	110
None	5164	100	5255	100	2751	100	3818	100

Source: Calculations by author and Grin (2000). The rate of exchange between the Swiss franc (CHF) and the American dollar (USD), at the time of writing, was approximately 1.5 to 1.

that, having a higher education, they can hold better-paying jobs, and this may have nothing to do with the fact that they have some competence in English. In the same way, better-educated people who earn more are also likely to have had more Latin at school than others, but one would not necessarily conclude that they are financially rewarded for their ability to translate Cicero.

In order to circumvent this problem, the classic solution is to use a statistical instrument called 'ordinary least squares regression' (OLS for short). I will not discuss the OLS methodology here (see e.g. Lewis-Beck, 1993); suffice it to say that it serves to separate the effect of various determinants of earnings. Using not just English language skills, but also education and experience (both measured in years) as regressors, we obtain estimated coefficients quantifying the effect on earnings of the 'control variables' (in our case: education and work experience, both measured in years), and of the other explanatory variables which are of chief interest to us here, that is, respondents' degree of competence in English. These coefficients therefore indicate the statistical effect of English-language proficiency on earnings, net of the influence of education and experience.

For reasons not discussed here, these coefficients are expressed in 'log-points', and hence are difficult to interpret directly (although one common procedure is to transform them into percentage points). Hence, I have chosen to transform them into a set of values allowing for direct comparison with the figures in Table 1; these figures are reported in Table 2.²⁰ The bottom line of Table 2 yields an estimate, in Swiss francs, of the average labour income of a person with no English skills. This figure is then multiplied (for each skill level) by $(1 + r)$, where r is the estimated coefficient in log-points. This yields estimates, in Swiss francs, of the average earnings of a person with basic, good or fluent English language skills. These figures are then transformed into index values for direct comparison with Table 1. Calculations are made here for earnings in full-time equivalent only.²¹

These figures are expressed in the same units as those in Table 1; however, they concern hypothetical men and women having exactly the average number of years of education and experience. Within categories so defined, the net earnings differentials accruing to persons with English language skills remain considerable, although they confirm that part of the

Table 2. Net earnings differentials, all Switzerland, 1994/95, evaluated at mean education and experience. Earnings in full-time equivalent

	Men (n = 1141)		Women (n = 803)	
Mean ed. (yrs)	11.56		11.34	
Mean exp. (yrs)	21.52		19.78	
	CHF	Index	CHF	Index
Fluent	7378	131	4689	122
Basic	6696	119	4927	128
Low	6432	114	4339	112
None	5644	100	3857	100

Source: Calculations by author.

earnings differentials between fluent speakers of English and less proficient speakers must be assigned to the fact that the better speakers are also better educated; in other words, only part of the premia reported in Table 1 can be credited to the fact that they possess those language skills.

The key results to be stressed here are the following:

1. All the coefficients used for these calculations are statistically significant at the 1% level.
2. English language skills are associated with significant earnings gains on the Swiss labour market. Controlling for education and experience, these differences clearly rise along with the level of competence in English. It is important to note that these results obtain *holding education and experience constant*, and therefore reflect more closely the effect of English-language skills.²²
3. The wage difference for the top level of competence can exceed 30%, which is remarkably high. Even at lower levels of competence, a little English is always associated with higher earnings.
4. The results also hold for women, which is noteworthy (in the Canadian studies, results for women often are statistically not significant).
5. The progression of differentials is non-monotonic in the case of women (that is, as skills levels rise, earnings first also rise, and then drop); this non-monotonicity is even more pronounced when calculations are made for reported (instead of full-time equivalent) earnings: to a significant extent, this is due to the fact that women work part-time more often than men, and that the occurrence of part-time work is probably not independent from the degree of fluency in English (that is, women with a higher competence in English are relatively more likely to be working part-time).
6. The fact that the non-monotonicity remains when calculations are carried out (as above) using earnings expressed in full-time equivalent suggests that other effects are at work, in particular, that women's language skills are rewarded not so much because they are put to use on the workplace as because they work as a 'signal' for the employer, indicating that a worker has a certain combination of skills in which language may be useful, but not crucial.

