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**A concise bibliography of language  
economics**

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**REAL**

Research group “Economics and Language”  
Forschungsgruppe »Ökonomie und Sprache«

# A concise bibliography of language economics\*

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## 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.

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## 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 and applied linguistics, 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), BAYLEY, CAMERON, and LUCAS (2013), RICENTO (2006), RICENTO (2015), or SHOHAMY (2006). 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), ESAU (1973), or KELLER (1994). 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 economically relevant methods, they are not included in the list below.

Third, a recurring theme in language economics is that of “linguistic rights” and “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 (2016) ). 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 (2016), SONNTAG (2016), and ZENTZ (2016) 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.

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- COOPER, ROBERT L. (1989). *Language planning and social change*. Cambridge: Cambridge University Press.
- DE SCHUTTER, HELDER and LEA YPI (2012). "Language and luck". In: *Politics, Philosophy & Economics* **11**: 357–381.

- ESAU, HELMUT (1973). “Form and function of German adjective endings”. In: *Folia Linguistica* 6: 136–145.
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- RICENTO, THOMAS, editor (2015). *Language Policy and Planning*. Critical Concepts in Linguistics. New York: Routledge.
- ROMAINE, SUZANNE (2016). “Language and sustainable development: Integrating the economics of language policy with poverty reduction and biodiversity conservation”. In: *The economics of language policy*. Edited by MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 13.
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- SONNTAG, SELMA K. (2016). “English on the rise: Access and resources in internationalization”. In: *The economics of language policy*. Edited by MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 15.
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- SPOLSKY, BERNARD (2009). *Language management*. Cambridge: Cambridge University Press.
- SPOLSKY, BERNARD, editor (2012). *The Cambridge handbook of language policy*. Cambridge: Cambridge University Press.
- VAN PARIJS, PHILIPPE (2011). *Linguistic justice for Europe and for the world*. Oxford political theory. Oxford: Oxford University Press.



ZENTZ, LAUREN (2016). “English on the rise: Access and resources in internationalization”. In: *The economics of language policy*. Edited by MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 14.

## 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, PAUL (2003). “21st century trends in language and economics”. In: *Current Issues in Language Planning* **4**: 84–90.

GAZZOLA, MICHELE, FRANÇOIS GRIN, and FRANÇOIS VAILLANCOURT (2015). *Evaluating language policy and planning: An introduction to the economic approach*. Research report 15-4. Berlin: REAL, Humboldt-Universität zu Berlin.

GINSBURGH, VICTOR A. and SHLOMO WEBER, editors (2016). *The Palgrave handbook of economics and language*. Houndmills: Palgrave Macmillan.

GRIN, FRANÇOIS (1994). “The economics of language: Match or mismatch?” In: *International Political Science Review* **15**: 25–42.

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GRIN, FRANÇOIS (1996b). “The economics of language: Survey, assessment, and prospects”. In: *International Journal of the Sociology of Language* **121**: 17–44.

GRIN, FRANÇOIS (2003a). “Diversity as a paradigm, analytical device, and policy goal”. In: *Language rights and political theory*. Edited by WILL KYMLICKA and ALAN PATTEN. Oxford: Oxford University Press: 169–188.

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- WICKSTRÖM, BENGT-ARNE (2009). “Ökonomie und Sprache”. In: *Interlinguistische Informationen Beiheft* 16: 137–156.
- ZHANG, WEIGUO [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, WEIGUO [张卫国] (2011). “语言, 及其起源与变迁: 一种制度经济学的解释 (Language, its origin and change: An explanation by institutional economics)”. In: *制度经济学研究 (Research of Institutional Economics)* 34: 1–32.

ZHANG, WEIGUO and GILLES 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 specialty; 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, AMADO (2011). “Economia de la llengua”. In: *Treballs de Sociolingüística Catalana* 21: 19–27.

CHISWICK, BARRY R. and PAUL W. MILLER, editors (2007). *The economics of language: International analyses*. New York: Routledge.

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MORA, MARIE 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.*

DEMICHELI, STEFANO and JÖRGEN W. WEIBULL (2008). “Language, meaning, and games: A model of communication, coordination, and evolution”. In: *American Economic Review* **98**: 1292–1311.

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

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

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

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

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

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## 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).*

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## 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”.<sup>1</sup> This makes up the lion’s share of language economics.*

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

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

### 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.*

<sup>1</sup> Note 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.1.1 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.*

ADSERÀ, ALÍCIA and MARIOLA PYTLIKOVÁ (2015). “The role of language in shaping international migration”. In: *Economic Journal* **125**: F49–F81. Research report.

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ANGERER, SILVIA, DANIELA GLÄTZLE-RÜTZLER, PHILIPP LERGETPORER, and MATTHIAS SUTTER (2015). *Cooperation and discrimination within and across language borders: Evidence from children in a bilingual city*. Research report 9039. Bonn: Forschungsinstitut zur Zukunft der Arbeit.

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CHISWICK, BARRY R. and PAUL W. MILLER (2016). *Does bilingualism among the native born pay?* Research report 9791. Bonn: Forschungsinstitut zur Zukunft der Arbeit.

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

SUTTER, MATTHIAS, SILVIA ANGERER, DANIELA GLÄTZLE-RÜTZLER, and PHILIPP LERGETPORER (2015). *The effect of language on economic behavior: Experimental evidence from children’s intertemporal choices*. Research report 5532. München: CESifo.

