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A Concise Bibliography of Language Economics

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A Concise Bibliography of Language Economics

Michele Gazzola
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A Concise Bibliography of Language Economics

Abstract

The following pages are devoted to a bibliography which, though not exhaustive, provides an extensive set of references to several categories of literature in language economics. It consolidates the respective literature lists used by the authors over the years in their research and teaching. The bibliography is structured according to a “mental map” developed by Grin. The four highest levels of this structure are reproduced at the beginning of the essay.

Keywords: language economics, language policy, bibliography.

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Structure of the “mental map”

	Page
A Surveys and meta-level analyses	6
A.1 General/integrative	7
A.2 Descriptive/sectorial	8
B Economics of language corpus	9
B.1 Evolution of language corpus	9
B.2 Structure of language corpus	10
C Economics of language status	10
C.1 Influence of linguistic variables on economic variables ($\{L\} \rightarrow \{E\}$)	11
C.1.1 LPP-unregulated determination of economic variables	11
C.1.1.1 Value of diversity	11
C.1.1.2 “Macro-level-oriented” analyses	12
C.1.1.3 Sector- and industry-level analyses	15
C.1.1.4 Language, earnings, and the labor market	16
C.1.1.5 Language skills and production	27
C.1.2 Economic impact of LPP	28
C.1.2.1 Language and nationalism	29
C.1.2.2 Social rates of return to national and foreign language teaching	29
C.1.2.3 Costs, benefits, and distributive effects of LPP	30
C.1.2.4 Optimization of language regimes	33
C.1.2.5 Regional and minority language promotion and regional eco- nomics	35
C.2 Influence of economic variables on linguistic variables ($\{E\} \rightarrow \{L\}$), including economically based explanations of language processes	36
C.2.1 Effectiveness of LPP	36
C.2.1.1 Regional and minority language promotion	36
C.2.1.2 Language learning	37
C.2.1.3 Effectiveness of language regimes	38
C.2.2 LPP-unregulated determination of linguistic variables	38
C.2.2.1 Language learning	38
C.2.2.2 Language use	39
C.2.2.3 Language dynamics	42
C.2.2.4 Economics of translation	44

Introduction

Preparing a bibliography on “Language Economics” or “The Economics of Language” confronts scholars with several challenges, conceptual or other.

As a label describing a field of study, whatever combines “economics” and “language” is decidedly marginal. By contrast, if we consider sociolinguistics, together with work on language issues produced in specialties from other disciplines in the social sciences (in particular sociology and political science), we face a body of literature that easily runs into thousands of entries. Among them, quite a few mention the role of economic factors, even if few do so in any detail. This raises the question of what to include and what to leave out when putting together a bibliography of language economics – that is, where to draw the line. One aspect to be borne in mind when weighing this question is that in this *a priori* “non-economic” literature, many contributions provide important inspirations for the economic analysis of language. No economist seriously interested in language and its intersection (or interface) with economics can deny a conceptual debt to authors such as Ferguson, Haugen, Fishman, Jernudd, or Labov, to quote but a few classic names. Also, there are no general references to language and linguistics, although, of course, such general knowledge is extremely important to anyone seriously interested in language economics.

We cannot embark on a survey of the sociolinguistic sources we consider relevant for the economist engaging in language economics work (this would constitute a different project altogether), but we nonetheless recommend every economist interested in language to get acquainted with one of the many handbooks in sociolinguistics or language policy, such as Hellinger and Pauwels (2007), Fishman and García (2010), Spolsky (2012), or Bayley, Cameron, and Lucas (2013). Let us, however, emphasize that these few references are actually restrictive. Analytic boundaries between the disciplines are porous, meaning that there is an abundance of interesting sociolinguistic work that raises genuinely important economic questions, but that could not be included here lest the bibliography lose its focus on language *economics*. Nevertheless, some strands of research in the language disciplines deserve to be singled out in this introductions.

We stress that the following gives a very brief overview of areas of research that are *not* included in the main bibliography. What *is* included and what in our opinion is the core of language economics, is not commented upon here, but in the bibliography itself.

First, a number of linguists (who may be said to represent structural linguistics, as opposed to sociolinguistics) describe the structure of language as a system, thereby arguing economically, but often without realizing it. For example, an economically inspired analysis of language structure goes back at least to Martinet (1955); essentially economic analyses of language change and structure can also be found in Chen (1972) or Esau (1973). They were apparently unaware of the economic relevance of their analysis, and neither these authors nor their many successors are included in this bibliography, although economists could learn a lot from them.

Second, some sociolinguists deploy certain types of argument without recognizing how deeply economic such lines of argument ultimately are. As examples of this, we mention Harshav (1993) and Cooper (1989). Harshav (1993) shows most beautifully that the concept of a (relative) “critical mass” (resulting from the attempted, and partially successful, expulsion of the Jews from Palestine by the British) accounts for the victory of *Ivrit* in then Palestine. Similarly, the analysis of language policy put forward by Cooper (1989) could easily be reinterpreted in terms of economics. However, since these and many other authors are not aware of their eco-

nomically relevant methods, they are not included in the list below.

Third, a recurring theme in language economics is that of “linguistic justice”. It may be viewed as addressing fairly straightforward cases of distributive analysis, but most of the work in this area originates in political theory, and some in sociolinguistics (see, for instance, Hees (2013), Kontra, Phillipson, Skutnabb-Kangas, and Várady (1999), May (2012), Van Parijs (2011), Patten (2009), Skutnabb-Kangas and Phillipson (1995), Skutnabb-Kangas, Phillipson, Mohanty, and Panda (2009), Peled, Ives, and Ricento (2014) and other articles in the same issue. The same applies to May’s chapter in this book, May (2015)). Because their main inspiration is not economic – despite their direct relevance to an economic perspective on language policy – these and similar contributions are not included in our list; this also goes for more philosophically oriented contributions that examine the *nature* of linguistic justice (for instance De Schutter and Ypi (2012)).

Fourth, the sociolinguistic literature on language policy also displays fundamental connections with economics (see, for instance, Fishman (1991), Spolsky (2004), or Spolsky (2009)), since language policy in general, being concerned with the choice of a public policy, is undoubtedly relevant to the economic analysis of language. As explained in the introduction to this book, in this category we also find the contributions Romaine (2015), Sonntag (2015), and Zentz (2015) in this book. Here again, in order to preserve the “language economics” focus of our bibliography, we have abstained from including such contributions in it.

Summing up, we have tried to come up with a very limited list, reducing it – in the main, though not rigidly so – to economics (some might say “hard-core economics”, although we do cast the net a little wider than that).

In spite of this relatively restrictive interpretation of “economics of language”, this bibliography is fairly long. We have tried to assign the different contributions to the heading in the mental map that to us appears most relevant. Many papers, however, straddle the distinctions made for establishing the mental map. The implication is that while some contributions fit very comfortably in one and only one category of the mental map, others could arguably be assigned to a category different than the one we have opted for. In such cases, our criterion has been the main thrust of the paper concerned. This is not always fully satisfactory, but it serves to ensure that no entry appears more than once. The fact of the matter remains that the various language economics questions identified in the mental map are closely interconnected. Therefore, the reader searching for contributions on a given topic is advised to look up related themes as well, and to refer back to the mental map in the preceding chapter.

The list has greatly benefited from suggestions made by the contributors to this book as well as one of the anonymous referees, and we would like to express our deep gratitude to all those who have helped us improve the final result.

Let us in closing note that the number of contributions by Gazzola, Grin, and Wickström might appear somewhat exaggerated. This is, of course, a reflection of the simple fact that we know ourselves best. However, we have included these contributions, because just as all the other contributions by other authors listed in this chapter, we consider them to be, if not important, at least relevant. We do apologize to all other authors, however, if some of their interesting publications have, despite our best efforts, escaped our notice and are missing from the list. We can only blame this on the limitations of our knowledge. We have tried to include every relevant piece of work known to us. We appeal to all scholars of language economics who find (some of) their contributions missing to help us correct any errors and omissions; and

we shall be most grateful for any suggestions of additional key references to this bibliography, which attempts to capture the essence and spirit of the fascinating field of language economics.

References to the introduction

- Bayley, R., R. Cameron, and C. Lucas, editors (2013). *The Oxford handbook of sociolinguistics*. Oxford: Oxford University Press.
- Chen, M. (1972). “The time dimension: Contribution toward a theory of sound change”. In: *Foundations of Language* **8**: 457–498.
- Cooper, R. L. (1989). *Language planning and social change*. Cambridge: Cambridge University Press.
- De Schutter, H. and L. Ypi (2012). “Language and luck”. In: *Politics, Philosophy & Economics* **11**: 357–381.
- Esau, H. (1973). “Form and function of German adjective endings”. In: *Folia Linguistica* **6**: 136–145.
- Fishman, J. A. (1991). *Reversing language shift: Theoretical and empirical foundations of assistance to threatened languages*. Clevedon: Multilingual Matters Ltd.
- Fishman, J. A. and O. García, editors (2010). *Handbook of language and ethnic identity: Disciplinary and regional perspectives*. 2nd edition. Volume 1. Oxford: Oxford University Press. (Originally published as: *Handbook of language and ethnic identity*. Oxford: Oxford University Press, 1999.)
- Harshav, B. (1993). *Language in time of revolution*. Berkeley: University of California Press.
- Hees, M. van (2013). “Rights, goals, and capabilities”. In: *Politics, Philosophy & Economics* **12**: 247–259.
- Hellinger, M. and A. Pauwels, editors (2007). *Handbook of language and communication: Diversity and change*. Berlin: Mouton De Gruyter.
- Kontra, M., R. Phillipson, T. Skutnabb-Kangas, and T. Várady, editors (1999). *Language: a right and a resource: Approaching linguistic human rights*. Budapest: Central European University Press.
- Martinet, A. (1955). *Économie des changements phonétiques*. Bern: A. Francke AG Verlag.
- May, S. (2012). *Language and minority rights: Ethnicity, nationalism and the politics of language*. 2nd edition. New York: Routledge. (Originally published as: *Language and minority rights: Ethnicity, nationalism and the politics of language*. Harlow: Longman, 2001.)
- (2015). “Globalization, language(s), and mobility”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 12: forthcoming.

- Patten, A. (2009). “Survey article: The justification of minority language rights”. In: *Journal of Political Philosophy* **17**: 102–128.
- Peled, Y., P. Ives, and T. Ricento (2014). “Introduction to the thematic issue: Language policy and political theory”. In: *Language Policy (Thematic issue: Language policy and political theory)* **13**. Edited by T. Ricento, Y. Peled, and P. Ives: 295–300.
- Romaine, S. (2015). “Language and sustainable development: Integrating the economics of language policy with poverty reduction and biodiversity conservation”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 13: forthcoming.
- Skutnabb-Kangas, T. and R. Phillipson, editors (1995). *Linguistic human rights: Overcoming linguistic discrimination*. Berlin: Mouton de Gruyter.
- Skutnabb-Kangas, T., R. Phillipson, A. K. Mohanty, and M. Panda, editors (2009). *Social justice through multilingual education*. Linguistic diversity and language rights. Bristol: Multilingual Matters.
- Sonntag, S. K. (2015). “English on the rise: Access and resources in internationalization”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 15: forthcoming.
- Spolsky, B. (2004). *Language policy*. Key topics in sociolinguistics. Cambridge: Cambridge University Press.
- (2009). *Language management*. Cambridge: Cambridge University Press.
- editor (2012). *The Cambridge handbook of language policy*. Cambridge: Cambridge University Press.
- Van Parijs, P. (2011). *Linguistic justice for Europe and for the world*. Oxford political theory. Oxford: Oxford University Press.
- Zentz, L. (2015). “English on the rise: Access and resources in internationalization”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 14: forthcoming.

The bibliography

A Surveys and meta-level analyses

Section A is devoted to survey of language economics, whether general and integrative (sub-section A.1) or more descriptive and sectorial (sub-section A.2).

A.1 General/integrative

The contributions listed here offer panoramas of language economics as a whole, intended to encompass all the subdivisions of language economics research.

- Bruthiaux, P. (2003). “21st century trends in language and economics”. In: *Current Issues in Language Planning* **4**: 84–90.
- Ginsburgh, V. A. and S. Weber, editors (2016, forthcoming). *The Palgrave handbook of economics and language*. Basingstoke: Palgrave-Mac Millan.
- Grin, F. (1994). “The economics of language: Match or mismatch”. In: *International Political Science Review* **15**: 25–42.
- (1996a). “Economic approaches to language and language planning: An introduction”. In: *International Journal of the Sociology of Language* **121**: 1–16.
- (1996b). “The economics of language: Survey, assessment, and prospects”. In: *International Journal of the Sociology of Language* **121**: 17–44.
- (2003a). “Diversity as a paradigm, analytical device, and policy goal”. In: *Language rights and political theory*. Edited by W. Kymlicka and A. Patten. Oxford: Oxford University Press: 169–188.
- (2003b). “Language planning and economics”. In: *Current Issues in Language Planning* **4**: 1–66.
- (2015). “50 years of economics in language policy: Critical assessment and priorities”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 1: forthcoming.
- Grin, F. and F. Vaillancourt (1997). “The economics of multilingualism: Overview of the literature and analytical framework”. In: *Multilingualism and multilingual communities (Annual Review of Applied Linguistics, XVII)*. Edited by W. Grabe. Cambridge: Cambridge University Press: 43–65.
- Lamberton, D. M., editor (2002). *The economics of language*. Cheltenham: Edward Elgar.
- Li, W. [李维森(韦森)] (2005). 从语言的经济学到经济学的语言 (*From economics of language to language of economics*). Research report. Shanghai: 复旦大学 (Fudan University).
- Lipman, B. L. (2003). “Language and economics”. In: *Cognitive processes and rationality in economics*. Edited by N. Dimitri, M. Basili, and I. Gilboa. London: Routledge.
- Vaillancourt, F., editor (1985a). *Économie et langue: Recueil de texte*. Québec: Éditeur officiel du Québec.
- (1985b). “Les écrits en économie de la langue: brève revue et introduction au recueil”. In: *Economie et langue*. Edited by F. Vaillancourt. Québec: Conseil de la langue française: 11–25.