Extended statistical analysis (yielding figures not reported here) confirms the econometric robustness of the results; yet it also shows that reality is much more complex than these simple figures suggest. This would, however, require a separate paper; I will therefore simply mention the following points.

First, there are significant differences between Swiss language regions. When the analysis is carried out for the three regions separately, much higher rates of return for competence in English appear in the case of German-speaking Switzerland. In French-speaking Switzerland, by contrast, knowledge of German as a second language is more highly rewarded than knowledge of English.

Second, one can show that returns are sector-dependent: in some economic sectors (typically, those that display a strong orientation towards international trade), English is highly rewarded; in other sectors, the rates of return are low.²³

Third, and perhaps most importantly, the above statistical results indicate the existence of a robust link between English language skills and earnings; this constitutes a very strong presumption that these skills contribute to *explain* earnings, and that they can therefore be interpreted as a *cause* in a causal relationship; this interpretation is further borne out by the fact that a credible explanation can be suggested to make sense of these results (i.e., the fact that such skills increase a worker's productivity in certain economic activities). However, they do not, *as such*, constitute a *proof* that English language skills are valuable. Hence, the term 'premium' sometimes used to refer to earnings differences should be taken with due regard for the fact that a statistical association, strong as it may be, is not an explanation, let alone a basis for making predictions.²⁴

What emerges is a complex picture in which English can be interpreted as a valuable commodity on the Swiss labour market, but where it would be incorrect to assume that policy could be content with promoting English and forget about other languages. This point is discussed in the final section of this paper.

4. DISCUSSION

Our discussion so far has sketched out the meaning of language in an economic perspective and, focusing on one important dimension of the issue (the value of language skills on the workplace), provided an empirical estimation of the economic value of English on the Swiss labour market.

This information is relevant because Switzerland is a country where English is neither a dominant nor a majority or official language, and the high rates of return associated with competence in English are a direct indication of its value as an international, global or possibly 'glocal' language.

What can we infer from all this? The question is largely one of generalisation in terms of time and space.

Addressing the issue of space first, it is likely that the Swiss results hold, by and large, for other non-anglophone countries, particularly those with a strong orientation towards international trade, if only because the data show that rates of return are significantly higher (in the case of men) for those employed in internationally-oriented firms. Of all OECD countries, Switzerland has the highest index of foreign trade per capita, so we would expect similar results (possibly in decreasing order) for the Netherlands, Austria, Germany, France and Italy. A similar argument can be made for non-OECD countries, including economically developed countries in Asia. The order of magnitude of the returns on English competence may therefore be lower in countries other than Switzerland, but the structural logic is similar, and can be expected to become increasingly so in the future with the global intensification of international trade.²⁵

As regards time, the question is whether these differences are going to hold in the long run. We obviously have no data on the future, and cannot answer this question empirically. On the theoretical plane, there seems to exist no full-fledged model of language dynamics, and it is accordingly difficult to prophesy how language-related earnings differences will change over time, because these differences, to the extent that they reflect patterns of supply and demand, would be affected by long-term patterns of language decline and spread.

However, there is good cause to think that over time, the relative value of English will progressively erode. This is still a speculative view, but one which is borne out by the following analogy. Only one or two centuries ago, the ability to read and write was a major asset, either inherited from or giving access to a privileged socio-economic position. With the generalisation of literacy, the need to learn these skills has become so obvious that it is hardly relevant to use human capital theory to explain why people learn to read and write. It has become a norm and part of social habitus in the broad sense, and being able to read and write now no longer suffices to ensure professional success.

In the long run, a similar evolution is likely to occur with English. As competence in English spreads (as it certainly will, if only because it yields appreciable gains), the socio-economic *relevance* of English will increase, and so will the demand for English-language skills, thereby driving upwards the wage 'premia' accruing to people with a good command of the language. Yet as people are moved to learn it, they will increase the supply of English language skills, making them more banal, as it were, and driving down the 'premia' to English speakers. The question is which of these two effects will dominate. The story of literacy suggests that the second will. In other words, the rewards for speaking English will be less and less, and other skills will be required to achieve socio-economic success. First and foremost among those skills are languages other than English.