#### 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, RAMON (2016). “The economic value of reciprocal bilingualism”. In: *The economics of language policy*. Edited by MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 5.
- CUESTA, BRANDON DE LA and LEONARD WANTCHEKON (2016). “Is language destiny? The origins and consequences of ethnolinguistic diversity in sub-Saharan Africa”. In: *The Palgrave handbook of economics and language*. Edited by VICTOR A. GINSBURGH and SHLOMO WEBER. Houndmills: Palgrave Macmillan. Chapter 18: 513–537.
- DESMET, KLAUS, IGNACIO ORTUÑO-ORTÍN, and ROMAIN WACZIARG (2016). “Linguistic cleavages and economic development”. In: *The Palgrave handbook of economics and language*. Edited by VICTOR A. GINSBURGH and SHLOMO WEBER. Houndmills: Palgrave Macmillan. Chapter 15: 425–446.
- DESMET, KLAUS, IGNACIO ORTUÑO-ORTÍN, and SHLOMO WEBER (2009). “Linguistic diversity and redistribution”. In: *Journal of European Economic Association* 7: 1291–1318.
- GINSBURGH, VICTOR A. and SHLOMO WEBER (2016). “Linguistic diversity, standardization and disenfranchisement: Measurement and consequences”. In: *The economics of language policy*. Edited by MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 3.
- GRIN, FRANÇOIS (1994). “L’identification des bénéfices de l’aménagement linguistique: la langue comme actif naturel”. In: *Sociolinguistique et aménagement des langues*. Edited by CATHERINE PHILIPPONNEAU and BOUDREAU A. Moncton: Centre de Recherche en Linguistique Appliquée, Université de Moncton: 67–101.
- JONES, ERIC (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, JOE (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, REBECCA and STEPHEN 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, JAVIER and THOMAS P. TANGERÅS (2008). “Unilingual versus bilingual education: A political economy analysis”. In: *Journal of the European Economic Association* **6**: 1078–1108.

OTTAVIANO, GIANMARCO I.P. and GIOVANNI PERI (2005). “Cities and cultures”. In: *Journal of Urban Economics* **58**: 304–337.

WANG, CONG and BODO STEINER (2015). “Can ethno-linguistic diversity explain cross-country differences in social capital? A global perspective”. In: *Economic Record* **91**: 338–366.

WEIZMAN, MARTIN (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, ALBERTO and ELENA LA FERRARA (2005). “Ethnic diversity and economic performance”. In: *Journal of Economic Literature* **43**: 762–800.

APARICIO-FENOLL, AINHOA and ZOË KUEHN (2016). “Does foreign language proficiency foster migration of young individuals within the European Union?” In: *The economics of language policy*. Edited by MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 10.

ARCAND, JEAN-LOUIS (1996). “Development economics and language: The earnest search for a mirage”. In: *International Journal of the Sociology of Language* **121**: 119–157.

- ARCAND, JEAN-LOUIS and FRANÇOIS GRIN (2013). “Language in economic development: Is English special and is linguistic fragmentation bad?” In: *English and development. Policy, pedagogy and globalization*. Edited by ELIZABETH J. ERLING and PHILIP SEARGEANT. Bristol: Multilingual Matters: 243–266.
- ARCAND, JEAN-LOUIS, PATRICK GUILLAUMONT, and SYLVIANE 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, QUAMRUL and ODED GALOR (2013). “Genetic diversity and the origins of cultural fragmentation”. In: *American Economic Review* **103**: 528–533.
- BRETON, ALBERT (1998). “The economic analysis of language”. In: *Economic approaches to language and bilingualism*. Edited by ALBERT BRETON. Ottawa: Canadian Heritage: 1–34.
- BUZASI, KATALIN (2015). “Languages, communication potential and generalized trust in Sub-Saharan Africa: Evidence based on the Afrobarometer Survey”. In: *Social Science Research* **49**: 141–155.
- BUZASI, KATALIN (2016). “Languages and national identity in Sub-Saharan Africa: A multilevel approach”. In: *The economics of language policy*. Edited by MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 7.
- CARRÈRE, CÉLINE and MARIA 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, ALBERTO, JORGE GUILLEN, and VANESSA RIOS (2010). “Language nuances and socioeconomic outcomes”. In: *American Journal of Economics and Sociology* **69**: 693–716.
- DEBAERE, PETER MARCEL, HONGSHIK LEE, and JOONHYUNG LEE (2013). “Language, ethnicity and intrafirm trade”. In: *Journal of Development Economics* **103**: 244–253. Research report.
- DUSTMANN, CHRISTIAN and ARTHUR 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, WILLIAM and ROSS LEVINE (1997). “Africa’s growth tragedy: Policies and ethnic divisions”. In: *The Quarterly Journal of Economics* **112**: 1203–1250.
- EGGER, PETER H. and ANDREA LASSMANN (2012). “The language effect in international trade: A meta-analysis”. In: *Economics Letters* **116**: 221–224.
- EGGER, PETER H. and ANDREA LASSMANN (2015). “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, PETER H. and ANDREA LASSMANN (2016). “Cultural integration and export variety overlap across countries”. In: *The economics of language policy*. Edited by MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 11.
- EGGER, PETER H. and FARID TOUBAL (2016). “Common spoken language and international trade”. In: *The Palgrave handbook of economics and language*. Edited by VICTOR A. GINSBURGH and SHLOMO WEBER. Houndmills: Palgrave Macmillan. Chapter 9: 263–289.
- ESPERANÇA, JOSÉ PAULO (2008). *An eclectic approach to language valuation: The global Influence of the Portuguese language*. Lisboa: Instituto Camões.
- FALCK, OLIVER, STEPHAN HEBLICH, ALFRED LAMELI, and JENS SÜDEKUM (2012). “Dialects, cultural identity, and economic exchange”. In: *Journal of Urban Economics* **72**: 225–239.
- FEARON, JAMES D. (2003). “Ethnic and cultural diversity by country”. In: *Journal of Economic Growth* **8**: 195–223.
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- FOREMAN-PECK, JAMES (2007). “Costing Babel: The contribution of language skills to exporting and productivity”. In: *Quarterly Economic Bulletin* **28**: 20–28.
- FOREMAN-PECK, JAMES and YI WANG (2014). *The costs to the UK of language deficiencies as a barrier to UK engagement in exporting: A report to UK Trade & Investment*. Research report. Cardiff: Cardiff Business School, Cardiff University.