- Wickström, B.-A. (2009). “Ökonomie und Sprache”. In: *Interlinguistische Informationen* **Beiheft 16**: 137–156.
- Zhang, W. [张卫国] (2008). “作为人力资本、公共产品和制度的语言:语言经济学的一个基本分析框架 (Language as human capital, public good and institution: A basic analytical framework of language and economics)”. In: *经济研究 (Economic Research Journal)* **43**: 144–154.
- Zhang, W. and G. Grenier (2013). “How can language be linked to economics?” In: *Language Problems & Language Planning* **37**: 203–226.

A.2 Descriptive/sectorial

This category lists contributions offering a broad vista of language economics, without, however, providing a general review of the speciality; they usually address a somewhat more specific topic, such as language and earnings, but they situate this topic within language economics as a whole.

- Alarcón, A. (2011). “Economia de la llengua”. In: *Treballs de Sociolingüística Catalana* **21**: 19–27.
- Chiswick, B. R. and P. W. Miller, editors (2007). *The economics of language: International analyses*. New York: Routledge.
- Gazzola, M. (2010). “L’approccio economico alla pianificazione linguistica. Contributi recenti e riflessioni generali”. In: *Lingua Italiana d’Oggi (Lid’O)* **6**: 103–118.
- Grin, F. (2007). “Economics and language policy”. In: *Handbook of language and communication: Diversity and change*. Edited by M. Hellinger and A. Pauwels. Handbook of applied linguistics 9. Berlin: Mouton de Gruyter: 271–297.
- (2008). “The economics of language education”. In: *Encyclopaedia of language and education*. Edited by S. May and N. Hornberger. New York: Springer: 83–93.
- (2009). “Promoting language through the economy: competing paradigms”. In: *Language and economic development*. Edited by J. M. Kirk and D. P. Ó Baoill. Belfast: Queen’s University Press: 1–12.
- (2012). “Economic analysis of language policy and planning”. In: *The encyclopedia of applied linguistics*. Edited by C. A. Chapelle. Online: Wiley-Blackwell.
- Harris, R. G. (1998). “The economics of language in a virtually integrated global economy”. In: *Economic approaches to language and bilingualism*. Edited by A. Breton. Ottawa: Canadian Heritage: 1–34.
- Jiménez, J. C. (2006). *La economía de la lengua: una visión de conjunto*. Research report DT 01/06. Madrid: Instituto Complutense de Estudios Internacionales.

Mora, M. T. (2003). *An overview of the economics of language in the U.S. labor market: Presentation notes*. Research report. University of Colorado at Denver: American Economic Association Summer Minority Program.

B Economics of language corpus

Section B brings together contributions that focus on the analysis of language as such, as opposed to the issues that arise as a result of the joint presence of two or more languages. Therefore, it can address, for example, the evolution (sub-section B.1) of a language or its morpho-syntactical structure (sub-section B.2).

B.1 Evolution of language corpus

Publications in subsection B.1 use economic reasoning and formal modeling to explain changes over time in the corpus of a language. This sub-section is distinct from that on language dynamics (C.2.2.3) that is devoted to papers on the evolution of language status.

Demichelis, S. and J. W. Weibull (2008). “Language, meaning, and games: A model of communication, coordination, and evolution”. In: *American Economic Review* **98**: 1292–1311.

Jaeger, G. (2008). “Applications of game theory in linguistics”. In: *Language and linguistics compass* **2**: 406–421.

Levy, D. M. (1997). “Adam Smith’s rational choice linguistics”. In: *Economic Inquiry* **35**: 672–678.

Marschak, J. (1965). “The economics of language”. In: *Behavioral Science* **10**: 135–140.

Moldoveanu, M. (2002). “Language, games and language games”. In: *Journal of Socio-Economics* **31**: 233–251.

Nettle, D. (1999). “Using social impact theory to simulate language change”. In: *Lingua* **108**: 95–117.

Rubinstein, A. (2000). *Economics and language: Five essays*. Cambridge: Cambridge University Press.

Snow, M. S. (1998). *Economic aspects of language: Survey and empirical example*. Research report. Stockholm: 12th Biennial conference of the International Telecommunications Society.

Wickström, B.-A. (2011). “Die Sprache als erneuerbare Ressource: Die Kapazität verschiedener Sprachen, fremde Elemente zu nostrifizieren”. In: *Florilegium interlinguisticum: Festschrift für Detlev Blanke zum 70. Geburtstag*. Edited by C. Brosch and S. Fiedler. Frankfurt am Main: Peter Lang: 193–208.

— (2012). “Language as a renewable resource: Import, dissipation, and absorption of innovations”. In: *International Journal of Computational Linguistics* **3**: 32–52.

B.2 Structure of language corpus

Publications in subsection B.2 use economic reasoning and formal modeling to explain the structural features of language in general – as opposed to specific languages (in the plural).

Alexejew, P. M., W. M. Kalinin, and R. G. Piotrowski [П. М. Алексеев, В. М. Калинин, and Р. Г. Пиотровский], editors (1973). *Sprachstatistik*. Translated from the Russian by L. Hoffman et al. München: W. Fink. (Originally published as: *Статистика речи*. Leningrad: Издательство "Наука", 1968.)

Blume, A. (2005). "A learning-efficiency explanation of structure in language". In: *Theory and Decision* **57**: 265–285.

Chiswick, B. R. and P. W. Miller (2005). "Linguistic distance: A quantitative measure of the distance between English and other languages". In: *Journal of Multilingual and Multicultural Development* **26**: 1–11. (Reprint in: *The economics of language: International analyses*. Edited by B. R. Chiswick and P. W. Miller. New York: Routledge, 2007.)

Ginsburgh, V. A. and S. Weber (2015 (?)). "Linguistic distances and ethno-linguistic indices". In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 6: forthcoming.

Lo Jacomo, F. (1989). "Optimization in language planning". In: *Interlinguistics: Aspects of the science of planned languages*. Edited by K. Schubert. Berlin: Mouton de Gruyter: 121–128.

Schweizer, H. (1979). *Sprache und Systemtheorie: Zur modelltheoretischen Anwendung der kybernetischen Systemtheorie in der Linguistik*. Tübingen: Gunter Narr.

Spolaore, E. and R. Wacziarg (2015 (?)). "Ancestry, language and culture". In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 7.

C Economics of language status

Section C is devoted to contributions on issues that arise because many different languages are present. It raises the question of their position with respect to each other, which can be subsumed under the notion of "status".¹ This makes up the lion's share of language economics.

Breton, A., editor (1998). *Economic approaches to language and bilingualism*. New Canadian perspectives. Ottawa: Canadian Heritage.

— editor (1999). *Exploring the economics of language*. New Canadian perspectives. Ottawa: Canadian Heritage.

¹Note that in the early literature, the word "status" mainly referred to the legal position of a language (e.g., official status or not, etc.). In more recent work, as here, "status" is used in a broader sense.

C.1 Influence of linguistic variables on economic variables ($\{L\} \rightarrow \{E\}$)

In this broad subsection, we consider all the contributions whose main focus is on explaining the values taken by economic variables given the influence, among others, of linguistic variables.

C.1.1 LPP-unregulated determination of economic variables

Papers in this category consider the influence of linguistic variables on economic ones in the absence of explicit language policy intervention; they may be seen as focusing on the effect of market forces in channeling this influence.

Adsera, A. and M. Pytliková (2015 (?)). “Language and migrations”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 12: forthcoming.

— (2016 (?)). “The role of language in shaping international migration”. In: *Economic Journal* **126** (?): forthcoming.

Breton, A. (1964). “The economics of nationalism”. In: *The Journal of Political Economy* **72**: 376–386.

Grin, F. (2015). “The economics of English in Europe”. In: *Language policy and political economy: English in a global context*. Edited by T. Ricento. Oxford: Oxford University Press: 119–144.

C.1.1.1 Value of diversity

These contributions examine the effects of linguistic diversity as such. This includes the value of diversity in general terms, the effects of language spread, as well as the impact of language on creativity and innovation.

Caminal, R. (2015). “The economic value of reciprocal bilingualism”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 5: forthcoming.

Cuesta, B. de la and L. Wantchekon (2015 (?)). “Is language destiny? The origins and consequences of ethnolinguistic diversity in sub-Saharan Africa”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 18: forthcoming.

Desmet, K., I. Ortuño-Ortín, and R. Wacziarg (2015 (?)). “Linguistic cleavages and economic development”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 15: forthcoming.

Desmet, K., I. Ortuño-Ortín, and S. Weber (2009). “Linguistic diversity and redistribution”. In: *Journal of European Economic Association* **7**: 1291–1318.

Ginsburgh, V. A. and S. Weber (2015). “Linguistic diversity, standardization and disenfranchisement: Measurement and consequences”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 3: forthcoming.

- Grin, F. (1994). “L’identification des bénéfices de l’aménagement linguistique: la langue comme actif naturel”. In: *Sociolinguistique et aménagement des langues*. Edited by C. Phlipponneau and B. A. Moncton: Centre de Recherche en Linguistique Appliquée, Université de Moncton: 67–101.
- Jones, E. (2000). “The case of a shared world language”. In: *Cultural factors in economic growth*. Edited by M. Casson and A. Godley. Berlin: Springer: 210–235.
- Lo Bianco, J. (1988). “Some economic implications of taking languages seriously”. In: *Immigration, multiculturalism and economic development*. Edited by R. J. Holton. Bedford Park, S. Australia: Centre for Multicultural Studies, University of South Australia: 83–95.
- Mitchell, R. and S. Nicholas (2006). “Knowledge creation in groups: The value of cognitive diversity, transactive memory and open-mindedness norms”. In: *The Electronic Journal of Knowledge Management* **4**: 67–74.
- Ortega, J. and T. P. Tangerås (2008). “Unilingual versus bilingual education: A political economy analysis”. In: *Journal of the European Economic Association* **6**: 1078–1108.
- Ottaviano, G. I. and G. Peri (2005). “Cities and cultures”. In: *Journal of Urban Economics* **58**: 304–337.
- Wang, C. and B. Steiner (2015). “Can ethno-linguistic diversity explain cross-country differences in social capital? A global perspective”. In: *Economic Record* **91**: forthcoming.
- Weizman, M. (1992). “On diversity”. In: *Quarterly Journal of Economics* **107**: 363–405.

C.1.1.2 “Macro-level-oriented” analyses

In this category, we list contributions that address the effects of linguistics variables on an aspect or another of economic activity at a larger scale, which is why we refer not to macroeconomics proper, but to “macro-level-oriented” work. This includes the effects of linguistic attributes on investment behavior, GDP, trade patterns, and social capital. We include here a specific strand of research that explores, through the notion of “linguistic intensity” the presence of language as a factor in input-output matrices (but see also the related category C.1.1.5 on “Language skills and production”).

- Alesina, A. and E. La Ferrara (2005). “Ethnic diversity and economic performance”. In: *Journal of Economic Literature* **43**: 762–800.
- Aparicio Fenoll, A. and Z. Kuehn (2015). “Does foreign language proficiency foster migration of young individuals within the European Union?” In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 10: forthcoming.
- Arcand, J.-L. (1996). “Development economics and language: The earnest search for a mirage”. In: *International Journal of the Sociology of Language* **121**: 119–157.

- Arcand, J.-L. and F. Grin (2013). “Language in economic development: Is English special and is linguistic fragmentation bad?” In: *English and development. Policy, pedagogy and globalization*. Edited by E. J. Erling and P. Seargeant. Bristol: Multilingual Matters: 243–266.
- Arcand, J.-L., P. Guillaumont, and S. Guillaumont-Jeanneney (2000). “How to make a tragedy: On the alleged effect of ethnicity on growth”. In: *Journal of International Development* **12**: 925–938.
- Ashraf, Q. and O. Galor (2013). “Genetic diversity and the origins of cultural fragmentation”. In: *American Economic Review* **103**: 528–533.
- Breton, A. (1998). “The economic analysis of language”. In: *Economic approaches to language and bilingualism*. Edited by A. Breton. Ottawa: Canadian Heritage: 1–34.
- Buzasi, K. (2015a). “Languages and national identity in Sub-Saharan Africa: A multilevel approach”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 7: forthcoming.
- (2015b). “Languages, communication potential and generalized trust in Sub-Saharan Africa: Evidence based on the Afrobarometer Survey”. In: *Social Science Research* **49**: 141–155.
- Carrère, C. and M. Masood (2014). *Le poids économique de la langue française dans le monde*. Clermont-Ferrand: Fondation pour les études et recherches sur le développement international (FERDI).
- Chong, A., J. Guillen, and V. Rios (2010). “Language nuances and socioeconomic outcomes”. In: *American Journal of Economics and Sociology* **69**: 693–716.
- Debaere, P. M., H. Lee, and J. Lee (2013). “Language, ethnicity and intrafirm trade”. In: *Journal of Development Economics* **103**: 244–253.
- Dustmann, C. and A. Van Soest (2004). “An analysis of speaking fluency of immigrants using ordered response models with classification errors”. In: *Journal of Business & Economic Statistics* **22**: 312–321.
- Easterly, W. and R. Levine (1997). “Africa’s growth tragedy: Policies and ethnic divisions”. In: *The Quarterly Journal of Economics* **112**: 1203–1250.
- Egger, P. H. and A. Lassmann (2012). “The language effect in international trade: A meta-analysis”. In: *Economics Letters* **116**: 221–224.
- (2015a). “Cultural integration and export variety overlap across countries”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 11: forthcoming.
- (2015b). “The causal impact of common native language on international trade: Evidence from a spatial regression discontinuity design”. In: *Journal of applied econometrics* **30**: 699–745.