The policy implications are clear: English is worth learning, but restricting foreign/second language acquisition to English only would be a very short-sighted policy, even if one reasons only on the basis of the crassest materialistic considerations. However, the limitations of an English-only policy are more manifest if a broader range of issues is taken into account. One key consideration, of course, is that of the language environment we wish to live in and hand over to future generations. In the same way as overall welfare is enhanced by environmental quality, a strong case can be made that it is enhanced by high linguistic diversity.

An English-only policy would therefore be tantamount to throwing away this component of our quality of life – and of the quality of life of the generations that will follow us. In addition, it implies distributive effects (Grin and Vaillancourt, 2000) which have hardly been explored yet: in short, these effects imply a redistribution of economic and symbolic power from the rest of the world towards dominantly English-speaking countries (and most probably towards the political and economic elite in these countries). Although these distributive effects will not be discussed here (this would require another paper), it is important to point out that these effects almost certainly exist, and that one should carefully evaluate whether we are really willing to accept, let alone encourage them.

To sum up, the essential message that an economist of language can deliver holds in a single word: 'Beware!' The question of the economic value of English is a complex one, and the associated language dynamics are far from being fully elucidated. This holds, in particular, for the conditions under which patterns of language spread move according to some kind of self-reinforcing mechanisms. At this time, the preservation of our quality of

life in the long term suggests that what deserves our care and efforts is the promotion of linguistic diversity.

NOTES

1. An earlier version of this paper was presented at the Symposium 'English in Switzerland', University of Berne, 27–8 January 2000.
2. Switzerland's four national languages are German, French, Italian and Romanche; speakers of these languages as their 'main' language make up 63.6%, 19.2%, 7.6% and 0.6% of the resident population respectively (1990 Federal Census). The remaining 9% have non-national languages as their first language, notably Spanish (1.7%), Portuguese (1.4), Turkish (0.9%) and English (0.9%). I use the terms 'multilingualism' to denote an indefinite number of languages in the social space, and 'plurilingualism' when this number is a finite and identified one.
3. Throughout this paper, the word 'language' refers to 'language-in-society', as this notion is used for example by Fishman. Further, I will concentrate on matters of language status, as distinct from language corpus (Kloss, 1969).
4. 'Subsidiarity', an important concept in all federal systems as well as in the context of supra-national organisations such as the European Union, means that local and regional authorities enjoy a wide degree of autonomy in matters concerning the population under their jurisdiction. According to this principle, only matters which local and regional levels are not capable of dealing with are referred to higher-level authorities.
5. The concept of 'language attribute' is commonly used in the language economics literature; it reflects the historical evolution of the field (Vaillancourt, 1996; Grin and Vaillancourt, 1997). Language attributes denote an actor's level of skills in his first, second, etc. languages (L1, L2, etc.). Generally, though not systematically, L1 coincides with MT (mother tongue).
6. The English word 'globalisation' does not adequately translate the French *mondialisation*, which is distinct from (and broader than) the French meaning of *globalisation*; *globalisation* emphasises the geographical dimensions of the societal evolution referred to in the word *mondialisation* (Rossiaud, 1997; Grin and Rossiaud, 1999).
7. This raises the question of what is meant here by 'model'. As argued elsewhere (Grin, 1999b), economics as a discipline (including specialist areas such as the economics of language) requires a model to include the explicit identification of causal links between variables, in which the directionality of causation is supposed to be spelled out, not just mentioned – that is, beyond saying that 'a depends on b', a 'model' should also state whether an increase in b will result in an increase or a decrease in a, and under what conditions). Let us recall here an illuminating comment by the sociologist Richard Brown, who once observed that 'models are metaphors whose implications have been spelled out' (Brown, 1989).
8. English is not the only language currently experiencing spread at the expense of other languages; see e.g. some regional languages like Hausa, Swahili or Bahasa Indonesia.
9. Respective ideological perspectives on the spread of English can be at variance with each other; for example, Phillipson (1999) criticises Crystal for the 'triumphalist' tone of his account.
10. See for example his discussion on 'development' (Coulmas, 1992: 47–53).
11. This also holds for discussions of language spread in general. For example, Crystal (1997: 110), looking for explanations of the current dominance of English, concludes that 'it is a language which has repeatedly found itself at the right place at the right time'; this, of course, begs the question of *why* this has been (and still probably is) the case.
12. Another risk is that of the 'rambling flight of metaphor' (this problem is discussed in Pool, 1991a). One example is the analogy between 'language' and 'currency' (Rossi-Landi, 1968; Coulmas, 1992) which confuses possible resemblance between 'words' and 'coins' (a dubious one at best) and possible commonalities linking *differences between languages* on the one hand, and *differences between currencies* on the other hand (Carr, 1985); this latter analogy is, indeed, a valid one to explain the usefulness of currencies (De Grauwe, 1999). When confusion arises, however, it seems to be the result of insufficient attention to the meaning of the term 'value' (see Grin, 1998).
13. Although the empirical reality may be one and the same, the types of analytical issues are rather different (see Grin, 1999d, for a discussion); this question, however, is not of primary relevance in the rest of this paper, which will stress empirical issues.
14. It should be noted that the macro-economic perspective on the language-economy links is much less developed than the micro-economic one, both in theoretical and empirical terms.
15. The empirical estimation and theoretical explanation of language-based inequality has, however, played an important role in the development of language economics (Vaillancourt, 1996), and is the focus of some recent work on Switzerland (Grin and Sfreddo, 1998). The distributive dimension is of crucial importance in the economic and rational choice approaches to language policies (Pool, 1991b; Grin and Vaillancourt, 2000).