- GARCÍA DELGADO, JOSÉ LUIS, JOSÉ ANTONIO ALONSO, and JUAN CARLOS JIMÉNEZ (2007). *Economía del español. Una introducción*. Madrid: Ariel.
- GRINBLATT, MARK and MATTI KELOHARJU (2001). “How distance, language, and culture influence stockholdings and trades”. In: *The Journal of Finance* **56**: 1053–1073.
- GUO, RONGXING (2007). “Linguistic and religious influences on foreign trade: Evidence from East Asia”. In: *Asian Economic Journal* **21**: 101–121.
- HELLIWELL, JOHN F. (1999). “Language and trade”. In: *Exploring the economics of language*. Edited by ALBERT BRETON. Ottawa: Canadian Heritage: 5–30.
- HUGHES, EVERETT C. and MARGARET 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, WILLIAM K. (2002). “Does ease of communication increase trade? Commonality of language and bilateral trade”. In: *Scottish Journal of Political Economy* **49**: 544–556.
- HUTCHINSON, WILLIAM K. (2005). “‘Linguistic distance’ as a determinant of bilateral trade”. In: *Southern Economic Journal* **72**: 1–15.
- ISPHORDING, INGO EDUARD and SEBASTIAN OTTEN (2013). “The costs of Babylon: Linguistic distance in applied economics”. In: *Review of International Economics* **21**: 354–369.
- JAIN, TARUN (2011). *Common tongue: The impact of language on economic performance*. Research report 34423. München: Munich Personal Research Papers in Economics Archive (MPRA).
- KIM, MOONHAWK, AMY H. LIU, KIM-LEE TUXHORN, DAVID S. BROWN, and DAVID LEBLANG (2015). “Lingua mercatoria: Language and foreign direct investment”. In: *International Studies Quarterly* **59**: 330–343.
- KU, HYEJIN and ASAF ZUSSMAN (2010). “Lingua franca: The role of English in international trade”. In: *Journal of Economic Behavior & Organization* **75**: 250–260.

- LAMELI, ALFRED, VOLKER NITSCH, JENS SÜDEKUM, and NIKOLAUS WOLF (2015). “Same same but different: Dialects and trade”. In: *German Economic Review* **16**: 290–306.
- LEE, CHEW GING (2012). “English language and economic growth: Cross-country empirical evidence”. In: *Journal of Economic and Social Studies* **2**: 5–20.
- LIEN, DONALD and CATHERINE YAP 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, DONALD, CHANG HOON OH, and W. TRAVIS 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.
- LOHMANN, JOHANNES (2011). “Do language barriers affect trade?” In: *Economics Letters* **110**: 159–162.
- MARTÍN MUNICIO, ÁNGEL, editor (2003). *El valor económico de la lengua española*. Madrid: Espasa.
- MÉLITZ, JACQUES (2008). “Language and foreign trade”. In: *European Economic Review* **52**: 667–699.
- MÉLITZ, JACQUES (2012). *A framework for analyzing language and welfare*. Research report 2012-89. Edinburgh: Scottish institute for research in economics.
- MÉLITZ, JACQUES (2016). “English as a global language”. In: *The Palgrave handbook of economics and language*. Edited by VICTOR A. GINSBURGH and SHLOMO WEBER. Houndmills: Palgrave Macmillan. Chapter 20: 583–615.
- MÉLITZ, JACQUES and FARID TOUBAL (2014). “Native language, spoken language, translation and trade”. In: *Journal of International Economics* **93**: 351–363.
- NETTLE, DANIEL (2000). “Linguistic fragmentation and the wealth of nations: The Fishman-Pool hypothesis reexamined”. In: *Economic Development and Cultural Change* **48**: 335–348.
- NOGUER, MARTA and MARC SISCART (2003). *Language as a barrier to international trade? An empirical investigation*. Research report. New York: Columbia University.

OH, CHANG HOON, W. TRAVIS SELMIER, and DONALD LIEN (2011). “International trade, foreign direct investment, and transaction costs in languages”. In: *The Journal of Socio-Economics* **40**: 732–735.

STANLEY, JOHN, DAVID INGRAM, and GARY CHITTICK (1990). *The relationship between international trade and linguistic competence*. Canberra: Department of Employment, Education and Training.

STURM, JAN-EGBERT and JACOB 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).*

ARAÚJO, LUÍSA, PATRÍCIA DINIS DA COSTA, SALVO FLISI, and ELENA SOTO CALVO (2015). *Language and employability*. Research report. Luxembourg: European Commission Joint Research Centre.

BRAZEAU, E. JACQUES (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, KENNETH and STEPHEN J. DRINKWATER (2000). “Pushed out or pulled in? Self-employment among ethnic minorities in England and Wales”. In: *Labor Economics* **7**: 603–628.

CONNELL, TIM J. (2002). *Languages and employability. A question of careers*. Research report. London: City University.

DRINKWATER, STEPHEN J. and N. C. O'LEARY (1997). “Unemployment in Wales: Does language matter?” In: *Regional Studies* **31**: 583–591.