- Egger, P. H. and F. Toubal (2015 (?)). “Common spoken language and international trade”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 9: forthcoming.
- Esperança, J. P. (2008). *An eclectic approach to language valuation: The global Influence of the Portuguese language*. Lisboa: Instituto Camões.
- Falck, O., S. Heblich, A. Lameli, and J. Südekum (2012). “Dialects, cultural identity, and economic exchange”. In: *Journal of Urban Economics* **72**: 225–239.
- Fearon, J. D. (2003). “Ethnic and cultural diversity by country”. In: *Journal of Economic Growth* **8**: 195–223.
- Fidrmuc, J. and J. Fidrmuc (2014). *Foreign languages and trade*. Research report 4670. München: CESifo.
- Foreman-Peck, J. (2007). “Costing Babel: The contribution of language skills to exporting and productivity”. In: *Quarterly Economic Bulletin* **28**: 20–28.
- García Delgado, J. L., J. A. Alonso, and J. C. Jiménez (2007). *Economía del español. Una introducción*. Madrid: Ariel.
- Grinblatt, M. and M. Keloharju (2001). “How distance, language, and culture influence stockholdings and trades”. In: *The Journal of Finance* **56**: 1053–1073.
- Guo, R. (2007). “Linguistic and religious influences on foreign trade: Evidence from East Asia”. In: *Asian Economic Journal* **21**: 101–121.
- Helliwell, J. F. (1999). “Language and trade”. In: *Exploring the economics of language*. Edited by A. Breton. Ottawa: Canadian Heritage: 5–30.
- Hughes, E. C. and M. L. McDonald (1941). “French and English in the economic structures of Montreal”. In: *Canadian Journal of Economics and Political Science / Revue canadienne d'économie et de science politique* **7**: 493–505.
- Hutchinson, W. K. (2002). “Does ease of communication increase trade? Commonality of language and bilateral trade”. In: *Scottish Journal of Political Economy* **49**: 544–556.
- (2005). “‘Linguistic distance’ as a determinant of bilateral trade”. In: *Southern Economic Journal* **72**: 1–15.
- Isphording, I. E. and S. Otten (2013). “The costs of Babylon: Linguistic distance in applied economics”. In: *Review of International Economics* **21**: 354–369.
- Jain, T. (2011). *Common tongue: The impact of language on economic performance*. Research report 34423. München: Munich Personal Research Papers in Economics Archive (MPRA).
- Kim, M., A. H. Li, K.-L. Tuxhorn, D. S. Brown, and D. Leblang (2015). “Lingua mercatoria: Language and foreign direct investment”. In: *International Studies Quarterly* **59**: 330–343.

- Ku, H. and A. Zussman (2010). “Lingua franca: The role of English in international trade”. In: *Journal of Economic Behavior & Organization* **75**: 250–260.
- Lameli, A., V. Nitsch, J. Südekum, and N. Wolf (2015). “Same same but different: Dialects and trade”. In: *German Economic Review* **16**: 290–306.
- Lee, C. G. (2012). “English language and economic growth: Cross-country empirical evidence”. In: *Journal of Economic and Social Studies* **2**: 5–20.
- Lien, D. and C. Y. Co (2013). “The effect of Confucius Institutes on US exports to China: A state level analysis”. In: *International Review of Economics and Finance* **27**: 566–571.
- Lien, D., C. H. Oh, and W. T. Selmier (2012). “Confucius Institute effects on China’s trade and FDI: Isn’t it delightful when folks afar study *Hanyu*?” In: *International Review of Economics and Finance* **21**: 147–155.
- Martín Municio, Á., editor (2003). *El valor económico de la lengua española*. Madrid: Espasa.
- Méltiz, J. (2008). “Language and foreign trade”. In: *European Economic Review* **52**: 667–699.
- (2012). *A framework for analyzing language and welfare*. Research report 2012-89. Edinburgh: Scottish institute for research in economics.
- (2015 (?)). “English as a global language”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 20: forthcoming.
- Méltiz, J. and F. Toubal (2014). “Native language, spoken language, translation and trade”. In: *Journal of International Economics* **93**: 351–363.
- Nettle, D. (2000). “Linguistic fragmentation and the wealth of nations: The Fishman-Pool hypothesis reexamined”. In: *Economic Development and Cultural Change* **48**: 335–348.
- Noguer, M. and M. Siscart (2003). *Language as a barrier to international trade? An empirical investigation*. Research report. New York: Columbia University.
- Stanley, J., D. Ingram, and G. Chittick (1990). *The relationship between international trade and linguistic competence*. Canberra: Department of Employment, Education and Training.
- Sturm, J.-E. and J. de Haan (2015). “Income inequality, capitalism and ethno-linguistic fractionalization”. In: *American Economic Review: Papers & Proceedings* **105**: 593–597.

C.1.1.3 Sector- and industry-level analyses

In this category, we place a relatively heterogeneous collection of contributions that tend towards meso-level issues and would not fit comfortably into any of the other categories of sub-section C.1.1. It includes topics such as “ethnic businesses”, the language needs of businesses, the role of language skills in employability, as well as the fledgling literature on the “language sector” (such as publishing).

- Brazeau, E. J. (1958). "Language differences and occupational experience". In: *Canadian Journal of Economics and Political Science / Revue canadienne d'économie et de science politique* **24**: 532–540.
- Clark, K. and S. J. Drinkwater (2000). "Pushed out or pulled in? Self-employment among ethnic minorities in England and Wales". In: *Labor Economics* **7**: 603–628.
- Connell, T. J. (2002). *Languages and employability. A question of careers*. Research report. London: City University.
- Drinkwater, S. J. and N. C. O'Leary (1997). "Unemployment in Wales: Does language matter?" In: *Regional Studies* **31**: 583–591.
- Esser, H. (2006). *Migration, Sprache und Integration*. Berlin: Arbeitsstelle interkulturelle Konflikte und gesellschaftliche Integration, Wissenschaftszentrum Berlin für Sozialforschung.
- Fixman, C. S. (1990). "The foreign language needs of U.S.-based corporations". In: *Annals of the American Academy of Political and Social Science* **511**: 25–46.
- Koslow, S., P. N. Shamdasani, and E. E. Touchstone (1994). "Exploring language effects in ethnic advertising: A sociolinguistic perspective". In: *The Journal of Consumer Research* **20**: 575–585.
- Krishna, A. and R. Ahluwalia (2008). "Language choice in advertising to bilinguals: Asymmetric effects for multinational versus local firms". In: *Journal of Consumer Research* **35**: 692–705.
- Light, I. and S. Gold (2000). *Ethnic economics*. San Diego: Academic Press.
- Marschan-Piekkari, R., D. Welch, and L. Welch (1999). "In the shadow: The impact of language on structure, power and communication in the multinational". In: *International Business Review* **8**: 421–440.
- Raynauld, A. and F. Vaillancourt (1984). *L'appartenance des entreprises : le cas du Québec en 1978*. Québec: Conseil de la langue française.
- Reeves, N. B. R. (1990). "The foreign language needs of U.K.-based corporations". In: *Annals of the American Academy of Political and Social Science* **511**: 60–73.
- Vaillancourt, F. and L. Vaillancourt (2005). *La propriété des employeurs au Québec en 2003 selon le groupe d'appartenance linguistique*. Québec: Conseil de la langue française.
- Ward, R. and R. Jenkins, editors (1984). *Ethnic communities in business: Strategies for economic survival*. Cambridge: Cambridge University Press.

C.1.1.4 Language, earnings, and the labor market

This category has particular importance in language economics, of which it probably constitutes the single most important one, if only by dint of the sheer number of contributions. It focuses on

the effect of agents' linguistic attributes: a person's mother tongue, usually his or her "L1", and a person's skills in other languages ("L2", "L3", etc.). Note, however, that several of the papers listed here are not strictly focused on the determination of earnings, but also address related questions such as language use as well as the indirect implications, on the labor market, of some language policy measures. For practical purposes the category has been divided into three parts, which do not exactly match the break-down proposed in the mental map of the preceding chapter: the general contributions are listed under the main heading and contributions mainly dealing with indigenous and migrant labor, respectively, are found in two subcategories.

- Alarcón, A., A. Di Paolo, J. Heyman, and M. C. Morales (2014a). "Returns to Spanish-English bilingualism in the new information economy: The health and criminal justice sectors in the Texas border and Dallas-Tarrant counties". In: *The bilingual advantage: Language, literacy, and the US labor market*. Edited by R. M. Callahan and P. C. Gándara. Bristol: Multilingual Matters: 140–161.
- (2014b). "The occupational location of Spanish-English bilinguals in the new information economy: The health and criminal justice sector in the US borderlands with Mexico". In: *The bilingual advantage: Language, literacy, and the US labor market*. Edited by R. M. Callahan and P. C. Gándara. Bristol: Multilingual Matters: 112–139.
- Bartz, K. and N. Fuchs-Schündeln (2012). "The role of borders, languages, and currencies as obstacles to labor market integration". In: *European Economic Review* **56**: 1148–1163.
- Blázquez, M. and S. Rendón (2014). "Over-education in multilingual economies: Evidence from Catalonia". In: *International Migration* **52**: 149–164.
- Chiswick, B. R. and P. W. Miller (2013). "The impact of surplus skills on earnings: Extending the over-education model to language proficiency". In: *Economics of Education Review* **36**: 263–275.
- Constant, A. F. and K. F. Zimmermann (2009). "Work and money: Payoffs by ethnic identity and gender". In: *Research in Labor Economics* **29**: 3–30.
- Constant, A. F., M. Kahanec, and K. F. Zimmermann (2012). "The Russian-Ukrainian earnings divide". In: *Economics of Transition* **20**: 1–35.
- Coomer, N. M. (2011). "Returns to bilingualism in the nursing labor market. Demand or ability?" In: *The Journal of Socio-Economics* **40**: 274–284.
- Dustmann, C. and A. Van Soest (2001). "Language fluency and earnings: Estimation with misclassified language indicators". In: *Review of Economics and Statistics* **83**: 663–674.
- Fry, R. and L. Lowell (2003). "The value of bilingualism in the U.S. labour market". In: *Industrial and Labor Relations Review* **57**: 128–140.
- González, L. (2005). "Nonparametric bounds on the returns to language skills". In: *Journal of Applied Econometrics* **20**: 771–795.

- Klein, C. (2004). *La valorisation des compétences linguistiques: importance du sexe et/ou du statut professionnel?* Research report. Dijon: 11èmes Journées d'études sur les données longitudinales.
- Lang, K. (1986). "A language theory of discrimination". In: *The Quarterly Journal of Economics* **101**: 363–382.
- Mavisakalyan, A. (2015). "Gender in language and gender in employment". In: *Oxford Development Studies* **43**: forthcoming.
- Pendakur, K. and R. Pendakur (2002). "Language as both human capital and ethnicity". In: *International Migration Review* **36**: 147–177.
- Pope, D. G. (2008). "Benefits of bilingualism: Evidence from Mormon missionaries". In: *Economics of Education Review* **27**: 234–242.
- Raynauld, A. and P. Marion (1972). "Une analyse économique de la disparité inter-ethnique des revenus". In: *Revue économique* **23**: 1–19.
- Saiz, A. and E. Zoido (2004). "Curriculum mandates and skills in adulthood: The case of foreign languages". In: *Economics Letters* **84**: 1–8.
- Stöhr, T. (2015). "The returns to occupational foreign language use: Evidence from Germany". In: *Labour Economics* **32**: 86–98.

C.1.1.4.1 Indigenous labor

- Albouy, D. (2008). "The wage gap between Francophones and Anglophones: A Canadian perspective, 1970–2000". In: *Canadian Journal of Economics / Revue canadienne d'économie* **41**: 1211–1238.
- Aldashev, A. and A. M. Danzer (2014). *Economic returns on speaking the right language(s)? Evidence from Kazakhstan's shift in state language and language of instruction*. Research report 5086. München: CESifo.
- Azam, M., A. Chin, and N. Prakash (2013). "The returns to English-language skills in India". In: *Economic Development and Cultural Change* **61**: 335–367.
- Baker, M. and G. Hamilton (2000). "Écart salarial entre francophones et anglophones à Montréal au 19^e siècle". In: *L'Actualité économique* **76**: 75–111.
- Béland, N., É. Forgues, and M. Beaudin (2008). "Évolution des écarts entre les salaires des hommes francophones et anglophones âgés de 25 à 54 ans selon le bilinguisme au Nouveau-Brunswick de 1970 à 2000". In: *Francophonies d'Amérique* **25**: 49–87.
- Bloom, D. E. and G. Grenier (1992a). "Earnings of the French minority in Canada and the Spanish minority in the United States". In: *Immigration, language and ethnicity: Canada and the United States*. Edited by B. Chiswick. Washington: The AEI Press: 373–409.