16. Besides, the empirical case considered (Switzerland) is one where state regulation of the labour market is comparatively low.
17. The neologism 'glocal', sometimes found in the literature on globalisation or on social movements, combines the adjectives 'global' and 'local'. It refers to the local embeddedness of global (or 'globalised') features and phenomena. For example, the fact that English (a 'global' language) is used to advertise goods for a local market in which hardly anybody has English as a first language (therefore implying a 'local' use) is an instance of *glocal* English.
18. The small and scattered Romanche-speaking regions in eastern Switzerland were excluded from the survey, because considerable oversampling (carrying a high cost and significant organisational problems) would have been necessary to generate enough data on the Romanche-speaking population for meaningful statistical analysis. Moreover, the very particular sociolinguistic situation of the Romanche would have required specific analytical treatment (Furrer, 1992).
19. Note that it is important here to use 'earnings' or, equivalently, 'labour income', in order to make it clear that other sources of income (such as interest from property) are not included in these calculations, as is usually the case in the estimations of earnings equations.
20. In Table 2, the estimated coefficients are multiplied by the average value of the corresponding variables in the case of education, experience and its square, and added to the estimated value of the constant.
21. Regression results with reported earnings yield non-significant coefficients for women's experience; this would have hampered the calculation of the indicators presented in Table 3.
22. Earnings are undoubtedly influenced by additional variables, such as respondents' economic sector of employment, or their parents' socio-economic background. What matters here, however, is whether such additional variables are likely to be correlated with respondents' English-language skills. Various tests performed using additional variables from the data base indicate that the labour market value of English may, depending on specification, drop by three to four percentage points, but remain high and statistically significant at all times.
23. A full exploration of sector-dependency would ideally require a data base much larger than the 2,400 observations available from the survey data. However, by dividing up the sample between persons who work for an export-oriented employer and those who do not, it is possible to show that the returns to English are consistently higher among the former. Even when standardising the sample for education, experience and its square, nine national language skill dummy variables (in order to control for respondents' skills in other languages), and eight occupational dummy variables (in order to control for the economic sector in which they are active) fluency in English still commands a premium in excess of 30%. Restricting the sample to respondents in export- or import-oriented employment results in a much steeper grade of the relationship between English language skills and labour income, suggesting that these skills are more highly rewarded where they are more likely to be used. The higher value of adjusted R²s (indicating the statistical quality of the fit) suggests that the sample split enhances the explanatory power of the equation.
24. On the status of 'prediction' in economic modelling and empirical testing, see e.g. Leibenstein (1976).
25. It should be noted that in terms of broad economic sectors (primary, secondary and tertiary, referring to agriculture and mining, industry, and services respectively), the Swiss economic structure is not markedly different from that of other developed countries).

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(Received 20 April 2000.)