ESSER, HARTMUT (2006). *Migration, Sprache und Integration*. Berlin: Arbeitsstelle interkulturelle Konflikte und gesellschaftliche Integration, Wissenschaftszentrum Berlin für Sozialforschung.

- FIXMAN, CAROL 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, SCOTT, PREM N. SHAMDASANI, and ELLEN E. TOUCHSTONE (1994). “Exploring language effects in ethnic advertising: A sociolinguistic perspective”. In: *The Journal of Consumer Research* **20**: 575–585.
- KRISHNA, ARADHNA and ROHINI AHLUWALIA (2008). “Language choice in advertising to bilinguals: Asymmetric effects for multinational versus local firms”. In: *Journal of Consumer Research* **35**: 692–705.
- LIGHT, IVAN and STEVEN GOLD (2000). *Ethnic economics*. San Diego: Academic Press.
- MARSCHAN-PIEKKARI, REBECCA, DENICE WELCH, and LAWENCE 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, ANDRÉ and FRANÇOIS VAILLANCOURT (1984). *L'appartenance des entreprises : le cas du Québec en 1978*. Québec: Conseil de la langue française.
- REEVES, NIGEL 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.
- RENDON, SÍLVIO (2007). “The Catalan premium: Language and employment in Catalonia”. In: *Journal of Population Economics* **20**: 669–686.
- VAILLANCOURT, FRANÇOIS and LUC VAILLANCOURT (2005). *La propriété des employeurs au Québec en 2003 selon le groupe d'appartenance linguistique*. Québec: Conseil de la langue française.
- WARD, ROBIN and RICHARD 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 per-*

son'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, AMADO, ANTONIO DI PAOLO, JOSIAH HEYMAN, and MARIA CRISTINA 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.

ALARCÓN, AMADO, ANTONIO DI PAOLO, JOSIAH HEYMAN, and MARIA CRISTINA MORALES (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, KEVIN and NICOLA FUCHS-SCHÜNDELN (2012). "The role of borders, languages, and currencies as obstacles to labor market integration". In: *European Economic Review* **56**: 1148–1163.

BLÁZQUEZ, MAITE and SILVIO RENDÓN (2014). "Over-education in multilingual economies: Evidence from Catalonia". In: *International Migration* **52**: 149–164.

CHISWICK, BARRY R. and PAUL 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, AMALIE F. and KLAUS F. ZIMMERMANN (2009). "Work and money: Payoffs by ethnic identity and gender". In: *Research in Labor Economics* **29**: 3–30.



- CONSTANT, AMELIE F., MARTIN KAHANEC, and KLAUS F. ZIMMERMANN (2012). “The Russian-Ukrainian earnings divide”. In: *Economics of Transition* **20**: 1–35.
- COOMER, NICOLE M. (2011). “Returns to bilingualism in the nursing labor market. Demand or ability?” In: *The Journal of Socio-Economics* **40**: 274–284.
- DUSTMANN, CHRISTIAN and ARTHUR VAN SOEST (2001). “Language fluency and earnings: Estimation with misclassified language indicators”. In: *Review of Economics and Statistics* **83**: 663–674.
- FRY, RICHARD and LINDSAY LOWELL (2003). “The value of bilingualism in the U.S. labour market”. In: *Industrial and Labor Relations Review* **57**: 128–140.
- GONZÁLEZ, LIBERTAD (2005). “Nonparametric bounds on the returns to language skills”. In: *Journal of Applied Econometrics* **20**: 771–795.
- GRENIER, GILLES (1982). *Language as human capital: Theoretical framework and application to Spanish-speaking Americans*. PhD thesis. Princeton: Princeton University.
- KLEIN, CARLO (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, KEVIN (1986). “A language theory of discrimination”. In: *The Quarterly Journal of Economics* **101**: 363–382.
- MAVISAKALYAN, ASTGHIK (2015). “Gender in language and gender in employment”. In: *Oxford Development Studies* **43**: 403–424.
- PENDAKUR, KRISHNA and RAVI PENDAKUR (2002). “Language as both human capital and ethnicity”. In: *International Migration Review* **36**: 147–177.
- POPE, DEVIN G. (2008). “Benefits of bilingualism: Evidence from Mormon missionaries”. In: *Economics of Education Review* **27**: 234–242.
- RAYNAULD, ANDRÉ and PIERRE MARION (1972). “Une analyse économique de la disparité inter-ethnique des revenus”. In: *Revue économique* **23**: 1–19.
- SAIZ, ALBERT and ELENA ZOIDO (2004). “Curriculum mandates and skills in adulthood: The case of foreign languages”. In: *Economics Letters* **84**: 1–8.

TREJO, STEPHEN J. (1997). “Why do Mexican Americans earn low wages?” In: *Journal of Political Economy* **105**: 1235–1268.

C.1.1.4.1 *Indigenous labor*

ALBOUY, DAVID (2008). “The wage gap between Francophones and Anglophones: A Canadian perspective, 1970–2000”. In: *Canadian Journal of Economics / Revue canadienne d'économique* **41**: 1211–1238.

ALDASHEV, ALISHER and ALEXANDER 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, MEHTABUL, AIMEE CHIN, and NISHITH PRAKASH (2013). “The returns to English-language skills in India”. In: *Economic Development and Cultural Change* **61**: 335–367.

BAKER, MICHAEL and GILLIAN HAMILTON (2000). “Écart salariaux entre francophones et anglophones à Montréal au 19e siècle”. In: *L'Actualité économique* **76**: 75–111.