- Bloom, D. E. and G. Grenier (1992b). "Economic perspective on language: The relative value of bilingualism in Canada and the United States". In: *Language loyalties: A source book on the official english controversy*. Edited by J. Crawford. Chicago: University of Chicago Press: 445–451.
- Borooah, V., D. Dineen, and N. Lynch (2009). *Language and occupational status: Linguistic elitism in the Irish labour market*. Dublin: Economic and Social Research Institute.
- Boulet, J.-A. (1980). *Language and earnings in Montreal*. Ottawa: Economic Council of Canada.
- Carliner, G. (1976). "Returns to education for Blacks, Anglos and five Spanish groups". In: *Journal of Human Resources* **11**: 172–184.
- (1981). "Wage differences by language group and the market for language skills in Canada". In: *The Journal of Human Resources* **16**: 384–399.
- Casale, D. (2011). "English language proficiency and earnings in a developing country: The case of South Africa". In: *The Journal of Socio-Economics* **40**: 385–393.
- Cattaneo, A. and R. Winkelmann (2005). "Earnings differentials between German and French speakers in Switzerland". In: *Schweizerische Zeitschrift für Volkswirtschaft und Statistik* **141**: 191–212.
- Christofides, L. N. and R. Swidinsky (1998). "Bilingualism and earnings: A study based on 1971, 1981 and 1991 census data". In: *Economic approaches to language and bilingualism*. Edited by A. Breton. Ottawa: Canadian Heritage: 123–185.
- (2010). "The Economic returns to the knowledge and use of a second official language: English in Quebec and French in the rest-of-Canada". In: *Canadian Public Policy / Analyse de Politiques* **36**: 137–158.
- Cornwell, K. (2006). *Language and labour in South Africa. A new approach for a new South Africa*. Research report 5/06. Clayton: Department of Econometrics and Business Statistics, Monash University.
- Di Paolo, A. (2011). "Knowledge of catalan, public/private sector choice and earnings: Evidence from a double sample selection model". In: *Hacienda Pública Española / Revista de Economía Pública* **197**: 9–35.
- Di Paolo, A. and J. L. Raymond (2012). "Language knowledge and earnings in Catalonia". In: *Journal of Applied Economics* **15**: 89–118.
- Di Paolo, A. and A. Tansel (2015). "Returns to foreign language skills in a developing country: The case of Turkey". In: *Journal of Development Studies* **51**: 407–421.
- Fogel, W. (1966). "The effects of low educational attainment on incomes: A comparative study of selected ethnic groups". In: *Journal of Human Resources* **1**: 22–40.

- Ginsburgh, V. A. and J. Prieto-Rodriguez (2007). “La prima salarial de las lenguas extranjeras en el mercado de trabajo español”. In: *Cuadernos Economicos del ICE*: 129–146.
- (2011). “Returns to foreign languages of native workers in the EU”. In: *Industrial and Labor Relations Review* **64**: 599–618.
- Godoy, R., V. Reyes-García, C. Seyfried, T. Huanca, W. R. Leonard, T. McDade, S. Tanner, and V. Vadez (2007). “Language skills and earnings: Evidence from a pre-industrial economy in the Bolivian Amazon”. In: *Economics of Education Review* **26**: 349–360.
- Grenier, G. (1987). “Earnings by language group in Quebec in 1980 and emigration from Quebec between 1976 and 1981”. In: *Canadian Journal of Economics / Revue canadienne d’économie* **20**: 774–791.
- Grenier, G. and G. Lacroix (1986). “Les revenus et la langue: le cas de la capitale nationale”. In: *L’Actualité économique* **62**: 365–384.
- Grenier, G. and S. Nadeau (2015). “English as the lingua franca and the economic value of other languages: The case of the language of work in the Montreal labor market”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 8: forthcoming.
- Grenier, G. and F. Vaillancourt (1983). “An economic perspective on learning a second language”. In: *Journal of Multilingual and Multicultural Development* **4**: 471–483.
- Grin, F. (1997). *Langue et différentiels de statut socio-économique en Suisse*. Berne: Office fédéral de la statistique.
- (1999). *Compétences et récompenses. La valeur des langues en Suisse*. Fribourg: Éditions Universitaires de Fribourg.
- (2001). “English as an economic value: Facts and fallacies”. In: *World Englishes* **20**: 65–78.
- Grin, F. and C. Sfreddo (1998). “Language-based earnings differentials on the Swiss labour market: Is Italian a liability?” In: *International Journal of Manpower* **19**: 520–535.
- Henley, A. and R. E. Jones (2005). “Earnings and linguistic proficiency in a bilingual economy”. In: *The Manchester School* **73**: 300–320.
- Klein, C. (2007). “The valuation of plurilingual competences in an open European labour market”. In: *International Journal of Multilingualism* **4**: 262–281.
- Kroncke, C. and K. Smith (1999). “The wage effects of ethnicity in Estonia”. In: *Economics of Transition* **7**: 179–199.
- Lavoie, M. (1983). “Bilinguisme, langue dominante et réseaux d’information”. In: *L’actualité économique* **59**: 38–62.

- Lavoie, M. and M. Saint-Germain (1991). “Disparités linguistiques de revenu au Canada selon la langue parlée à la maison”. In: *L’Actualité économique* **67**: 356–380.
- Lecker, T. (1997). “Language usage and earnings among minorities”. In: *Journal of Socio-Economics* **26**: 525–532.
- Lemay, D. (2005). *La différenciation des revenus du travail en fonction des groupes linguistiques au Québec, 2001*. Master’s thesis. Montréal: Université de Montréal.
- Lepig, K.-O. and O. Toomet (2008). “Emerging ethnic wage gap: Estonia during political and economic transition”. In: *Journal of Comparative Economics* **36**: 599–619.
- Levinsohn, J. (2007). “Globalization and the returns to speaking English in South Africa”. In: *Globalization and poverty*. Edited by A. Harrison. Chicago: University of Chicago Press: 629–646.
- Lui, H.-K. (2007). “The returns to language ability in Hong Kong: Before and after the hand-over”. In: *Applied Economics Letters* **14**: 121–125.
- MacKinnon, M. (2000). “Unilingues ou bilingues? Les Montréalais sur le marché du travail en 1901”. In: *L’Actualité économique* **76**: 137–158.
- Mason, P. L. (2001). “Annual income and identity formation among persons of Mexican descent”. In: *The American Economic Review* **91**: 178–183.
- Nadeau, S. (2010). “Another look at the francophone wage gap in Canada: Public and private sectors, Quebec and outside Quebec”. In: *Canadian Public Policy / Analyse de Politiques* **36**: 159–179.
- Patrinos, H. A. and M. E. Hurst (2007). “Indigenous language skills and the labor market in a developing economy: Bolivia”. In: *The economics of language. International analyses*. Edited by B. R. Chiswick and P. W. Miller. London: Routledge: 473–489.
- Patrinos, H. A., E. Velez, and Psacharopoulos (1994). “Language, education, and earnings in Asunción, Paraguay”. In: *The Journal of Developing Areas* **29**: 57–68.
- Rendon, S. (2007). “The Catalan premium: Language and employment in Catalonia”. In: *Journal of Population Economics* **20**: 669–686.
- Saiz, A. and E. Zoido (2005). “Listening to what the world says: Bilingualism and earnings in the United States”. In: *The Review of Economics and Statistics* **87**: 523–538.
- Sakellariou, C. (2009). “Endogeneity, computers, language skills and wages among university graduates in Vietnam”. In: *Applied Economics* **41**: 653–663.
- Shapiro, D. M. and M. Stelcner (1981). “Male-female earnings differentials and the role of language in Canada, Ontario, and Quebec, 1970”. In: *Canadian Journal of Economics / Revue canadienne d’économie* **14**: 341–348.

- Shapiro, D. M. and M. Stelcner (1997). “Language and earnings in Quebec: Trends over twenty years, 1970-1990”. In: *Canadian Public Policy / Analyse de Politiques* **23**: 115–140.
- Vaillancourt, F. (1978). “Revenus et langues, Québec. 1961-1971”. In: *Journal of Canadian Studies* **13**: 63–69.
- (1980). *Difference in earnings by language groups in Quebec. 1970*. Québec: Centre international de recherche sur le bilinguisme.
- (1995). “The private and total returns to education in Canada, 1985”. In: *Canadian Journal of Economics / Revue canadienne d’économie* **28**: 533–554.
- (1996). “Language and socioeconomic status in Quebec: Measurement, findings, determinants, and policy costs”. In: *International Journal of the Sociology of Language* **121**: 69–92.
- Vaillancourt, F. and M. Leblanc (1993). *La propriété de l’économie du Québec en 1991 selon le groupe d’appartenance linguistique*. Montréal: Office de la langue française.
- Vaillancourt, F., D. Lemay, and L. Vaillancourt (2007). *Laggards no more: The changed socioeconomic status of francophones in Quebec*. Toronto: C D. Howe Institute.
- Vaillancourt, F. and C. Touchette (2001). *Le statut du français sur le marché du travail au Québec, de 1970 à 1995: les revenus du travail*. Toronto: C.D. Howe Institute.
- Veltman, C. J., J.-A. Boulet, and C. Casonguay (1979). “The economic context of bilingualism and language transfer in the Montreal metropolitan area”. In: *Canadian Journal of Economics / Revue canadienne d’économie* **12**: 468–479.
- Williams, D. R. (2011). “Multiple language usage and earnings in Western Europe”. In: *International Journal of Manpower* **32**: 372–393.

C.1.1.4.2 Migrant labor

- Aldashev, A., J. Gernandt, and S. L. Thomsen (2009). “Language usage, participation, employment and earnings: Evidence for foreigners in West Germany with multiple sources of selection”. In: *Labour Economics* **16**: 330–341.
- Bellante, D. (1998). “Language ability, US labor market experience and the earnings of immigrants”. In: *International Journal of Manpower* **19**: 319–330.
- Berman, E., K. Langa, and E. Siniver (2003). “Language-skill complementarity: returns to immigrant language acquisition”. In: *Labour Economics* **10**: 265–290.
- Bleakley, H. and A. Chin (2004). “Language skills and earnings: Evidence from childhood immigrants”. In: *The Review of Economics and Statistics* **82**: 481–496.

- Bleakley, H. and A. Chin (2008). “What holds back the second generation?: The intergenerational transmission of language human capital among immigrants”. In: *Journal of Human Resources* **43**: 267–298.
- (2010). “Age at arrival, English proficiency, and social assimilation among US immigrants”. In: *American Economic Journal: Applied Economics* **2**: 165–192.
- Bloemen, H. (2013). *Language proficiency of migrants: The relation with Job satisfaction and matching*. Research report 7366. Bonn: Forschungsinstitut zur Zukunft der Arbeit.
- Bloom, D. E. and G. Grenier (1996). “Language, employment, and earnings in the United States: Spanish-English differentials from 1970 to 1990”. In: *International Journal of the Sociology of Language* **121**: 45–68.
- Budría, S. and P. Swedberg (2012). *The impact of language proficiency on immigrants’ earnings in Spain*. Research report 6957. Bonn: Forschungsinstitut zur Zukunft der Arbeit.
- Carliner, G. (1996). *The wages and language skills of U.S. immigrants*. Research report 5763. Washington DC: National Bureau of Economic Research.
- Carnevale, A., R. Fry, and L. Lowell (2001). “Understanding, speaking, reading, writing and earnings in the immigrant labor market”. In: *American Economic Review* **91**: 159–163.
- Casey, T. and C. Dustmann (2008). “Intergenerational transmission of language capital and economic outcomes”. In: *Journal of Human Resources* **43**: 660–687.
- Chiswick, B. R. (1978). “The effect of Americanization on the earnings of foreign-born men”. In: *Journal of Political Economy* **86**: 897–921.
- (1991). “Speaking, reading, and earnings among low-skilled immigrants”. In: *Journal of Labor Economics* **9**: 149–170. (Reprint in: *The economics of language: International analyses*. Edited by B. R. Chiswick and P. W. Miller. New York: Routledge, 2007.)
- (1998). “Hebrew language usage: Determinants and effects on earnings among immigrants in Israel”. In: *Journal of Population Economics* **11**: 253–271.
- (1999). “Language skills and earnings among legalized aliens”. In: *Journal of Population Economics* **12**: 63–91. (Reprint in: *The economics of language: International analyses*. Edited by B. R. Chiswick and P. W. Miller. New York: Routledge, 2007.)
- (2009). “The economics of language for immigrants: An introduction and overview”. In: *The education of language minority immigrants in the United States*. Edited by T. Wiley, J. S. Lee, and R. Rumberger. Bristol: Multilingual Matters: 72–91.
- Chiswick, B. R. and N. Larsen (2015 (?)). “Russian Jewish immigrants in the United States: The adjustment of their English language proficiency and earnings in the American Community Survey”. In: *Contemporary Jewry* **35** (?): forthcoming.

- Chiswick, B. R. and P. W. Miller (1985). “Immigrant generation and income in Australia”. In: *Economic Record* **61**: 540–553.
- (1992). “Language in the immigrant labor market”. In: *Immigration, language and ethnicity, Canada and the United States*. Edited by B. R. Chiswick. Washington DC: American Enterprise Institute (AEI) Press Press: 229–296. (Reprint in: *The economics of language: International analyses*. New York: Routledge, 2007.).
 - (1995). “The endogeneity between language and earnings: International analyses”. In: *Journal of Labor Economics* **13**: 246–288. (Reprint in: *The economics of language: International analyses*. Edited by B. R. Chiswick and P. W. Miller. New York: Routledge, 2007.)
 - (2001). “A model of destination-language acquisition: Application to male immigrants in Canada”. In: *Demography* **38**: 391–409. (Reprint in: *The economics of language: International analyses*. Edited by B. R. Chiswick and P. W. Miller. New York: Routledge, 2007.)
 - (2002). “Immigrant earnings: Language skills, linguistic concentrations and the business cycle”. In: *Journal of Population Economics* **15**: 31–57. (Reprint in: *The economics of language: International analyses*. Edited by B. R. Chiswick and P. W. Miller. New York: Routledge, 2007.)
 - (2010). “Occupational language requirements and the value of English in the US labor market”. In: *Journal of Population Economics* **23**: 353–372.
 - (2012). “Negative and positive assimilation, skill transferability, and linguistic distance”. In: *Journal of Human Capital* **6**: 35–55.
 - (2015). “International migration and the economics of language”. In: *Handbook of the economics of international migration*. Edited by B. R. Chiswick and P. W. Miller. Volume 1A. Handbooks in economics. Amsterdam: North-Holland. Chapter 5: 211–269.
- Chiswick, B. R. and G. Repetto (2001). “Immigrant adjustment in Israel: Literacy and fluency in Hebrew and earnings”. In: *International migration: Trends, policy and economic impact*. Edited by S. Djajic. New York: Routledge: 204–228. (Reprint in: *The economics of language: International analyses*. New York: Routledge, 2007.).
- Dávila, A. and M. T. Mora (2004). “English-language skills and the earnings of self-employed immigrants in the United States”. In: *Industrial Relations* **43**: 386–391.
- Dávila, A., M. T. Mora, and R. González (2011). “English-language proficiency and occupational risk among hispanic immigrant men in the United States”. In: *Industrial Relations* **50**: 263–296.
- Drydakis, N. (2012). “Ethnic identity and immigrants’ wages in Greece”. In: *International Journal of Intercultural Relations* **36**: 389–402.
- Dustmann, C. (1994). “Speaking fluency, writing fluency and earnings of migrants”. In: *Journal of Population Economics* **7**: 133–156.

- Dustmann, C. and F. Fabbri (2003). “Language proficiency and labour market. Performance of immigrants in the UK”. In: *The Economic Journal* **113**: 695–717.
- Dustmann, C. and A. Van Soest (2002). “Language and earnings of immigrants”. In: *Industrial and Labor Relations Review* **55**: 473–492.
- Fang, T. and J. S. Heywood (2010). “Immigration, ethnic wage differentials and output pay in Canada”. In: *British Journal of Industrial Relations* **48**: 109–130.
- Gao, W. and R. Symth (2011). “Economic returns to speaking ‘Standard Mandarin’ among migrants in China’s urban labour market”. In: *Economics of Education Review* **36**: 342–352.
- Goldmann, G., A. Sweetman, and C. Warman (2016 (?)). “The portability of new immigrants’ human capital: Language, education and occupational matching”. In: *Canadian Public Policy / Analyse de Politiques* **42** (?): forthcoming.
- Grenier, G. (1984). “The effect of language characteristics on the wages of Hispano-American males”. In: *The Journal of Human Resources* **19**: 35–52.
- (2001). “Immigration, langues et performance économique: le Québec et l’Ontario entre 1970 et 1995”. In: *L’Actualité économique* **77**: 305–338.
- Grenier, G. and S. Nadeau (2011). “Immigrant access to work in Montreal and Toronto”. In: *Canadian Journal of Regional Science / Revue canadienne des sciences régionales* **34**: 19–32.
- Grin, F., J. Rossiaud, and B. Kaya (2002). “Langues de l’immigration et intégration professionnelle en Suisse”. In: *Les migrations et la Suisse*. Edited by W. Hans-Rudolf, R. Fibbi, and W. Haug. Zurich: Seismo: 404–433.
- Hall, M. and G. Farkas (2008). “Does human capital raise earnings for immigrants in the low-skill labor market?” In: *Demography* **45**: 619–639.
- Hayfron, J. E. (2001). “Language training, language proficiency and earnings of immigrants in Norway”. In: *Applied Economics* **33**: 1971–1979.
- Hellerstein, J. and D. Neumark (2003). “Ethnicity, language, and workplace segregation: Evidence from a new matched employer-employee data set”. In: *Annales d’économie et de statistique* **71-72**: 19–78.
- Isphording, I. E. (2013). “Returns to foreign language skills of immigrants in Spain”. In: *LABOUR* **27**: 443–461.
- (2014a). “Disadvantages of linguistic origin: Evidence from immigrant literacy scores”. In: *Economics Letters* **123**: 236–239.
- (2014b). *Language and labor market success*. Research report 8572. Bonn: Forschungsinstitut zur Zukunft der Arbeit.

- Isphording, I. E. and S. Otten (2014). “Linguistic barriers in the destination language acquisition of immigrants”. In: *Journal of Economic Behavior & Organization* **105**: 30–50.
- Isphording, I. E. and M. Sinning (2012). *The returns to language skills in the US labor market*. Research report 7080. Bonn: Forschungsinstitut zur Zukunft der Arbeit.
- Kossoudji, S. A. (1988). “English language ability and the labor market opportunities of Hispanic and East Asian immigrant men”. In: *Journal of Labor Economics* **6**: 205–228.
- Lang, K. and E. Siniver (2009). “The return to English in a non-English speaking country: Russian immigrants and native Israelis in Israel”. In: *The B.E. Journal of Economic Analysis & Policy* **9**: Article 50.
- Leslie, D. and J. Lindley (2001). “The impact of language ability on employment and earnings of Britain’s ethnic communities”. In: *Economica* **68**: 587–606.
- Lindley, J. (2002). “The English language fluency and earnings of ethnic minorities in Britain”. In: *Scottish Journal of Political Economy* **49**: 467–487.
- McManus, W. S. (1985). “Labor market costs of language disparity: An interpretation of Hispanic earnings differences”. In: *The American Economic Review* **75**: 818–827.
- (1990). “Labor market effects of language enclaves: Hispanic men in the United States”. In: *Journal of Human Resources* **25**: 228–252.
- McManus, W. S., W. Gould, and F. Welch (1983). “Earnings of Hispanic men: The role of English language proficiency”. In: *Journal of Labor Economics* **1**: 101–130.
- Messinis, G. (2009). “Earnings and languages in the family: Second-generation Australians”. In: *The Economic Record* **85**: s59–s73.
- Park, J. H. (1999). “The earnings of immigrants in the United States: The effect of English-speaking ability”. In: *American Journal of Economics and Sociology* **58**: 43–56.
- Pendakur, K. and R. Pendakur (1998). “Speak and ye shall receive: Language knowledge as human capital”. In: *Economic approaches to language and bilingualism*. Edited by A. Breton. Ottawa: Canadian Heritage: 89–121.
- Rivera-Batiz, F. (1990). “English language proficiency and the economic progress of immigrants”. In: *Economics Letters* **34**: 295–300.
- Sean-Shong, H., J. Xi, and Y. Cao (2010). “The conditional relationship between English language proficiency and earnings among US immigrants”. In: *Ethnic and Racial Studies* **33**: 1620–1647.
- Shields, M. A. and S. Wheatley Price (2002). “The English language fluency and occupational success of ethnic minority immigrant men living in English metropolitan areas”. In: *Journal of Population Economics* **15**: 137–160.

- Shin, H.-j. and R. Alba (2009). “The economic value of bilingualism for Asians and Hispanics”. In: *Sociological Forum* **24**: 254–275.
- Tainer, E. (1988). “English language proficiency and the determination of earnings among foreign-born men”. In: *The Journal of Human Resources* **23**: 108–122.
- Wang, C. and L. Wang (2011). “Language skills and the earnings distribution among child immigrants”. In: *Industrial Relations* **50**: 297–322.
- Yao, Y. and J. C. van Ours (2015). “Language skills and labor market performance of immigrants in the Netherlands”. In: *Labour Economics* **34**: 76–85.
- Zavodny, M. (2000). “The effects of official English laws on limited-English-proficient workers”. In: *Journal of Labor Economics* **18**: 427–452.

C.1.1.5 Language skills and production

Contributions listed here examines the production process and the how it may be affected by language skills and patterns of language use, particularly in multilingual settings. Some revisit core production theory, while others address issues such as matching between a worker and a job and the related recruiting strategies.

- Aldashev, A. and A. M. Danzer (2015). “Bilingualism and economic performance”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 9: forthcoming.
- Beckhusen, J., R. J. Florax, T. de Graaff, J. Poot, and B. Waldorf (2012). *Living and working in ethnic enclaves: Language proficiency of immigrants in U.S. metropolitan areas*. Research report 6363. Bonn: Forschungsinstitut zur Zukunft der Arbeit.
- Caminal, R. (2010). “Markets and linguistic diversity”. In: *Journal of Economic Behavior & Organization* **76**: 774–790.
- Chorney, H. (1998). “Bilingualism in employee recruitment and the role of symbolic analysts in leading export-oriented firms”. In: *Economic approaches to language and bilingualism*. Edited by A. Breton. Ottawa: Canadian Heritage: 185–223.
- Crémer, J., L. Garicano, and A. Prat (2007). “Language and the theory of the firm”. In: *The Quarterly Journal of Economics* **122**: 373–407.
- Gomez-Mejia, L. and L. Palich (1997). “Cultural diversity and the performance of multinational firms”. In: *Journal of International Business Studies* **28**: 335.
- Grin, F. and C. Sfreddo (2010). “Besoins linguistiques et stratégie de recrutement des entreprises”. In: *Langue, économie, entreprise. Gérer les échanges*. Edited by I. Behr, P. Farges, D. Hentschel, M. Kauffmann, and C. Lang. Paris: Presses Sorbonne Nouvelle: 19–40.

- Grin, F., C. Sfreddo, and F. Vaillancourt (2010). *The economics of the multilingual workplace*. London: Routledge.
- Heblich, S., A. Lameli, and G. Riener (2015). “The effect of perceived regional accents on individual economic behavior: A lab experiment on linguistic performance cognitive ratings and economic decisions”. In: *PLoS ONE* **10**: e0113475.
- Quella, N. and S. Rendón (2012). “Occupational selection in multilingual labor markets: The case of Catalonia”. In: *International Journal of Manpower* **33**: 918–937.
- Sabourin, C. (1985). “La théorie des environnements linguistiques”. In: *Économie et langue*. Edited by F. Vaillancourt. Québec: Conseil de la langue française: 59–82.
- Solé, C., A. Alarcón, A. Terrones, and L. Garzón (2006). “The problems of efficiency and linguistic discrimination in the coordination of firms”. In: *International Journal of the Sociology of Language* **182**: 41–66.
- Yamamura, E. (2012). “Effect of linguistic heterogeneity on technology transfer: An economic study of FIFA football rankings”. In: *Atlantic Economic Journal* **40**: 85–99.

C.1.2 Economic impact of LPP

This sub-section is devoted to contributions that assess the economic consequences of policies that specifically target languages (as distinct from policies with other aims, but that may nonetheless have economic impacts through language; some such cases turn up in C.1.1).

- Aspachs-Bracons, O., I. Clots-Figueras, J. Costa-Font, and P. Masella (2008). “Compulsory language educational policies and identity formation”. In: *Journal of the European Economic Association* **6**: 434–444.
- Battisti, M., J. Friesen, and B. Krauth (2014). “English as a second dialect policy and achievement of aboriginal students in British Columbia”. In: *Canadian Public Policy / Analyse de Politiques* **40**: 182–192.
- Desmet, K., I. Ortuño-Ortín, and R. Wacziarg (2012). “The political economy of linguistic cleavages”. In: *Journal of Development Economics* **97**: 322–338.
- Grin, F. and F. Vaillancourt (2015). “The economics of language policy: An introduction to evaluation work”. In: *Research methods in language policy and planning: A practical guide*. Edited by F. M. Hult and D. C. Johnson. Chichester: Wiley-Blackwell: 118–129.
- Lien, D. (2013). “Financial effects of the Confucius Institute on Chinese language acquisition: Isn’t it delightful that friends come from afar to teach you *Hanyu*?” In: *North American Journal of Economics and Finance* **24**: 87–100.
- Lien, D. and Y. Wang (2013). “An economic analysis of instructional language”. In: *Education Economics* **21**: 380–391.

Vaillancourt, F. (1983). “The economics of language and language planning”. In: *Language Problems & Language Planning* 7: 162–178. (Reprint in: *The economics of language*. Edited by D. M. Lambertson. Cheltenham: Edward Elgar, 2002.)

C.1.2.1 Language and nationalism

Some language policies are connected to a political stance that may be viewed as nationalist. Such policies can carry economic consequences, which are often discussed but rarely addressed – as in the papers mentioned here.

Breton, A. (1978). “Nationalism and language policies”. In: *Canadian Journal of Economics / Revue canadienne d'économie* 11: 656–668.

Gardeazabal, J. (2011). “Linguistic polarization and conflict in the Basque Country”. In: *Public Choice* 149: 405–425.