BÉLAND, NICOLAS, ÉRIC FORGUES, and MAURICE 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, DAVID E. and GILLES 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 BARRY CHISWICK. Washington: The AEI Press: 373–409.

BLOOM, DAVID E. and GILLES 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.K. CRAWFORD. Chicago: University of Chicago Press: 445–451.

BOROOAH, VANI, DONAL DINEEN, and NICOLA LYNCH (2009). *Language and occupational status: Linguistic elitism in the Irish labour market*. Dublin: Economic and Social Research Institute.

BOULET, JAC-ANDRÉ (1980). *Language and earnings in Montreal*. Ottawa: Economic Council of Canada.

- CAPPELLARI, LORENZO and ANTONIO DI PAOLO (2015). *Bilingual schooling and earnings: Evidence from a language-in-education reform*. Research report 9431. Bonn: Institut zur Zukunft der Arbeit.
- CARLINER, GEOFFREY (1976). “Returns to education for Blacks, Anglos and five Spanish groups”. In: *Journal of Human Resources* **11**: 172–184.
- CARLINER, GEOFFREY (1981). “Wage differences by language group and the market for language skills in Canada”. In: *The Journal of Human Resources* **16**: 384–399.
- CASALE, DANIELA (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, ALEJANDRA and RAINER WINKELMANN (2005). “Earnings differentials between German and French speakers in Switzerland”. In: *Schweizerische Zeitschrift für Volkswirtschaft und Statistik* **141**: 191–212.
- CHRISTOFIDES, LOUIS N. and ROBERT SWIDINSKY (1998). “Bilingualism and earnings: A study based on 1971, 1981 and 1991 census data”. In: *Economic approaches to language and bilingualism*. Edited by ALBERT BRETON. Ottawa: Canadian Heritage: 123–185.
- CHRISTOFIDES, LOUIS N. and ROBERT SWIDINSKY (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, KATY (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, ANTONIO and AYSIT 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, VICTOR A. and JUAN PRIETO-RODRIGUEZ (2007). “La prima salarial de las lenguas extranjeras en el mercado de trabajo español”. In: *Cuadernos Economicos del ICE*: 129–146.
- GINSBURGH, VICTOR A. and JUAN PRIETO-RODRIGUEZ (2011). “Returns to foreign languages of native workers in the EU”. In: *Industrial and Labor Relations Review* **64**: 599–618.
- GODOY, RICARDO, VICTORIA REYES-GARCÍA, CRAIG SEYFRIED, TOMÁS HUANCA, WILLIAM R. LEONARD, THOMAS MCDADE, SUSAN TANNER, and VINCENT 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, GILLES (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'économique* **20**: 774–791.
- GRENIER, GILLES and GUY LACROIX (1986). “Les revenus et la langue: le cas de la capitale nationale”. In: *L'Actualité économique* **62**: 365–384.
- GRENIER, GILLES and SERGE NADEAU (2016). “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 MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 8.
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#### **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.*

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## 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).*

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### 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.*

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### **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, BRINDUSA, ANTONIO CABRALES, and JESUS 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, JOSHUA D. and VICTOR 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, JOSHUA, AIMEE CHIN, and RICARDO GODOY (2008). “Is Spanish-only schooling responsible for the Puerto Rican language gap?” In: *Journal of Development Economics* **85**: 105–128.

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- LOCAY, LUIS, TRACY L. REGAN, and ARTHUR M. DIAMOND (2013). "The effects of Spanish-language background on completed schooling and aptitude test scores". In: *Economic Inquiry* **51**: 527–562.
- PARKER, SUSAN W., LUIS RUBALCAVA, and GRACIELA TERUEL (2005). "Schooling inequality and language barriers". In: *Economic Development and Cultural Change* **54**: 71–94.
- RAMACHANDRAN, RAJESH (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, SABINE, 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.*

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- COCHE, OLIVIER, FRANÇOIS VAILLANCOURT, MARC-ANTOINE CADIEUX, and JAMIE LEE RONSON (2012). *Official language policies of the Canadian provinces: Costs and benefits in 2006*. Vancouver: Fraser Institute.
- COLOMER, JOSEP M. (1990). "The utility of bilingualism: A contribution to a rational choice model of language". In: *Rationality and Society* **2**: 310–334.

- COLOMER, JOSEP M. (1996). *La utilitat del bilingüisme*. Barcelona: Edicions 62.
- DESGAGNÉ, MAXIME LEBLANC and FRANÇOIS VAILLANCOURT (2016). “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 MICHELE GAZZOLA and BENGT-ARNE WICKSTRÖM. Cambridge: MIT Press. Chapter 4.
- DI PIETRANTONIO, SARA (2012). *L’insegnamento delle lingue straniere come politica pubblica: il caso italiano*. Master’s thesis. L’Aquila: Università degli Studi dell’Aquila.
- FALQUET, GILLES and FRANÇOIS GRIN (2008). “Free software, proprietary software and linguistic justice”. In: *Intellectual property and theories of justice*. Edited by AXEL GOSSERIES, ALAIN MARCIANO, and ALAIN STROWEL. Houndmills: Palgrave Macmillan: 277.
- FIDRMUC, JAN, VICTOR A. GINSBURGH, and SHLOMO 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).
- FIDRMUC, JAN, VICTOR A. GINSBURGH, and SHLOMO WEBER (2009). “Voting on the choice of core languages in the European Union”. In: *European Journal of Political Economy* **25**: 56–62.
- GAZZOLA, MICHELE (2011). “Conti precisi sull’importanza economica delle lingue nei brevetti industriali”. In: *La Crusca per Voi* **42**: 8–10.
- GAZZOLA, MICHELE (2012). “Perché l’anglicizzazione completa dei programmi universitari è inefficace e iniqua”. In: *Fuori l’italiano dall’università? Inglese, internazionalizzazione, politica linguisticam*. Edited by NICOLETTA MARASCHIO and DOMENICO DE MARTINO. Roma: Laterza: 87–94.
- GAZZOLA, MICHELE (2014a). “Il multilinguismo svizzero nel sistema europeo dei brevetti”. In: *Babylonia*: 54–57.
- GAZZOLA, MICHELE (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.

- GAZZOLA, MICHELE (2014c). “Lingva justeco: kiel taksi ĝin? La ekzemplo de Eŭropa Unio”. In: *Internacia Kongresa Universitato, 67-a sesio*. Edited by JOSÉ-ANTONIO VERGARA. Rotterdam: Universala Esperanto-Asocio: 74–89.
- GAZZOLA, MICHELE (2015a). *Multilinguisme et équité : l’impact d’un changement de régime linguistique européen en Espagne, France et Italie*. Research report 4. Amsterdam: Amsterdam Working Papers in Multilingualism.
- GAZZOLA, MICHELE (2015b). “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. SIEBETCHEU. Roma: Bulzoni: 67–84.
- GAZZOLA, MICHELE and ALESSIA 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, FRANÇOIS (1997). “Gérer le plurilinguisme européen: approche économique au problème de choix”. In: *Sociolinguistica: Internationales Jahrbuch für europäische Soziolinguistik*. Edited by ULRICH AMMON, JEROEN DARQUENNES, and SUE WRIGHT. Volume 11. Berlin: De Gruyter: 1–15.
- GRIN, FRANÇOIS (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.
- GRIN, FRANÇOIS (2004b). “On the costs of cultural diversity”. In: *Cultural diversity versus economic solidarity: Is there a tension? How must it be resolved?* Edited by PHILIPPE VAN PARIJS. Bibliothèque scientifique Francqui 6. Bruxelles: De Boeck Université: 189–202.
- GRIN, FRANÇOIS (2005). *L’enseignement des langues étrangères comme politique publique*. Paris: Haut Conseil de l’évaluation de l’école. [Translated as: FRANÇOIS GRIN. *L’insegnamento delle lingue straniere come politica pubblica*. Roma: “Esperanto” Radikala Asocio, 2009.].
- GRIN, FRANÇOIS and FRANÇOIS 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, FRANÇOIS and FRANÇOIS VAILLANCOURT (2002). “Minority self-governance in economic perspective”. In: *Minority governance in Europe*. Edited by KINGA GÁL. LGI/ECMI series on ethnopolitics and minority issues. Budapest: LGI Books: 73–86.
- HARHOFF, DIETMAR, KARIN HOISL, BRUNO VAN POTTELSBERGHE DE LA POTTERIE, and CHARLOTTE VANDEPUT (2016). “Languages, fees and the international scope of patenting”. In: *The Palgrave handbook of economics and language*. Edited by VICTOR A. GINSBURGH and SHLOMO WEBER. Houndmills: Palgrave Macmillan. Chapter 14: 403–422.
- HARHOFF, DIETMAR, KARIN HOISL, BETTINA REICHL, and BRUNO 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, OTTO (2004). “The price of a common language”. In: *Begegnungen* **22**: 215–222.
- LIU, AMY H., ANDREW B. KIRKPATRICK, and DONALD M. BEAUDETTE (2014). “Linguistic competition and education spending in Spain 1992–2008”. In: *The Social Science Journal* **51**: 139–147.
- LUKÁCS, ÁRON (2007). *Economic aspects of language inequality*. PhD thesis. Tatabánya: College for Modern Business Studies.
- MÜHLHÄUSLER, PETER and RICHARD DAMANIA (2004). *Economic costs and benefits of Australian indigenous languages*. Research report. Canberra: Australian Government Aboriginal and Torres Strait Islander Services (ATSIS).
- PATRINOS, HARRY ANTHONY and EDUARDO VELEZ (2009). “Costs and benefits of bilingual education in Guatemala: A partial analysis”. In: *International Journal of Educational Development* **29**: 594–598.
- POOL, JONATHAN (1987). “Thinking about linguistic discrimination”. In: *Language Problems & Language Planning* **11**: 3–21.
- PORTUESE, AURÉLIEN (2012). “Law and economics of the European multilingualism”. In: *European Journal of Law and Economics* **34**: 279–325.
- SELTEN, REINHARD, editor (1997). *La kostoj de la eŭropa lingva (ne-)komunikado*. Rome: “Esperanto” Radikala Asocio.