Laitin, D. D. (2000). “Language conflict and violence: The straw that strengthens the camel’s back”. In: *European Journal of Sociology / Archives Européennes de Sociologie* 41: 97–137. (Reprint of “Language conflict and violence: The straw that strengthens the camel’s back”. In: *International conflict resolution after the cold war*. Edited by P. C. Stern and D. Drukman. Washington D. C.: National Academy Press, 1999.)

Lleras-Muney, A. and A. Shretzer (2015). “Did the americanization movement succeed? An evaluation of the effect of English-only and compulsory schooling laws on the education of immigrants”. In: *American Economic Journal: Economic Policy* 7: 258–290.

Migué, J.-L. (1970). “Le nationalisme, l’unité nationale et la théorie économique de l’information”. In: *Revue canadienne d'économie* 3: 183–198.

C.1.2.2 Social rates of return to national and foreign language teaching

A few papers investigate the returns to society as a whole of imparting certain language skills. Although only a few entries appear here, this question is also addressed in some of the contributions that already appear elsewhere in this bibliography, in particular C.1.1.4

Anghel, B., A. Cabrales, and J. M. Carro (2012). *Evaluating a bilingual education program in Spain: The impact beyond foreign language learning*. Research report 8995. London: Centre for Economic Policy Research (CEPR).

Angrist, J. D. and V. Lavy (1997). “The effect of a change in language of Instruction on the returns to schooling in Morocco”. In: *Journal of Labor Economics* 15: S48–S76.

Angrist, J., A. Chin, and R. Godoy (2008). “Is Spanish-only schooling responsible for the Puerto Rican language gap?” In: *Journal of Development Economics* 85: 105–128.

- Breton, A. and P. Mieszkowski (1975). *The returns to investment in language. The economics of bilingualism*. Research report 7512. Toronto: Institute for Policy Analysis.
- Grin, F. and C. Sfreddo (1997). *Dépenses publiques pour l'enseignement des langues secondes en Suisse*. Aarau: Schweizerische Koordinationsstelle für Bildungsforschung (SKBF).
- Locay, L., T. L. Regan, and A. M. Diamond (2013). "The effects of Spanish-language background on completed schooling and aptitude test scores". In: *Economic Inquiry* **51**: 527–562.
- Parker, S. W., L. Rubalcava, and G. Teruel (2005). "Schooling inequality and language barriers". In: *Economic Development and Cultural Change* **54**: 71–94.
- Ramachandran, R. (2012). *Language use in education and primary schooling attainment: Evidence from a natural experiment in Ethiopia*. Research report 2012/34. Barcelona: Institut d'Economia de Barcelona.
- Tritscher-Archan, S., editor (2008). *Fremdsprachen für die Wirtschaft : Analysen, Zahlen, Fakten*. ibw-Forschungsbericht 143. Wien: Institut für Bildungsforschung der Wirtschaft.

C.1.2.3 Costs, benefits, and distributive effects of LPP

Each set of language-policy measures entails costs and benefits, both symbolic and material; different policies therefore display different net values (benefit minus cost); not everyone benefits from them in equal measure. The papers listed here address these questions of identification and measurement, as well as the resulting distributive implications.

- Briey, L. de and P. Van Parijs (2002). "La justice linguistique comme justice coopérative". In: *Philosophie économique* **5**: 5–37.
- Coche, O., F. Vaillancourt, M.-A. Cadieux, and J. L. Ronson (2012). *Official language policies of the Canadian provinces: Costs and benefits in 2006*. Vancouver: Fraser Institute.
- Colomer, J. M. (1990). "The utility of bilingualism: A contribution to a rational choice model of language". In: *Rationality and Society* **2**: 310–334.
- (1996). *La utilitat del bilingüisme*. Barcelona: Edicions 62.
- Desgagné, M. L. and F. Vaillancourt (2015). "The distribution of the benefits and costs of Canada's federal official languages policy: Results for 2001". In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 4: forthcoming.
- Di Pietrantonio, S. (2012). *L'insegnamento delle lingue straniere come politica pubblica: il caso italiano*. Master's thesis. L'Aquila: Università degli Studi dell'Aquila.

- Falquet, G. and F. Grin (2008). “Free software, proprietary software and linguistic justice”. In: *Intellectual property and theories of justice*. Edited by A. Gosseries, A. Marciano, and A. Strowel. Houndmills: Palgrave Macmillan: 277.
- Fidrmuc, J., V. A. Ginsburgh, and S. Weber (2007). *Ever closer union or Babylonian discord? The official-language problem in the European Union*. Research report 6367. London: Centre for Economic Policy Research (CEPR).
- (2009). “Voting on the choice of core languages in the European Union”. In: *European Journal of Political Economy* **25**: 56–62.
- Gazzola, M. (2011). “Conti precisi sull’importanza economica delle lingue nei brevetti industriali”. In: *La Crusca per Voi* **42**: 8–10.
- (2014a). “Il multilinguismo svizzero nel sistema europeo dei brevetti”. In: *Babylonia*: 54–57.
- (2014b). *Language policy and innovation. An evaluation of the language regime of the PCT system*. Research report 11. Genève: Observatoire “Economics-Languages-Training”, Université de Genève.
- (2015). “Valutare una politica linguistica. Teoria e applicazione all’Organizzazione mondiale della proprietà intellettuale”. In: *Plurilinguismo / Sintassi. Atti del XLVI Congresso Internazionale di Studi della Società di Linguistica Italiana (SLI)*. Edited by C. Bruno, S. Casini, F. Gallina, and R. Siebetchu. Roma: Bulzoni: 67–84.
- Gazzola, M. and A. Volpe (2014). “Linguistic justice in IP policies: Evaluating the language regime of the European Patent Office”. In: *European Journal of Law and Economics* **38**: 47–70.
- Grin, F. (1997). “Gérer le plurilinguisme européen: approche économique au problème de choix”. In: *Sociolinguistica: Internationales Jahrbuch für europäische Soziolinguistik*. Edited by U. Ammon, J. Darquennes, and S. Wright. Volume 11. Berlin: De Gruyter: 1–15.
- (2004a). “L’anglais comme lingua franca; questions de coût et d’équité. Commentaire sur l’article de Philippe van Parijs”. In: *Économie publique* **15**: 33–41.
- (2004b). “On the costs of cultural diversity”. In: *Cultural diversity versus economic solidarity: Is there a tension? How must it be resolved?* Edited by P. Van Parijs. Bibliothèque scientifique Francqui 6. Bruxelles: De Boeck Université: 189–202.
- (2005). *L’enseignement des langues étrangères comme politique publique*. Paris: Haut Conseil de l’évaluation de l’école. (See also: *L’insegnamento delle lingue straniere come politica pubblica*. Roma: “Esperanto” Radikala Asocio (ERA) Onlus, 2009.).
- Grin, F. and F. Vaillancourt (2000). “On the financing of language policies and distributive justice”. In: *Rights to language: Equity, power and education*. Edited by R. Phillipson. New York: Lawrence Erlbaum Associates: 102–110.

- Grin, F. and F. Vaillancourt (2002). “Minority self-governance in economic perspective”. In: *Minority governance in Europe*. Edited by K. Gál. LGI/ECMI series on ethnopolitics and minority issues. Budapest: LGI Books: 73–86.
- Harhoff, D., K. Hoisl, B. van Pottelsberghe de la Potterie, and C. Vandeput (2015 (?)). “Languages, fees and the international scope of patenting”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 14: forthcoming.
- Harhoff, D., K. Hoisl, B. Reichl, and B. van Pottelsberghe de la Potterie (2009). “Patent validation at the country level - the role of fees and translation costs”. In: *Research Policy* **38**: 1423–1437.
- Haszpra, O. (2004). “The price of a common language”. In: *Begegnungen* **22**: 215–222.
- Liu, A. H., A. B. Kirkpatrick, and D. M. Beaudette (2014). “Linguistic competition and education spending in Spain 1992–200”. In: *The Social Science Journal* **51**: 139–147.
- Lukács, Á. (2007). *Economic aspects of language inequality*. PhD thesis. Tatabánya: College for Modern Business Studies.
- Mühlhäusler, P. and R. Damania (2004). *Economic costs and benefits of Australian indigenous languages*. Research report. Canberra: Australian Government Aboriginal and Torres Strait Islander Services (ATSIS).
- Patrinos, H. A. and E. Velez (2009). “Costs and benefits of bilingual education in Guatemala: A partial analysis”. In: *International Journal of Educational Development* **29**: 594–598.
- Pool, J. (1987). “Thinking about linguistic discrimination”. In: *Language Problems & Language Planning* **11**: 3–21.
- Portuese, A. (2012). “Law and economics of the European multilingualism”. In: *European Journal of Law and Economics* **34**: 279–325.
- Selten, R., editor (1997). *La kostoĵ de la eŭropa lingva (ne-)komunikado*. Rome: “Esperanto” radikala asocio.
- Vaillancourt, F. (1997). “Economic costs and benefits of the official languages: Some observations”. In: *Official languages and the economy: Papers presented at a colloquium hosted by the official languages support programs branch, Department of Canadian Heritage, held on May 5, 1995*. New Canadian perspectives. Ottawa: Canadian Heritage: 103–118.
- Vaillancourt, F. and O. Coche (2009). *Les politiques fédérales en matière de langues officielles au Canada : coûts et avantages en 2006*. Vancouver: Institut Fraser. (See also: *Official language policies at the federal level in Canada: Costs and benefits in 2006*. Vancouver: Fraser Institute, 2009.).
- Van Parijs, P. (2011). *Linguistic justice for Europe and for the world*. Oxford political theory. Oxford: Oxford University Press.

- Wickström, B.-A. (1997). “Kio estas kostoj kaj utilo de lingvouzo?” In: *La kostoj de la eŭropa lingva (ne-)komunikado*. Edited by R. Selten. Roma: “Esperanto” radikala asocio: 5–13.
- (2007). “Fairness, rights, and language rights: On the fair treatment of linguistic minorities”. In: *Public economics and public choice*. Edited by P. Baake and R. Borck. Berlin: Springer: 81–101.
 - (2010). “Lingvaj rajtoj kaj lingva justeco”. In: *La arto labori kune: Festlibro por Humphrey Tonkin*. Edited by D. Blanke and U. Lins. Rotterdam: Universala Esperanto-Asocio: 97–103.
 - (2013). “The optimal Babel: An economic framework for the analysis of dynamic language rights”. In: *Constitutional economics and public institutions: Essays in honour of José Casas Pardo*. Edited by F. Cabrillo and M. Puchades-Navarro. New thinking in political economy. Cheltenham: Edward Elgar. Chapter 18: 322–344.
 - (2014). “Indigenes, immigration, and integration: A welfare-economics approach to minority rights”. In: *A handbook of alternative theories of public economics*. Edited by F. Forte, R. Mudambi, and P. M. Navarra. Cheltenham: Edward Elgar. Chapter 10: 227–242.

C.1.2.4 Optimization of language regimes

Countries and organizations use certain languages but not others: the (formal) set of official languages and the corresponding patterns of use are known as language regimes. The papers listed here look at the quest for the best possible regime in allocation and distribution terms.

- Andrey, S., E. Kobelt, and D. Kübler (2008). “Is there a trade-off between diversity and performance? Efficient communication versus multilingualism in the Swiss federal administration”. In: *European group for public administration’s yearly conference*. Rotterdam: European Group for Public Administration.
- Athanasiou, E., J. Moreno-Ternero, and S. Weber (2015 (?)). “Language learning and communicative benefits”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 8: forthcoming.
- Breton, A. and P. Mieszkowski (1977). “The economics of bilingualism”. In: *The political economy of fiscal federalism*. Edited by W. E. Oates. Lexington: Lexington Books: 261–273.
- Fidrmuc, J. and V. A. Ginsburgh (2007). “Languages in the European Union: The quest for equality and its cost”. In: *European Economic Review* **51**: 1351–1369.
- Fidrmuc, J., V. A. Ginsburgh, and S. Weber (2004). “Le français, deuxième langue de l’Union européenne?” In: *Économie publique* **15**: 43–63.
- (2010). “Scenarios beyond unanimity: Could a qualified majority of member states alleviate the burden of multilingualism in Europe?” In: *Langues et construction européenne*. Edited by D. Hanf, K. Malacek, and E. Muir. Bruxelles: Peter Lang: 259–279.

- Gazzola, M. (2006a). “La gestione del multilinguismo nell’Unione europea”. In: *Le sfide della politica linguistica di oggi. Fra la valorizzazione del multilinguismo migratorio locale e le istanze del plurilinguismo europeo*. Edited by A. Carli. Milano: Franco Angeli: 17–117.
- (2006b). “Managing multilingualism in the European Union: Language policy evaluation for the European Parliament”. In: *Language Policy* **5**: 393–417.
 - (2014a). *Language policy and linguistic justice in the European Union: The socio-economic effects of multilingualism*. Research report 15. Genève: Observatoire “Economics-Languages-Training”, Université de Genève.
 - (2014b). “Partecipazione, esclusione linguistica e traduzione: Una valutazione del regime linguistico dell’Unione europea”. In: *Studi Italiani di Linguistica Teorica e Applicata* **43**: 227–264.
 - (2014c). *The evaluation of language regimes. Theory and application to multilingual patent organisations*. Amsterdam: John Benjamins.
 - (2015). “Identifying and mitigating linguistic inequalities in the management of patent information in Europe”. In: *World Patent Information* **40**: 43–50.
- Gazzola, M. and F. Grin (2007). “Assessing efficiency and fairness in multilingual communication: Towards a general analytical framework”. In: *AILA Review* **20**: 87–105.
- (2013). “Is ELF more effective and fair than translation? An evaluation of the EU’s multilingual regime”. In: *International Journal of Applied Linguistics* **23**: 93–107.
- Ginsburgh, V. A., I. Ortuño-Ortín, and S. Weber (2005). “Disenfranchisement in linguistically diverse societies. The case of the European Union”. In: *Journal of the European Economic Association* **3**: 946–965.
- Ginsburgh, V. A. and S. Weber (2005). “Language disenfranchisement in the European Union”. In: *Journal of Common Market Studies* **43**: 273–286.
- (2011). *How many languages do we need? The economics of linguistic diversity*. Princeton: Princeton University Press.
- Grin, F. (1996). “Conflit ethnique et politique linguistique”. In: *Relations Internationales* **88**: 381–396.
- (2008). “Principles of policy evaluation and their application to multilingualism in the European Union”. In: *Respecting linguistic diversity in the European Union*. Edited by X. Arzoz. Amsterdam: Benjamins: 73–83.
 - (2010). “The oligarchic temptation and its dangers”. In: *Proceedings of the international symposium on “Situació I perspectives del plurilingüisme a Europa”*, 6–8 November 2008. Edited by J. Palomero. Valencia: Valencian Academy of Language.