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- VAILLANCOURT, FRANÇOIS and OLIVIER COCHE (2009). *Les politiques fédérales en matière de langues officielles au Canada : coûts et avantages en 2006*. Vancouver: Institut Fraser. [See also: FRANÇOIS VAILLANCOURT and OLIVIER COCHE. *Official language policies at the federal level in Canada: Costs and benefits in 2006*. Vancouver: Fraser Institute, 2009.].
- VAN PARIJS, PHILIPPE (2011). *Linguistic justice for Europe and for the world*. Oxford political theory. Oxford: Oxford University Press.
- WICKSTRÖM, BENGT-ARNE (1997). “Kio estas kostoj kaj utilo de lingvouzo?” In: *La kostoj de la eŭropa lingva (ne-)komunikado*. Edited by REINHARD SELTEN. Roma: “Esperanto” Radikala Asocio: 5–13.
- WICKSTRÖM, BENGT-ARNE (2007). “Fairness, rights, and language rights: On the fair treatment of linguistic minorities”. In: *Public economics and public choice*. Edited by PIO BAAKE and RAINALD BORCK. Berlin: Springer: 81–101.
- WICKSTRÖM, BENGT-ARNE (2010). “Lingvaj rajtoj kaj lingva justeco”. In: *La arto labori kune: Festlibro por Humphrey Tonkin*. Edited by DETLEV BLANKE and ULRICH LINS. Rotterdam: Universala Esperanto-Asocio: 97–103.
- WICKSTRÖM, BENGT-ARNE (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 FRANCISCO CABRILLO and MIGUEL PUCHADES-NAVARRO. New thinking in political economy. Cheltenham: Edward Elgar. Chapter 18: 322–344.
- WICKSTRÖM, BENGT-ARNE (2014). “Indigenes, immigration, and integration: A welfare-economics approach to minority rights”. In: *A handbook of alternative theories of public economics*. Edited by FRANCESCO FORTE, RAM MUDAMBI, and PIETRO MARIA NAVARRA. Cheltenham: Edward Elgar. Chapter 10: 227–242.
- WICKSTRÖM, BENGT-ARNE (2015). “Language rights: Efficiency, justice, implementation”. In: *Transylvanian Society / Erdélyi Társadalom* 13: 69–83.

WICKSTRÖM, BENGT-ARNE (2016). “Language rights: A welfare-economics approach”. In: *The Palgrave handbook of economics and language*. Edited by VICTOR A. GINSBURGH and SHLOMO WEBER. Houndmills: Palgrave Macmillan. Chapter 22: 659–688.

#### 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, STÉPHANIE, EMILIE KOBELT, and DANIEL 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, EFTHYMIOS, JUAN MORENO-TERNERO, and SHLOMO WEBER (2016). “Language learning and communicative benefits”. In: *The Palgrave handbook of economics and language*. Edited by VICTOR A. GINSBURGH and SHLOMO WEBER. Houndmills: Palgrave Macmillan. Chapter 7: 212–230.

BRETON, ALBERT and PETER MIESZKOWSKI (1977). “The economics of bilingualism”. In: *The political economy of fiscal federalism*. Edited by WALLACE E. OATES. Lexington: Lexington Books: 261–273.

FIDRMUC, JAN and VICTOR A. GINSBURGH (2007). “Languages in the European Union: The quest for equality and its cost”. In: *European Economic Review* **51**: 1351–1369.

FIDRMUC, JAN, VICTOR A. GINSBURGH, and SHLOMO WEBER (2004). “Le français, deuxième langue de l’Union européenne?” In: *Économie publique* **15**: 43–63.

FIDRMUC, JAN, VICTOR A. GINSBURGH, and SHLOMO WEBER (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 DOMINIK HANF, KLAUS MALACEK, and ELISE MUIR. Bruxelles: Peter Lang: 259–279.

- GAZZOLA, MICHELE (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 AUGUSTO CARLI. Milano: Franco Angeli: 17–117.
- GAZZOLA, MICHELE (2006b). “Managing multilingualism in the European Union: Language policy evaluation for the European Parliament”. In: *Language Policy* **5**: 393–417.
- GAZZOLA, MICHELE (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.
- GAZZOLA, MICHELE (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.
- GAZZOLA, MICHELE (2014c). *The evaluation of language regimes. Theory and application to multilingual patent organisations*. Amsterdam: John Benjamins.
- GAZZOLA, MICHELE (2015). “Identifying and mitigating linguistic inequalities in the management of patent information in Europe”. In: *World Patent Information* **40**: 43–50.
- GAZZOLA, MICHELE and FRANÇOIS GRIN (2007). “Assessing efficiency and fairness in multilingual communication: Towards a general analytical framework”. In: *AILA Review* **20**: 87–105.
- GAZZOLA, MICHELE and FRANÇOIS GRIN (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, VICTOR A., IGNACIO ORTUÑO-ORTÍN, and SHLOMO WEBER (2005). “Disenfranchisement in linguistically diverse societies. The case of the European Union”. In: *Journal of the European Economic Association* **3**: 946–965.
- GINSBURGH, VICTOR A. and SHLOMO WEBER (2005). “Language disenfranchisement in the European Union”. In: *Journal of Common Market Studies* **43**: 273–286.



- GINSBURGH, VICTOR A. and SHLOMO WEBER (2011). *How many languages do we need? The economics of linguistic diversity*. Princeton: Princeton University Press.
- GRIN, FRANÇOIS (1996). “Conflit ethnique et politique linguistique”. In: *Relations Internationales* **88**: 381–396.
- GRIN, FRANÇOIS (2008). “Principles of policy evaluation and their application to multilingualism in the European Union”. In: *Respecting linguistic diversity in the European Union*. Edited by XABIER ARZOZ. Amsterdam: Benjamins: 73–83.
- GRIN, FRANÇOIS (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 JOSEP PALOMERO. Valencia: Valencian Academy of Language.
- LIU, AMY H. (2015). *Standardizing diversity: The political economy of language regimes*. National and ethnic conflict in the 21st century. Philadelphia: University of Pennsylvania Press.
- POOL, JONATHAN (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.
- POOL, JONATHAN (1991). “The official language problem”. In: *American Political Science Review* **85**: 495–514.
- POOL, JONATHAN (1992). *Multilingualism versus language policy: Alternative models for the EC*. Research report LD20. Seattle: University of Washington - Interdisciplinary Committee on Language and Society.
- POOL, JONATHAN (1996). “Optimal language regimes for the European Union”. In: *International Journal of the Sociology of Language* **121**: 159–179.
- POOL, JONATHAN and BRIAN MCFANN (1991). *The language auction: a nondiscriminatory method of choosing official languages*. Research report. Seattle: Utilika Foundation.
- VAN POTTELSBERGHE, BRUNO and MALWINA MEJER (2010). “The London Agreement and the cost of patenting in Europe”. In: *European Journal of Law and Economics* **29**: 211–237.