- Liu, A. H. (2015). *Standardizing diversity: The political economy of language regimes*. National and ethnic conflict in the 21st century. Philadelphia: University of Pennsylvania Press.
- Pool, J. (1981). “The economics of artificial languages: Thoughts on the problem of cost minimization”. In: *Angewandte Soziolinguistik*. Edited by M. Hartig. Tübingen: Gunter Narr Verlag: 155–164.
- (1991). “The official language problem”. In: *American Political Science Review* **85**: 495–514.
- (1992). *Multilingualism versus language policy: Alternative models for the EC*. Research report LD20. Seattle: University of Washington - Interdisciplinary Committee on Language and Society.
- (1996). “Optimal language regimes for the European Union”. In: *International Journal of the Sociology of Language* **121**: 159–179.
- Pool, J. and B. McFann (1991). *The language auction: a nondiscriminatory method of choosing official languages*. Research report. Seattle: Utilika Foundation.
- Van Pottelsberghe, B. and M. Mejer (2010). “The London Agreement and the cost of patenting in Europe”. In: *European Journal of Law and Economics* **29**: 211–237.
- Voslamber, D. (2006). “Gedanken zur institutionellen Mehrsprachigkeit : Vorschläge für eine Verbesserung des Sprachenregimes in den Institutionen der Europäischen Union”. In: *Grundlagenstudien aus Kybernetik und Geisteswissenschaft / Humankybernetik* **47**: 20–31.

C.1.2.5 Regional and minority language promotion and regional economics

Papers in this category examine how language policies in favor of small languages impact on regional economic activity.

- Chalmers, D. (2003). *Economic impact of Gaelic arts and culture*. PhD thesis. Glasgow: Caledonian University.
- (2009). “The Promotion of arts and culture as a tool of economic regeneration: An opportunity or a threat to minority language development? – The case of Gaelic in Scotland”. In: *Rights, promotion and integration issues for minority languages in Europe*. Edited by S. Pertot, T. M. S. Priestly, and C. H. Williams. Palgrave studies in minority languages and communities. Houndmills: Palgrave Macmillan. Chapter 8: 141–164.
- Ivlevs, A. and R. M. King (2014). “2004 Minority Education Reform and pupil performance in Latvia”. In: *Economics of Education Review* **38**: 151–166.
- Keane, M., B. Griffith, and J. Dunn (1993). “Regional development and language maintenance”. In: *Environment and Planning A* **25**: 399–408.

- Ó Cinnéide, M. and M. Keane (1988). *Tionchar áitiúla shocheachnamaíocha a bhaineann le Gaeltacht na Gaillimhe / Local socio-economic impacts associated with the Galway Gaeltacht*. Gaillimh: Coláiste na hOllscoile Gaillimhe.
- Ó Cinnéide, M., S. Mac Donnacha, and S. Ní Chonghaile (2001). *Polasaithe agus cleachtais eagraíochtaí éagsúla le feidhm sa Ghaeltacht / Policies and practices of organisms serving the Gaeltacht*. Gaillimh: An tIonad Taighde sna hEolaíochtaí Sóisialta, Ollscoil na hÉireann.
- Sproull, A. (1966). “Regional economic development and minority language use: The case of Gaelic Scotland”. In: *International Journal of the Sociology of Language* **121**: 93–117.
- Walsh, J. (2003). *The relationship between the Irish language, Irish culture and Ireland’s socio-economic development: An analysis of the period 1890-1915*. Research report. Kiruna: International Conference on Minority Languages.

C.2 Influence of economic variables on linguistic variables ($\{E\} \rightarrow \{L\}$), including economically based explanations of language processes

This section contains a large number of extremely varied contributions whose common trait is that they use economics as a mode of reasoning and/or economic variables as independent variables in order to account for the value or evolution of linguistic variables. Some C.2.1 highlight the workings of language policies, while others C.2.2 investigate these processes in an unregulated context – that is, in the absence of policies explicitly targeting language.

C.2.1 Effectiveness of LPP

These contributions evaluate the outcomes of language policies in terms of the practical policy objectives. Their focus is primarily technical and they can feed into the policy evaluation approaches that characterize entries in C.1.2. By contrast with papers listed above under C.1.2, which are concerned with the costs and benefits of language policies (also in a broad sense), those listed here address the extent to which different language policies are effective in terms of linguistic indicators.

C.2.1.1 Regional and minority language promotion

These contributions focus on the effectiveness of alternative language policy measures in terms of the degree of revitalization of minority languages that they help achieve.

- Delgado, E., J. Baltà, and U. Staiger (2004). *Ex-post evaluation of activities in the field of regional and minority languages 1998-2002: Final report*. Research report. Barcelona: Fundación Interarts.
- Grin, F. (1990). “The economic approach to minority languages”. In: *Journal of Multilingual and Multicultural Development* **11**: 153–173.
- (2003). *Language policy evaluation and the European charter for regional or minority languages*. Basingstoke: Palgrave Macmillan.

- Grin, F. (2015 (?)). “Challenges of minority languages”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 21: forthcoming.
- Grin, F., M. Gazzola, T. Moring, and J. Häggmann (2005). *Ten years of EU support for regional or minority languages: A financial assessment*. Research report 1. Genève: Observatoire “Economics-Languages-Training”, Université de Genève.
- Grin, F., T. Moring, D. Gorter, J. Häggman, D. Ó Riagáin, and M. Strubell (2002). *Support for minority languages in Europe*. Research report. Brussels: European Commission.
- Grin, F. and F. Vaillancourt (1998). *Language revitalisation policy: An analytical survey – Theoretical framework, policy experience and application to Te Reo Maori*. Research report 98/6. Wellington: The Treasury.
- (1999). *The cost-effectiveness evaluation of minority language policies: Case studies on Wales, Ireland and the Basque Country*. Monograph 2. Flensburg: European Centre for Minority Issues.

C.2.1.2 Language learning

These contributions focus on the effectiveness of alternative language policy measures in terms of the languages skills acquired.

- Chin, A., N. M. Daysal, and S. A. Imberman (2013). “Impact of bilingual education programs on limited English proficient students and their peers: Regression discontinuity evidence from Texas”. In: *Journal of Public Economics* **107**: 63–78.
- Ginsburgh, V. A., J. Melitz, and F. Toubal (2014). *Foreign language learning: An econometric analysis*. Research report 10101. London: Centre for Economic Policy Research (CEPR).
- Grin, F. (2001). “On effectiveness and efficiency in education: Operationalizing the concepts”. In: *Zeitschrift für Pädagogik* **43**: 87–97.
- Grin, F. and F. Vaillancourt (2000). *The choice of a language of instruction: The economic aspects*. Washington: The World Bank Institute.
- Rupérez Micola, A., A. Bris, and A. Banal-Estañol (2009). *TV or not TV? Subtitling and English skills*. Research report 1156. Barcelona: Department of Economics and Business, Universitat Pompeu Fabra.
- Wyburn, J. and J. Hayward (2010). “A model of language-group interaction and evolution including language acquisition planning”. In: *The Journal of Mathematical Sociology* **34**: 167–200.

C.2.1.3 Effectiveness of language regimes

The contributions in this section focus on whether proposed measures, or set of measures making up a full-fledged language regime, are “effective” in the sense of having an effect at all – or changing the linguistic environment in the direction desired. These contributions, however, generally do not consider cost-effectiveness, let alone efficiency in the economic sense.

Grin, F. (2006). “Peut-on faire confiance au modèle ‘1+2’? Une évaluation critique des scénarios de communication dans l’Europe multilingue”. In: *Revista de Llengua i Dret* **45**: 217–231.

Grin, F. and M. Gazzola (2013). “Assessing efficiency and fairness in multilingual communication: Theory and application through indicators”. In: *Exploring the dynamics of multilingualism*. Edited by A.-C. Berthoud, F. Grin, and G. Lüdi. Amsterdam: John Benjamins: 365–386.

Jaime, L., X. Mitjà, and J. Solé Camardons (1995). “Objectius i indicadors de resultat: exemples de formulació”. In: *Llengua i Ús - Revista tècnica de Política Lingüística*: 15–20.

Solé Camardons, J. (2003). “El sistema d’indicadors lingüístics (SIL): finalitat i característiques generals”. In: *Noves SL. Revista de Sociolingüística*: Online. (See also: “The system of linguistic indicators (SIL): purpose and general features”. In: *Noves SL. Revista de Sociolingüística*, 2003.)

Solé Camardons, J. and A. Torrijos (2008). “El sistema d’indicadors lingüístics a Catalunya”. In: *Llengua i Ús - Revista tècnica de Política Lingüística*: 92–103.

C.2.2 LPP-unregulated determination of linguistic variables

These contributions focus on explaining linguistic variables independently of explicit policies targeting language.

C.2.2.1 Language learning

The papers listed in this category focus on (foreign or second) language learning decisions and processes. The economic dimension may reside in the implicit or explicit constrained maximization approach used to explain these decisions and processes, or in the nature of the explanatory variables considered – or both.

Budría, S. and P. Swedberg (2014). *The impact of multilingualism on Spanish language acquisition among immigrants in Spain*. Research report 8748. Bonn: Forschungsinstitut zur Zukunft der Arbeit.

Chiswick, B. R. and P. W. Miller (1997). “English language fluency among immigrants in the United States”. In: *Journal of Labor Economics* **13**: 246–288.

— (2008). “A test of the critical period hypothesis for language learning”. In: *Journal of Multilingual and Multicultural Development* **29**: 16–29.

- Danzer, A. M. and F. Yaman (2010). *Ethnic concentration and language fluency of immigrants in Germany*. Research report 4742. Bonn: Forschungsinstitut zur Zukunft der Arbeit.
- DeVoretz, D. and C. Werner (2000). *A theory of social forces and immigrant second language acquisition*. Research report 110. Bonn: Forschungsinstitut zur Zukunft der Arbeit.
- Gabszewicz, J. J., V. A. Ginsburgh, and S. Weber (2011). “Bilingualism and communicative benefits”. In: *Annals of Economics and Statistics / Annales d’Économie et de Statistique* **101-102**: 271–286.
- Ginsburgh, V. A., I. Ortuño-Ortín, and S. Weber (2007). “Learning foreign languages: Theoretical and empirical implications of the Selten and Pool model”. In: *Journal of Economic Behavior & Organization* **64**: 337–347.
- John, A. and K.-M. Yi (1997). *Language, learning, and location*. Research report. New York: Federal Reserve Bank of New York.
- Lazear, E. P. (1999). “Culture and language”. In: *Journal of Political Economy* **107**: S95–S126.
- Ortega, J. and G. Verdugo (2015). “Assimilation in multilingual cities”. In: *Journal of Population Economics* **28**: 785–815.
- Selten, R. and J. Pool (1991). “The distribution of foreign language skills as a game equilibrium”. In: *Game equilibrium models IV*. Edited by R. Selten. Berlin: Springer: 64–84.
- (1995). *Enkonduko en la teorion de lingvaj ludoj: Ĉu mi lernu esperanton?* Berlin: Akademia Libroservo.
- Swaan, A. de (2001). *Words of the world. The global language system*. Cambridge: Polity Press.

C.2.2.2 Language use

The type of approach found in the papers that belong to this category is very similar to what is found in C.2.2.1, except that the dependent variable is language use, rather than language learning; some also provide more descriptive accounts of the patterns of language use that emerge in work contexts.

- Alarcón, A. (2007). “Informacionalisme, globalització i trilingüisme. Una anàlisi de l’estadística sobre usos lingüístics a petites i mitjanes empreses de Catalunya”. In: *Noves SL. Revista de Sociolingüística*: Online. (See also: “Informationalism, globalisation and trilingualism. An analysis of the statistics of linguistic practices in small and medium companies in Catalonia”. In: *Noves SL. Revista de Sociolingüística*, 2007.)
- Andres, M., K. Korn, F. Barjak, A. Glas, A. Leukens, and R. Niederer (2005). *Fremdsprachen in Schweizer Betrieben. Eine Studie zur Verwendung von Fremdsprachen in der Schweizer Wirtschaft und deren Ansichten zu Sprachenpolitik und schulischer Fremdsprachenausbildung*. Research report. Solothurn: Fachhochschule Solothurn Nordwestschweiz, Hochschule für Wirtschaft.