VOSLAMBER, DIETRICH (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, DOUGLAS (2003). *Economic impact of Gaelic arts and culture*. PhD thesis. Glasgow: Caledonian University.

CHALMERS, DOUGLAS (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 SUSANNA PERTOT, TOM M. S. PRIESTLY, and COLIN H. WILLIAMS. Palgrave studies in minority languages and communities. Houndmills: Palgrave Macmillan. Chapter 8: 141–164.

IVLEVS, ARTJOMS and ROSWITHA M. KING (2014). “2004 Minority Education Reform and pupil performance in Latvia”. In: *Economics of Education Review* 38: 151–166.

KEANE, MICHAEL, B. GRIFFITH, and J.D. DUNN (1993). “Regional development and language maintenance”. In: *Environment and Planning A* 25: 399–408.

Ó CINNÉIDE, MÍCHEÁL and MICHAEL 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, MÍCHEÁL, SEOSAMH MAC DONNACHA, and SORCHA 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, ALAN (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, JOHN (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} → {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, EDUARD, JORDI BALTÀ, and UTA STAIGER (2004). *Ex-post evaluation of activities in the field of regional and minority languages 1998-2002: Final report*. Research report. Barcelona: Fundació Interarts.

GRIN, FRANÇOIS (1990). “The economic approach to minority languages”. In: *Journal of Multilingual and Multicultural Development* **11**: 153–173.

GRIN, FRANÇOIS (2003). *Language policy evaluation and the European charter for regional or minority languages*. Basingstoke: Palgrave Macmillan.

- GRIN, FRANÇOIS (2016). “Challenges of minority languages”. In: *The Palgrave handbook of economics and language*. Edited by VICTOR A. GINSBURGH and SHLOMO WEBER. Houndmills: Palgrave Macmillan. Chapter 21: 616–658.
- GRIN, FRANÇOIS, MICHELE GAZZOLA, TOM MORING, and JOHAN 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, FRANÇOIS, TOM MORING, DURK GORTER, JOHAN HÄGGMAN, DÓNALL Ó RIAGÁIN, and MIGUEL STRUBELL (2002). *Support for minority languages in Europe*. Research report. Brussels: European Commission.
- GRIN, FRANÇOIS and FRANÇOIS 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.
- GRIN, FRANÇOIS and FRANÇOIS VAILLANCOURT (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, AIMEE, N. MELTEM DAYSAL, and SCOTT 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, VICTOR A., JACQUES MÉLITZ, and FARID TOUBAL (2014). *Foreign language learning: An econometric analysis*. Research report 10101. London: Centre for Economic Policy Research (CEPR).
- GRIN, FRANÇOIS (2001). “On effectiveness and efficiency in education: Operationalizing the concepts”. In: *Zeitschrift für Pädagogik* **43**: 87–97.
- GRIN, FRANÇOIS and FRANÇOIS VAILLANCOURT (2000). *The choice of a language of instruction: The economic aspects*. Washington: The World Bank Institute.

RUPÉREZ MICOLA, AUGUSTO, ARTURO BRIS, and ALBERT BANAL-ESTAÑOL (2009). *TV or not TV? Subtitling and English skills*. Research report 1156. Barcelona: Department of Economics and Business, Universitat Pompeu Fabra.

WYBURN, JOHN and JOHN 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, FRANÇOIS (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, FRANÇOIS and MICHELE GAZZOLA (2013). “Assessing efficiency and fairness in multilingual communication: Theory and application through indicators”. In: *Exploring the dynamics of multilingualism*. Edited by ANNE-CLAUDE BERTHOUD, FRANÇOIS GRIN, and GEORGES LÜDI. Amsterdam: John Benjamins: 365–386.

JAIME, LAURA, XAVIER MITJÀ, and JOAN SOLÉ CAMARDONS (1995). “Objectius i indicadors de resultat: exemples de formulació”. In: *Llengua i Ús - Revista tècnica de Política Lingüística*: 15–20.

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

SOLÉ CAMARDONS, JOAN and ANNA 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, SANTIAGO and PABLO SWEDBERG (2014). *The impact of multilingualism on Spanish language acquisition among immigrants in Spain*. Research report 8748. Bonn: Forschungsinstitut zur Zukunft der Arbeit.

CHISWICK, BARRY R. and PAUL W. MILLER (1997). “English language fluency among immigrants in the United States”. In: *Journal of Labor Economics* **13**: 246–288.

CHISWICK, BARRY R. and PAUL W. MILLER (2008). “A test of the critical period hypothesis for language learning”. In: *Journal of Multilingual and Multicultural Development* **29**: 16–29.

DANZER, ALEXANDER M. and FIRAT YAMAN (2010). *Ethnic concentration and language fluency of immigrants in Germany*. Research report 4742. Bonn: Forschungsinstitut zur Zukunft der Arbeit.

DEVORETZ, DON and CHRISTIANE WERNER (2000). *A theory of social forces and immigrant second language acquisition*. Research report 110. Bonn: Forschungsinstitut zur Zukunft der Arbeit.

GABSZEWICZ, JEAN J., VICTOR A. GINSBURGH, and SHLOMO WEBER (2011). “Bilingualism and communicative benefits”. In: *Annals of Economics and Statistics / Annales d'Économie et de Statistique* **101-102**: 271–286.

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#### C.2.2.4 *Economics of translation*

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