- Chiswick, B. R. and P. W. Miller (1994). "Language choice among immigrants in a multi-lingual destination". In: *Journal of Population Economics* **7**: 119–131. (Reprint in: *The economics of language: International analyses*. Edited by B. R. Chiswick and P. W. Miller. New York: Routledge, 2007.)
- Clingingsmith, D. (2014). "Industrialization and bilingualism in India". In: *Journal of Human Resources* **49**: 73–109.
- Cremer, R. D. and M. J. Willes (1994). "Overcoming language barriers to international trade: A text-based study of the language of deals". In: *Journal of Asian Pacific Communication* **5**: 147–161.
- Dalmazzone, S. (1999). "Economics of language: A network externalities approach". In: *Exploring the economics of language*. Edited by A. Breton. New Canadian perspectives. Ottawa: Canadian Heritage: 63–87.
- Gazzola, M. (2010). "La valutazione della ricerca e l'internazionalizzazione dell'università: quali effetti sulla diversità linguistica?" In: *Plurilinguismo. Contatti di lingue e culture* **15**: 43–58.
- Ginsburgh, V. A. and J. Prieto-Rodriguez (2013). "Is there a gender bias in the use of foreign languages in Europe?" In: *Kyklos* **66**: 552–566.
- Grin, F. (1990). "The economic approach to minority languages". In: *Journal of Multilingual and Multicultural Development* **11**: 153–173.
- (2001). "The bilingual advertising decision". In: *Developing minority languages*. Edited by P. W. Thomas and J. Mathias. Cardiff: Gomer Press: 174–197.
- Güth, W., M. Strobel, and B.-A. Wickström (1997). "Equilibrium selection in linguistic games: Kial ni (ne) parolas esperanton?" In: *Understanding strategic interaction: Essays in honor of Reinhard Selten*. Edited by W. Albers, W. Güth, P. Hammerstein, B. Moldovanu, and E. Van Damme. Berlin: Springer: 257–269.
- Hocevar, T. (1975). "Equilibria on linguistic minority markets". In: *Kyklos* **28**: 337–357.
- (1983). "Les aspects économiques de la dynamique fonctionnelle des langues". In: *Language Problems & Language Planning* **7**: 135–147.
- Kralisch, A. (2003). *Business-language-Strategien im Internet*. Volume 1. Mosaicum scientiae. Regensburg: Christine Lindner - Haus des Buches.
- Laitin, D. D. (1993). "The game theory of language regimes". In: *International Political Science Review* **14**: 227–239.
- Lambert, R. D. (1990). "Foreign language use among international business graduates". In: *Annals of the American Academy of Political and Social Science* **511**: 47–59.

- Laur, E. (2004). “Parle-t-on ‘international’ dans les grandes entreprises au Québec? Quelques repères organisationnels sur l’emploi du français”. In: *Les pratiques linguistiques dans les entreprises à vocation internationale*. Québec: Secrétariat à la politique linguistique, Ministère de la culture et des communications: 67–83.
- Leblanc, M. (1992). *Estimation économétrique de la langue de travail des travailleurs francophones bilingues du Québec*. Master’s thesis. Montréal: Département d’Économie, Université de Montréal.
- MacLeod, M. (2009). “Gaelic language skills in the workplace”. In: *Language and economic development: Northern Ireland, the Republic of Ireland, and Scotland*. Edited by J. Kirk and D. Ó. Baoill. Belfast: Cló Ollscoil na Banríona (Queen’s University Press): 134–152.
- Mateo Aierza, M. (2004). “L’usage du basque dans les grandes entreprises de la communauté autonome basque”. In: *Les pratiques linguistiques dans les entreprises à vocation internationale*. Québec: Secrétariat à la politique linguistique, Ministère de la culture et des communications: 55–66.
- McGroarty, M. E. (1990). “Bilingualism in the workplace”. In: *Annals of the American Academy of Political and Social Science* **511**: 159–179.
- Nunberg, G. (1998). *Languages in the wired world*. Research report. Paris: The politics of language and the building of modern nations, Institut d’Etudes Politiques.
- (2000). “Will the internet always speak English?” In: *The American Prospect* **11**: 40–43. (Reprint in: *The economics of language*. Edited by D. M. Lamberton. Cheltenham: Edward Elgar, 2002.)
- Onofri, L., P. Nunes, J. Cenoz, and D. Gorter (2013). “Linguistic diversity and preferences: Econometric evidence from European cities”. In: *Journal of Economics and Econometrics* **56**: 39–60.
- Ramallo, F. and G. Rei Doval, editors (1996). *Vender en Galego. Comunicación, empresa e lingua en Galicia*. Santiago de Compostela: Consello da Cultura Galega.
- Uriarte Ayo, J. R. (2015 (?)). “Game-theoretic analysis of multilingual societies”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 23: forthcoming.
- Uriarte Ayo, J. R. and S. Sperlich (2015). “Economic theory and minority language”. In: *The economics of language policy*. Edited by M. Gazzola and B.-A. Wickström. Cambridge: MIT Press. Chapter 6: forthcoming.
- Vaillancourt, F. (1985). “Le choix de la langue de consommation”. In: *Economie et langue*. Edited by F. Vaillancourt. Québec: Conseil de la langue française: 209–220.
- Vaillancourt, F. and J. Carpentier (1989). *Le contrôle de l’économie du Québec: la place des francophones en 1987 et son évolution depuis 1961*. Montréal: Office de la langue française.

Vaillancourt, F., R. Champagne, and L. Lefebvre (1994). “L’usage du français au travail par les francophones du Québec: Une analyse économique”. In: *Langues et sociétés en contact*. Edited by P. Martel and J. Maurais. Tübingen: Niemeyer: 483–493.

C.2.2.3 Language dynamics

As in the two preceding categories (C.2.2.1 and C.2.2.2), the contributions listed here use economic reasoning and/or economic variables in their explanation of a linguistic process – in this case, the dynamics of language decline and language spread over time.

Abrams, D. M. and S. H. Strogatz (2003). “Modelling the dynamics of language death”. In: *Nature* **424**: 900.

Carr, J. (1985). “Le bilinguisme au Canada: l’usage consacre-t-il l’anglais monopole naturel?”. In: *Économie et langue*. Edited by F. Vaillancourt. Québec: Conseil de la langue française: 27–37.

Castelló, X., V. M. Eguíluz, M. San Miguel, L. Loureiro-Porto, R. Toivonen, J. Saramäki, and K. Kaski (2008). “Modelling language competition: Bilingualism and complex social networks”. In: *The evolution of language; Proceedings of the 7th international conference (EVOLANG7)*. Edited by A. D. M. Smith, K. Smith, and R. Ferrer i Cancho. Singapur: World Scientific: 59–66.

Castelló, X., V. Eguíluz, and M. San Miguel (2006). “Ordering dynamics with two non-excluding options: Bilingualism in language competition”. In: *New Journal of Physics* **8**: 308.

Castelló, X., L. Loureiro-Porto, V. M. Eguíluz, and M. San Miguel (2007). “The fate of bilingualism in a model of language competition”. In: *Advancing social simulation: The first world conference*. Edited by S. Takahashi, D. Sallach, and J. Rouchier. Tokyo: Springer-Verlag: 83–94.

Church, J. and I. King (1993). “Bilingualism and network externalities”. In: *Canadian Journal of Economics / Revue canadienne d’économie* **26**: 337–345.

Clingingsmith, D. (2015). “Are the world’s languages consolidating? The dynamics and distribution of language populations”. In: *The Economic Journal* **125**: forthcoming.

Fernando, C., R.-L. Valijärvi, and R. A. Goldstein (2010). “A model of the mechanisms of language extinction and revitalization strategies to save endangered languages”. In: *Human Biology* **82**: 47–75.

Gazzola, M. (2012). “The linguistic implications of academic performance indicators: General trends and case study”. In: *International Journal of the Sociology of Language* **216**: 131–156.

Goyal, S. and M. C. W. Janssen (1997). “Non-exclusive conventions and social coordination”. In: *Journal of Economic Theory* **77**: 34–57.

- Grin, F. (1992). “Towards a threshold theory of minority language survival”. In: *Kyklos* **45**: 69–97. (Reprint in: *The economics of language*. Edited by D. M. Lambertson. Cheltenham: Edward Elgar, 2002.)
- (1999). “Market forces, language spread and linguistic diversity”. In: *Language: A right and a resource. Approaching linguistic human rights*. Edited by M. Kontra, R. Phillipson, T. Skutnabb-Kangas, and T. Várady. Budapest: Central European University Press: 169–186.
- Heinsalu, E., M. Patriarca, and J. L. Léonard (2014). “The role of bilinguals in language competition”. In: *Advances in Complex Systems* **17**: 1450003.
- Iriberri, N. and J. R. Uriarte (2012). “Minority language and the stability of bilingual equilibria”. In: *Rationality and Society* **24**: 442–462.
- Ivanyna, M. (2007). *Multilingual societies, benevolent governments and dying languages*. Research report. Regensburg: Universität Regensburg.
- John, A. (2011). *Linguistic diversity in the very long run*. Research report. Melbourne: Melbourne Business School.
- (2015 (?)). “Dynamic models of language evolution: The economic perspective”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 3: forthcoming.
- Kennedy, P. and I. King (2005). *Dynamic language policy*. Research report. Dunedin: Department of Economics, University of Otago.
- Michalopoulos, S. (2012). “The origins of ethnolinguistic diversity”. In: *American Economic Review* **102**: 1508–1539.
- Minett, J. W. and W. S.-Y. Wang (2008). “Modelling endangered languages: The effects of bilingualism and social structure”. In: *Lingua* **118**: 19–45.
- Mira, J. and Á. Paredes (2005). “Interlinguistic similarity and language death dynamics”. In: *Europhysics Letters* **69**: 1031–1034.
- Nettle, D. (1998). “Explaining global patterns of language diversity”. In: *Journal of Anthropological Archaeology* **17**: 354–374.
- Olivier, J., M. Thoenig, and T. Verdier (2008). “Globalization and the dynamics of cultural identity”. In: *Journal of International Economics* **76**: 356–370.
- Patriarca, M., X. Castelló, J. R. Uriarte, V. M. Eguíluz, and M. San Miguel (2012). “Modeling two-language competition dynamics”. In: *Advances in Complex Systems* **15**.
- Patriarca, M. and T. Leppänen (2004). “Modeling language competition”. In: *Physica A* **338**: 296–299.
- Pool, J. (1991). “The world language problem”. In: *Rationality and Society* **3**: 78–105.

- Reksulak, M., W. F. Shughart II, and R. D. Tollison (2004). “Economics and English: Language growth in economic perspective”. In: *Southern Economic Journal* **71**: 232–259.
- Schulze, C., D. Stauffer, and S. Wichmann (2008). “Birth, survival and death of languages by Monte Carlo simulation: Reivew article”. In: *Communcations in Computational Physics* **3**: 271–294.
- Stauffer, D. and C. Schulze (2005). “Microscopic and macroscopic simulation of competition between languages”. In: *Physics of Life Reviews* **2**: 89–116.
- Wang, W. S.-Y. and J. W. Minett (2005). “The invasion of language: Emergence, change and death”. In: *Trends in Ecology and Evolution* **20**: 263–269.
- Wichmann, S. (2008). “The emerging field of language dynamics”. In: *Language and linguistics compass* **2**: 442–455.
- Wickström, B.-A. (2005). “Can bilingualism be dynamically stable? A simple model of language choice”. In: *Rationality and Society* **17**: 81–115.
- (2014). “Nachhaltiges Überleben von Minderheitensprachen: eine Übersicht einiger Modelle”. In: *Dogma und Evolution: Beiträge zum 60. Geburtstag von Dietmar Meyer*. Edited by J. Dötsch. Marburg: Metropolis-Verlag: 101–126.

C.2.2.4 Economics of translation

There are surprisingly few papers about the economics of translation. The contributions listed here assess the economic importance of the “language sector”, of which translation is a key component, and explore the role of different variables in the determination of supply, demand, and equilibrium on the market for translations.

- Chan, A. L. J. (2008). *Information economics, the translation profession and translator certification*. PhD thesis. Tarragona: Universitat Rovira i Virgili.
- Ginsburgh, V. A., S. Weber, and S. Weyers (2007). “Economics of literary translation: A simple theory and evidence”. In: *Poetics* **39**: 228–246.
- Heilbron, J. and G. Sapiro (2015 (?)). “Translation: Economic and sociological perspectives”. In: *The Palgrave handbook of economics and language*. Edited by V. A. Ginsburgh and S. Weber. Houndmills: Palgrave MacMillan. Chapter 13: forthcoming.
- Hjorth-Andersen, C. (2001). “A model of translations”. In: *Journal of Cultural Economics* **25**: 203–217.
- Language Technology Centre Ltd (2009). *Study on the size of the language industry - Study report to the Directorate General for Translation of the European Commission*. Brussels: European Commission.

- Mélitz, J. (2007). “The impact of English dominance on literature and welfare”. In: *Journal of Economic Behavior & Organization* **64**: 193–215.
- Pym, A. (1995). “Translation as a transaction cost”. In: *Meta: Translators’ Journal* **40**: 594–605.
- Pym, A., F. Grin, C. Sfreddo, and A. L. J. Chan (2013). *The status of the translation profession in the European Union*. London: Anthem Press.
- Tamura, R. (2001). “Translators: Market makers in merging markets”. In: *Journal of Economic Dynamics & Control* **25**: 1775–1800.